

PSYOKIN — FULL RULEBOOK

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-

Chapter 1 — The Core Loop (Calendar & Actions)

What this chapter is:

Your day planner and the physics of time. It defines how Morning/Afternoon/Evening flow, what actually consumes a phase, which systems tick weekly/monthly, and how Missions vs. VR interact with the loop. It's the “when” that every other system plugs into.

Covered systems:

- **Daily structure:** 3 phases, no Night; what each phase supports (training, missions, jobs, hangouts).
- **Action economy:** What spends a phase vs. freebies; endings of day (VR) vs. preserves (Missions).
- **SXP yields:** Baselines pre-fatigue; per-phase defaults and exceptions.
- **Weekly diminishing:** First 7 actions/stat at full value, 8th+ at 50%; resets Monday.
- **Attendance & exams:** Morning-only hooks and monthly reward cadence.
- **Scheduling overlays:** Hangout masks, mission windows, designer knobs, and data contracts.
- **Worked example:** A clean “one good week” that demonstrates the loop.

How to read it:

Lock this in before tuning numbers elsewhere. Use the loop to reason about throughput in **Ch. 2 (progression)**, pacing in **Ch. 9**, and conversion beats on **Sundays (Ch. 11)** and **month-ends (Ch. 12)**.

1.0 Daily Structure (no Night phase)

Each in-game day has three phases and exactly three actions:

1. **Morning** — classes, electives, skip-school stat spots, some hangouts
 2. **Afternoon** — world stat spots, **Mission** or **VR**, some hangouts
 3. **Evening** — jobs/world stat spots, Secret Training, most hangouts
- **Missions (Afternoon):** award LXP only and **do not** end the day (you still get Evening).
 - **VR (Afternoon):** grants LXP only and **ends the day (no Evening)**. You still keep your Morning action for SXP.
 - **Hangouts (CBXP):** can occur Morning / Afternoon / Evening if that event allows it.
-

1.1 What each phase supports

Morning

- **Class (track-locked):** +6 SXP to the track's stat. Counts toward Attendance.
- **Elective (Tue/Thu):** +6 SXP to your **current weakest stat**. Counts toward Attendance.
- **Tie-break rule:** if multiple stats are equally lowest, the **player chooses**.
- **Skip-School spots:** +8 SXP at alternative campus/city locations.
- **Hangout:** some events allow Morning.

Afternoon

- **World stat spots:** +8 SXP (Gym, Track, Clinic, Meditation, Library, etc.).
- **Mission:** LXP only (no SXP). **Does not** end the day.
- **VR Training:** LXP only (no SXP). **Ends** the day.
- **Hangout:** some events allow Afternoon.

Evening

- **Jobs / world stat spots:** +8 SXP (Karaoke, Bowling, Dojo, Club, Stocking, Register, Strategy, etc.).
 - **Secret Training:** +6 SXP to a chosen stat; **+4 synergy** if you also trained that **same stat earlier that day** (so this action can yield up to **+10**).
Design note: this is where older “Night training” lives now.
 - **Hangout:** default/most common time.
-

1.2 What spends an action (and what doesn't)

- **Spends a phase (1 action):** Class, Elective, Skip-School spot, Afternoon spot, Evening spot/job, Secret Training, Mission, VR, Hangout, and each study consumable below.
 - **Study consumables (each consumes the phase):**
 - **Study Guide:** +15 SXP (any stat)
 - **Workbook:** +12 SXP (TPO/FCS only)
 - **Field Manual:** +20 SXP (BRW/VTL only)
 - **Tutor:** +12 SXP (any stat; weekly-limited)
These four items **all** take a day spot.
 - **Does not spend an action:** Passive effects (gear, gifts obtained, flags set), travel, and UI review.
 - **UXBs (LXP packs):** do not grant SXP; they inject **LXP only** (still consumes a phase when used from menus).
-

1.3 SXP yields (before fatigue)

Source	SXP
Morning Class (track-locked)	+6
Elective (Tue/Thu → weakest non-capped stat)	+6
Skip-School spot (Morning alt)	+8
Afternoon world spot	+8
Evening world spot / job	+8
Secret Training (Evening)	+6 (+4 if same stat was trained earlier today → +10)
Tutor (consumes phase)	+12
Study Guide (consumes phase)	+15
Workbook (TPO/FCS) (consumes phase)	+12
Field Manual (BRW/VTL) (consumes phase)	+20
Hangout	0 (CBXP only)
Mission	0 (LXP only)
VR	0 (LXP only; ends day)

Typical daily SXP totals (pre-fatigue):

- Normal day (no Secret Training): **+6 +8 +8 = 22 SXP.**
 - Normal day (with Secret Training + synergy): **+6 +8 +10 = 24 SXP** (you forgo the +8 Evening spot).
 - Mission day: Morning + Evening SXP only → **14–16 SXP** baseline (Class/Elective vs Skip), **20–28** if a study item replaces one phase (e.g., **Field Manual + Evening +8**).
 - VR day: **Morning SXP only**; Afternoon VR gives LXP and ends the day. No Secret Training after VR.
 - **Study-item burst ceiling:** with two **Field Manuals** (+20 each) plus one **+8** spot, a single day can reach **48 SXP** (pre-fatigue).
-

1.4 Weekly diminishing returns & fatigue barks

Maintain **TrackActionsThisWeek[S]** for each stat S ∈ {BRW, VTL, TPO, FCS, MND}.

Resets every **Monday**.

- First **7** actions/week/stat: **100% SXP**.
- **8th+** actions on that stat: **50% SXP** ($\times 0.5$; final SXP is floored).
- **Attendance bonus SXP** (month-end; §1.5) and **Bonus-Date SXP** (if flagged; §1.7) **ignore** weekly fatigue counters.

Order of operations (all SXP sources, including study items):

1. compute base SXP; 2) apply weekly fatigue multiplier for that stat; 3) **floor**; 4) apply any “ignores fatigue” exception if applicable (attendance/bonus-date).

Flavor barks (no extra penalty—just feedback):

- BRW — tired: “Hands are buzzing—good burn.” • fatigued: “Everything’s lactic. Form’s slipping.”
 - VTL — tired: “Breath’s short—need a slower pace.” • fatigued: “Wind’s gone. I’m running on fumes.”
 - TPO — tired: “Timing’s slippery today.” • fatigued: “Dizzy. The room’s on 2x speed.”
 - FCS — tired: “Brain keeps alt-tabbing.” • fatigued: “Everything’s noise. Need a hard reset.”
 - MND — tired: “Neurons are simmering.” • fatigued: “Brain is fried. Syntax error, me.”
-

1.5 Attendance & exams (Morning only)

- **Counts as attendance:** Class and Elective (Morning).
- **Monthly bonus:** if attendance $\geq 75\%$ → grant +10 SXP at month end (+6 FCS / +4 MND).

Overflow policy:

- If the target stat is capped, **spill to the weakest non-capped stat** (player chooses on tie).
- If **all** stats are capped, excess is **lost**.

This bonus ignores weekly fatigue counters and does not consume a phase.

- **Skipping school:** Morning Skip-School spots give +8 SXP but don't count toward attendance.
-

1.6 Missions vs. VR (Afternoon rules)

- **Mission (Afternoon): LXP only;** consumes the Afternoon action; **Evening still available.**
 - **VR (Afternoon): LXP only;** consumes the Afternoon action and **ends the day** (no Evening).
 - **Scheduling tip:** Use Missions for steady LXP without losing Evening hangouts; use VR when you want a level push and are okay sacrificing Evening.
-

1.7 Hangouts (CBXP) and phase masks

- Any phase is allowed if the event's phase mask includes it (most are Evening; some Morning/Afternoon).
- Hangouts always consume the phase and grant **CBXP on a Pass**.
- **Bonus Dates:** special Love-route hangouts that do **not** grant CBXP; they grant **BAXP +6..+8** and small **SXP +4** (if flagged).
 - **Target of +4:** goes to the event's **themed stat**; if the event has no theme, **player chooses**.
 - Their +4 SXP **ignores weekly fatigue** counters.

Full bond math, pass thresholds, gifts, GGT, and Anchor choices are in Chapter 5.

1.8 Designer knobs in the loop

- Study item availability per week (e.g., Tutor limited; shop stock gating).
 - Secret Training synergy (+4) can be toggled off for specific balance windows.
 - VR frequency (default 1–2/mo) and Mission cadence (default ~3/mo) live in Chapter 9; the phase rules are fixed here.
 - Attendance threshold (default 75%) and bonus split (+6 FCS / +4 MND) can be tuned.
 - **Attendance overflow mode** (spill vs lose) is data-driven (default = **spill**).
-

1.9 Implementation notes (data)

- Phase actions table should enforce **3 actions/day**, hard-stop after VR.
- Per-stat weekly counters reset Monday; apply $\times 0.5$ SXP to that stat beyond 7 actions.
- Attendance increments on Morning Class/Elective only.
- **Source tags** per action drive UI tips and blockers:

```
{"gives_sxp":X, "gives_lxp":Y, "gives_cbxp":Z, "ends_day":bool,  
"counts_toward_attendance":bool, "counts_toward_fatigue"::[stat_ids...]}
```
- Item actions (Study Guide / Workbook / Field Manual / Tutor) are flagged `consumes_phase=true`.
- Attendance bonus SXP and Bonus-Date SXP bypass weekly fatigue counters.
- Elective weakest-stat tie-break: exclude capped stats; allow player choice among remaining.

Quick player example

- **Morning:** Elective (weakest stat) **+6 SXP** → Attendance +1
 - **Afternoon:** Mission (**LXP only**) → Evening still open
 - **Evening:** Secret Training on same stat trained this morning → **+10 SXP** (6 + synergy 4)
- Daily SXP total: 16** (plus whatever LXP came from the Mission)
-

Chapter 2 — All Progression Tracks

What this chapter is:

A single hub for every growth system in *Psyokin*. Where Chapter 1 explained *how you spend time*, this chapter explains *what those actions build*. Each subsection covers one progression track—its math, costs, rewards, and how it connects to others. Together, they define the long-horizon arc of the campaign.

Covered tracks:

- **Character Level (LXP)** — Your classic XP track. Raised via Missions, VR, or UXBs. Dictates base stats, unlocks skills, and gates perk points. Full formulas, level-difference ladders, and participation modifiers are here.
- **Stat Levels (SXP)** — Five core stats (BRW/VTL/TPO/FCS/MND) raised through classes, spots, jobs, training, and study items. Weekly diminishing returns prevent grinding one stat endlessly. Costs curve from Lv1→10, with an optional Lv11 peak.
- **Sigils** — The spell/skill system. Sigils level up by use; tiers (UST I–III) apply global multipliers; upgrades (I–III) reinforce individual Sigils at the Tech Lab. Damage/MP scaling order of operations is specified.
- **Battle Perk Points (BPP)** — Long-term perk grid. Earned at creation, on level milestones, and via hidden world pickups. Bankable, with 55+1 total to map builds.
- **Circle Bonds (CBXP)** — Relationship progression (see Ch. 5). Here only the high-level math: 12 Love + 17 Other tracks, EP → Pass → CBXP. Hangouts consume phases; Bonus Dates add BAXP without CBXP.
- **Battle Affinity (BAXP)** — Pairwise trust that converts weekly into Affinity Tiers (AT1–3). Unlocks Burst Duel/Omega moves, modified by dorm adjacency. Caps and Sunday conversion rules live here, with full dorm details in Ch. 11.
- **Gear Progression** — Weapons, armor, headwear, footwear, bracelets. Upgrade shorthand (UWT/UAT), hybrid forging/crafting model, and capture-economy interactions.

- **Hidden Morality** — A secret meter (Pacifist ↔ Bloodlust) that shifts from non-lethal vs lethal play and world choices. Only a pointer here; full system is Ch. 14.
- **Cross-track Interactions** — An “at-a-glance” section tying it all together: how LXP, SXP, CBXP, and BAXP interact to define player builds and campaign pacing.

How to read it:

Designers should use §2.1–2.9 as a reference for formulas and costs, then cross-link to later chapters for context (Combat in Ch. 4, Bonds in Ch. 5, Affinity in Ch. 11, Morality in Ch. 14, etc.). Players only ever see the surface (“level up, bond up, craft gear”), but the balance comes from this shared backbone.

2.1 Character Level (LXP) — Cap 99

Where LXP comes from

- **Missions (Afternoon)**: grant LXP only, do not end the day.
- **VR (Afternoon)**: grants LXP only, ends the day.
- **UXBs**: inject LXP only (no SXP): 300 / 900 / 2400 / 6000. (Field-only; see §7.8.)

Per-level requirement

- $XP_{NEXT}(L) = 120 + 30 \cdot L + 6 \cdot L^2$

Per-enemy base

- $BaseLXP = 25 + 6 \cdot EnemyLv$

Per-character calculation (important!)

Every character (active and benched) computes rewards with **their own level** against the enemy’s level. For each character:

- $\Delta = EnemyLv - CharacterLv$

Level-difference multiplier (clean ladder)

- $\Delta \geq 0 \rightarrow \times 1.00$
- $-1 \rightarrow \times 0.90 \cdot -2 \rightarrow \times 0.80 \cdot -3 \rightarrow \times 0.70 \cdot -4 \rightarrow \times 0.60 \cdot -5 \rightarrow \times 0.50$
- $-6 \rightarrow \times 0.40 \cdot -7 \rightarrow \times 0.30 \cdot -8 \rightarrow \times 0.20 \cdot -9 \rightarrow \times 0.10 \cdot \Delta \leq -10 \rightarrow \times 0.05$

Optional over-level bonus (designer toggle, default OFF)

If enabled: when $\Delta \geq +1$, apply $\times(1 + \min(\Delta, 5) \cdot 0.05)$ (up to $\times 1.25$). This stacks multiplicatively after the Δ ladder (which is $\times 1.00$ for $\Delta \geq 0$).

Party & participation modifiers

- Party size (applies equally to all party members that fight): **Solo $\times 1.30$ • Duo $\times 1.15$ • Trio+ $\times 1.00$**
- Participation (per character): **Active & standing $\times 1.00$ • KO at victory $\times 0.50$ • Benched $\times 0.20$**
- Environment: **Regular $\times 0.90$, Miniboss $\times 1.20$, Boss $\times 1.50$**

Pacify/Capture vs Kill

You still receive LXP for non-lethal outcomes:

- **Pacify or Capture:** multiply final LXP by $\times 0.30$ (**Regular/Miniboss**).
- **Boss non-lethal bump:** multiply final LXP by $\times 0.40$ (bosses only) to keep pacifist routes competitive.
- Rewards bump: **+50% credits** and **+50% item-drop chance** (multiply each eligible drop's probability by $\times 1.5$; clamp to 100% / respect table caps).

Final per-character formula

```
LXP_final = floor(  
    BaseLXP  
    × DiffMultiplier(Δ)  
    × OverLevelBonus(optional)  
    × Env  
    × PartySize  
    × Participation
```

```
    × NonLethalMod  
)
```

where NonLethalMod = 1.00 on kill; 0.30 on pacify/capture (Regular/Miniboss); **0.40 on bosses.**

Worked example (your scenario)

- Enemy Lv10; you are Lv15 → $\Delta = -5 \rightarrow \times 0.50$.
- Your ally is Lv10 → $\Delta = 0 \rightarrow \times 1.00$.

Ignoring other multipliers for clarity:

- You: get **50%** of BaseLXP.
- Ally: gets **100%** of BaseLXP.

Including environment/party (Regular, Trio party, both standing):

- BaseLXP = $25 + 6 \cdot 10 = 85$
- **You:** $\text{floor}(85 \times 0.50 \times 0.90 \times 1.00 \times 1.00) = 38 \text{ LXP}$
- **Ally:** $\text{floor}(85 \times 1.00 \times 0.90 \times 1.00 \times 1.00) = 76 \text{ LXP}$

If you **capture** instead of killing: multiply each by **0.30** (→ 11 and 22 LXP), and the drop/credits get the $\times 1.5$ reward bump.

2.2 Stat Levels (SXP) — 1→10 (+ secret 11)

Where SXP comes from: classes, world spots, jobs, Secret Training, and study items (see yields in Ch. 1 §1.3) with weekly diminishing (first 7 actions/stat at 100%, 8th+ at 50%; resets Monday). Missions/VR grant 0 SXP.

Design goal (tuning intent): same as before.

Per-level SXP cost (player), L → L+1

(1–5 feel even; 6–9 ramp; 10 is a “peak”; 11 is the long tail. **Slightly eased mid/high** to add realistic slack.)

- 1→2: **50** (cumulative 50)
- 2→3: **55** (cumulative 105)
- 3→4: **60** (cumulative 165)
- 4→5: **65** (cumulative 230)
- 5→6: **70** (cumulative 300)
- 6→7: **75** (cumulative 375)
- **7→8: 85** (cumulative **460**)
- **8→9: 105** (cumulative **565**)
- **9→10: 115** (cumulative **680**)
- 10→11 (secret): **263** (cumulative **943**) + special unlock (designer gate)

Why these numbers?

- **1→10 = 680 per stat**, so **all 10s = 3,400 SXP** across five stats (down from 3,485) → **~+85 SXP slack** for typical calendars.
- 10→11 = 263 remains intentionally “pricey” to keep 11s meaningful.

Budget sanity (dev-facing): with the season’s training-first ceiling (~4,800 SXP) and a full bond run replacing ~1,312 SXP worth of training slots (avg ~8/slot), players retain **≈3,488 SXP** for stats—**~88 SXP slack** over the new 3,400 all-10s total.

Creation note: at character creation, the player chooses **3 stats to start at Lv2**; the other two start at Lv1.

UI suggestion: show per-stat progress bars with tick marks at 9, 10, and 11; add a planner banner that compares “All-10s path” vs “Chasing 11s (+263 ea.)”.

2.3 Sigils — Levels, Tiers (UST), Upgrades (I–III)

Levels (by use): using a Sigil in battle grants **SigXP** to that Sigil. Allies' Sigils also gain SigXP when used in battle with you.

- Lv1 → Lv2: **40** SigXP
- Lv2 → Lv3: **80** SigXP
- Lv3 → Lv4: **140** SigXP

Baseline Fire example (single-target, neutral before type):

- **Lv1 Fireball:** 10 MP, ~12% HP
- **Lv2 Flame Burst:** 15 MP, ~18%
- **Lv3 Inferno:** 20 MP, ~25%
- **Lv4 Cataclysm:** 25 MP, ~32%

UST — Upgrading Sigil Tiers (global, not per-Sigil):

- **Tier II:** damage $\times 1.10$, MP $\times 1.05$
- **Tier III:** damage $\times 1.20$, MP $\times 1.10$

Upgrades I–III (per-Sigil reforges, post-Lv4 at Tech Lab):

- **Each upgrade:** +5–10% damage (default +7.5%, multiplicative) and +5 MP (flat).
- **Example:** *Cataclysm* III ≈ base ~32% $\times 1.075^3 \approx 40\%$ before Tier scaling; MP ≈ $25 + 5 \cdot 3 = 40$, then apply Tier MP mod if any.

Final order of operations (per cast):

- $\text{FinalDamage\%} = \text{Base\%} \times \text{TypeMod} \times \text{TierMod} \times \text{UpgradeMod} \times \text{Crit} \times (1 + \text{buffs} - \text{debuffs})$
- $\text{FinalMP} = \text{BaseMP} \times \text{TierMPMod} + \text{UpgradeMPFlat}$

Pacify & Reverse Blades: see **Ch. 4.8** (Capture/Non-Lethal) and **Ch. 6.8 / 7.5** for non-lethal kit.

2.4 Battle Perk Points (BPP)

- +1 BPP at character creation
 - +1 every 3 levels (Lv 3/6/9 ... 99 → +33 from leveling)
 - Hidden BPP in world: +22
 - **Totals:** creation 1 + leveling 33 = 34, plus 22 hidden = 56 (perfect set 55 +1 banked).
 - **Perk grids:** 5 perks per stat (BRW, VTL, TPO, FCS, MND) → 25 total; directed prereqs allowed; banking allowed.
 - **Costs:** Tier 1 = 1, Tier 2 = 2, Tier 3 = 2, Tier 4 = 3, Tier 5 = 3.
You can route-gate certain Tier-5 perks behind Anchor Bonds (Ch. 5) or morality bands (Ch. 14).
-

2.5 Circle Bonds (CBXP) — summary (full system Ch. 5)

- **12 Love** (8 events each), **17 Others** (1 per layer → 4 total).
 - Each event has **3 beats** (Loved +2, Okay +1, Miss +0) vs a **Pass** target (**4/5/6/6** by layer; Hard +1 / Easy -1).
 - **Gift (1):** Disliked +0, Neutral +2, Liked +4; optional **Synergy +1**; cap = **Pass+1** from gift/synergy.
 - On **Pass:** Love +1 CBXP, Others +2 CBXP; thresholds **2/4/6/8** mark layer completion.
 - **Fail-Forward (GGT):** next meeting gives +2 EP to salvage the miss.
 - **Bonus Dates:** no CBXP; grant **BAXP +6..+8** and **small SXP +4** (if flagged). Hangouts consume the phase and can occur Morning/Afternoon/Evening if allowed by the event.
-

2.6 Battle Affinity (BAXP) — pairwise, weekly

- **Earn:** +2 per battle together (cap +6/day/pair), **+6..+8** per **Bonus Date**.
- **Convert:** Tallied all week, then **convert on Sundays 00:00** into persistent **BAXP**.
- **Tiers (per pair):** 20 → AT1, 60 → AT2 (Duel), 120 → AT3 (Omega).
- **Activation:** MC must be present to use **Duel/Omega** in battle.
- **Scope:** Tracked for **all party-pair combinations** (not just with the MC).

(Full numbers, dorm adjacency, and auras live in Chapter 11.)

2.6a Aura vs. Adjacency Precedence (Deterministic)

Precedence Rule

- **Rival < AT2 Hard Override**
If pair relation = Rival and tier < AT2, and both are active & adjacent this week
→ apply **Rival penalty** to both whenever either acts. This cannot be offset by aura or Bestie adjacency.
- **Otherwise, pick one effect only (no stacking)**
Compare the acting unit's **aura** (from their locked partner's tier) versus their **best active Bestie adjacency**. Apply the stronger.
- **Rival at AT2+**
Rival pairs at AT2 or higher compare penalty vs aura; apply whichever is net-better.
- **Tiebreaker**
If equal but opposite (e.g., +5 vs -5), resolve in favor of the acting unit (apply the beneficial one).

Live Combat Application

- Snapshot source: **Sunday 00:00** layout of current week.
- Both actors must be **active in the party and not KO'd**.

- Aura is locked to the **chosen partner at sortie**; it does not switch mid-battle.

Examples

- Rival, AT1 → Rival penalty overrides.
- Rival, AT2 → Compare -4 vs +5 aura → aura applies.
- Bestie adjacency stronger than aura → apply adjacency.
- Aura stronger than adjacency → apply aura.

Design Notes

- Rival < AT2 keeps rivalries punishing.
 - AT2+ rivals resolve to aura dominance, rewarding bond growth.
 - No stacking ensures clarity and prevents runaway bonuses.
 - Tiebreaker favoring the player keeps outcomes predictable and positive.
-

2.6b Synergy “Best Three per Battle” (Selector & Tiebreaks)

Core Rule

- Each pair can earn synergy BAXP from in-battle events (weakness chains, Duel triggers, Omega triggers).
- At battle end, only the **three highest-value events** per pair are counted toward the weekly total.
- This ensures stability and prevents runaway stacking in long battles.

Event Values

- Weakness chain / Interrupt → **+1**
- Duel (requires AT2) → **+2**
- Omega (requires AT3 with MC + two allies) → **+1**

Selection Process

1. Gather all synergy events logged for the pair during the battle.
2. Sort by **value (descending)**.
3. If more than three events share equal value, break ties by **earliest timestamp in battle order**.
4. Keep the top three; discard the rest.
5. Sum their values into that pair's **synergy_baxp_raw** for the week.

CSV Example (battle log summary)

```
pair_id,battle_id,event_type,value,battle_clock_idx  
mc-red_girl,BR102,WeaknessChain,1,0042  
mc-red_girl,BR102,Duel,2,0075  
mc-red_girl,BR102,Duel,2,0130  
mc-red_girl,BR102,WeaknessChain,1,0190  
mc-red_girl,BR102,Omega,1,0210
```

Post-selection (applied)

- Top 3 by value: Duel(2@0075), Duel(2@0130), WeaknessChain(1@0042).
- Applied synergy_baxp_raw = **5**.
- Omega(1) and later WeaknessChain(1) discarded.

Designer Notes

- Keeps synergy pacing consistent across short and long fights.
 - Stable tie-break rule ensures logs are deterministic (no RNG in audit).
 - Value weighting (2 for Duel) makes Duel events feel impactful without overshadowing chains.
-

2.6c BAXP Caps & Conversion Order (Floor → Cap → Lifetime)

Conversion Flow (weekly Sunday process)

1. Aggregate raw weekly gains

- co_presence_baxp
- synergy_baxp_raw (from best-three selector)
- bonus_dates_baxp
- cameo_baxp
- dorm_bonus (Bestie +5 / None 0 / Rival -4)
→ Sum = **raw_weekly_total**

2. Apply floor

- floored = max(0, raw_weekly_total)
- Negative totals (from Rival adjacency) cannot reduce lifetime BAXP below what's already earned.

3. Apply cap

- Weekly cap = **30** per pair.
- weekly_applied = min(floored, 30)

4. Update lifetime

- lifetime_after = lifetime_before + weekly_applied
- Compare against thresholds:
 - ≥20 → **AT1**
 - ≥60 → **AT2** (Duel unlock)
 - ≥120 → **AT3** (Omega unlock)

5. Log

- Store all breakdowns in affinity_weekly_log.

Worked Example (weekly tally)

week_id,pair_id,co_presence_baxp,synergy_baxp_raw,bonus_dates_baxp,cameo_baxp,dorm_bonus,raw_weekly_total,floored,weekly_applied,lifetime_before,lifetime_after,new_tier,schema_version
2025W38,mc-blue_girl,12,5,6,0,-4,19,19,19,44,63,AT2,1

Designer Notes

- Explicit floor → cap → lifetime order prevents accidental regressions in implementation.
 - Weekly cap keeps BAXP progression aligned with pacing assumptions.
 - Rival penalties still matter within a week but can't erase prior bond progress.
-

2.7 Gear Upgrades & Equipment Progression

Weapons (UWT shorthand, if you don't use the hybrid path in Ch. 6):

- **+1 Tempered:** ATK_Power ×1.12, Crit ×1.05
- **+2 Forged:** ATK_Power ×1.24, Crit ×1.10
- **+3 Masterwork:** ATK_Power ×1.36, Crit ×1.15

Armor (UAT):

- **+1 Reinforced:** DEF ×1.10, +5% ailment resist
- **+2 Fortified:** DEF ×1.20, +10%
- **+3 Impenetrable:** DEF ×1.30, +15%

Full hybrid weapon model/ (shop tiers + Tech Lab + BRW scaling) is in Ch. 6.2 with example lines and materials.

2.8 Hidden Morality — Pacifist ↔ Bloodlust (pointer)

A hidden meter from **-100 .. +100** (0 neutral) responding to lethal vs non-lethal play and collateral choices. Per-mission clamp ±15; inter-chapter decay **10% toward 0**. Boss

pacify/kill swings are large; mobs are small with mission caps. Full table and effects in **Ch. 14**.

- **Rounding:** *half-away-from-zero* on all applied deltas (see §14.2a).
 - **Daily cap:** $|\Sigma p_{\text{applied}}| \leq 30$ per calendar day (live only) (see §14.2).
-

2.9 Cross-track interactions (at a glance)

- **Ch. 1 loop** → determines SXP inflow (with weekly fatigue) and timing of LXP (Mission/VR).
- **SXP costs (§2.2)** → Baseline first-run target is **all stats at 10** if you complete every Circle Bond. **Pushing to 11** costs **+263 SXP per stat** (~33 training slots), which usually means sacrificing hangouts or other actions.
- **Sigils (§2.3)** → grow by use; global UST and per-Sigil Upgrades stack multiplicatively with TYPE and buffs.
- **BPP (§2.4)** → long-horizon build; explore world for 22 hidden to hit the cap.
- **CBXP (§2.5) & BAXP (§2.6)** → social play fuels Duel/Omega combat and end-route choices; doing all Core Bonds sets the “all-10s” budget.
- **Gear (§2.7)** → steady power climbs; UXBs smooth LXP bands without touching SXP.

Quick tradeoff cheat-sheet (first run, all-bonds baseline):

- **+1 stat to 11 → +263 SXP (~33 slots)**
- **+2 stats to 11 → +526 SXP (~66 slots)**
- **+3 stats to 11 → +789 SXP (~99 slots)**

(Replace “slots” 1:1 with study items if the player buys stock; designer can limit stock to preserve the tradeoff.)

Chapter 3 — Stats & Derived Values

What this chapter is:

The dictionary for numbers on a character sheet. It defines core stats (BRW/VTL/TPO/FCS/MND), how they rank, what they cost, and how they flow into HP/MP, accuracy/evasion, damage terms, speed, and posture.

Covered systems:

- **Core stats:** Ranks 1–10 (+11), costs and recommended starts.
- **Growth:** HP/MP curves, Overcast rules, regen floors.
- **Initiative:** Turn order, TPO dice tiers, tie breaks.
- **Accuracy/Evasion:** Inputs and clamps.
- **Damage stacks:** Physical and Sigil pipelines; TYPE insertion points; crit/stumble/defend.
- **Sub-stats:** Where Speed, Ward, Armor, and Resistances come from.
- **Active Sigil posture:** Defensive typing and Omega neutrality.
- **Defaults:** Tunables with safe designer presets.

How to read it:

Treat as the source of truth for **Ch. 4** math and any system that shows numbers (HUD in **Ch. 16**). Cross-check with **Ch. 8** for TYPE and posture specifics.

3.1 The Five Core Stats (1–10, secret 11)

- **BRW — Brawn (Physical Power)**
Increases weapon damage via scaling. Affects checks that represent muscle, lift, shove, carry, recoil control.
- **VTL — Vitality (Toughness & Stamina)**
Raises **MaxHP** and reduces incoming **physical** damage (mitigation). Improves **physical evasion** fraction.
- **TPO — Tempo (Speed & Timing)**
Drives **initiative dice tiers**, improves **physical accuracy** and **critical odds**, contributes to **skill accuracy**.
- **FCS — Focus (Discipline & Guard)**
Raises **MaxMP** and reduces **magical** damage (mitigation). Improves **skill evasion** and resists **Skill Accuracy** attempts.
- **MND — Mind (Skill Power)**
Increases **skill (Sigil) damage**. Used in psyche/knowledge checks.

Caps & floors used across the system: Unless stated otherwise, hit/eva % are clamped to [5, 95]. Crit rates and special chances always clamp to designer-set ranges in data (common default caps 5–50%).

3.2 Stat Ranks, Costs, and Start Values (pointer)

- Rank range: **1–10** (with secret **11** unlock; see Ch. 2.2 for costs).
 - At character creation, the player **chooses 3 stats to start at Lv2**; the remaining two start at **Lv1**.
 - **Level-up costs & SXP sources** (classes, spots, jobs, items, Secret Training, weekly fatigue) are fully specified in **Ch. 1** and **Ch. 2**.
-

3.3 Resource Growth (HP/MP) & Overcast

Max HP (player):

$$\text{MaxHP} = 150 + (\text{VTL} \times \text{Level} \times 6)$$

Max MP (player):

$$\text{MaxMP} = 20 + (\text{FCS} \times \text{Level} \times 1.5)$$

Overcast rule (if MP < cost):

$$\text{HP_Overcast_Cost} = \text{ceil}(1.5 \times \text{MP_cost})$$

(Overcast Skill will not work if the skill will cause the character to go below 1HP)

HP is spent immediately; if interrupted, the HP is still lost. (see Ch. 4).

3.4 Initiative & Turn Order Inputs

TPO dice tiers (rerolled each round; keep highest):

- TPO **1–3** → **1d20**
- TPO **4–6** → **2d20 (H)**
- TPO **7–9** → **3d20 (H)**
- TPO **10** → **4d20 (H)**

Then **add Speed** (from footwear & effects). Ties break by **TPO** → **Speed** → **coinflip**. (Full loop: Ch. 4.1 & 4.7.)

3.5 Accuracy & Evasion

Physical attacks

Hit_phys% = WeaponBaseACC + 0.25 × TPO + mods

Eva_phys% = FootwearBaseEVA + 0.25 × VTL + mods

Final% = clamp(Hit_phys% – Eva_phys%, 5, 95)

Skills (Sigils)

Hit_skill% = SkillBaseACC + WeaponSkillBoost + 0.25 × TPO + mods

Eva_skill% = FootwearBaseEVA + 0.25 × FCS + mods

Final% = clamp(Hit_skill% – Eva_skill%, 5, 95)

Design intent: TPO helps you *land* things; VTL/FCS help you *not get hit*. Skill Accuracy contests specifically lean on FCS to feel different from physical.

3.6 Damage — What each stat actually does

Damage runs through two pipelines: **Physical (BRW + PDEF soak)** and **Sigil (MND + MDEF soak)**. BRW and MND raise outgoing damage, while VTL and FCS provide flat defense against those types. The flow is: build PreMit (base + scaling + TYPE/Crit/buffs), subtract flat soak, apply post-multipliers (Defend/Shield), then enforce a damage floor so hits can't drop to zero. Multi-hits scale soak by \sqrt{H} , keeping flurries fair. In short: BRW/MND scale offense, VTL/FCS scale defense, TPO influences accuracy/crit, and the floor ensures consistent throughput.

3.6.1 Physical damage (BRW attack, PDEF soak)

Let **POT** be the move's potency % (80–180 typical). Let **Scale_BRW** be the weapon's BRW scaler.

1. Pre-ATK

$$\text{Pre} = (\text{BaseWATK} + \text{BRW} \times \text{Scale_BRW}) \times \text{POT} / 100$$

2. Type / buffs / crit

$$\text{ATK_Power} = \text{Pre} \times (1 + \text{TYPE}) \times (\text{Crit} ? 2 : 1) \times (1 + \text{buffs} - \text{debuffs})$$

3. Flat soak (PDEF), then post-soak multipliers

For a move that hits **H** times, apply per-hit soak as PDEF/\sqrt{H} . Single-hit uses full **PDEF**.

$$\text{Raw} = \max(\text{ATK_Power} - \text{PDEF_perHit}, 0)$$

$$\text{DMG} = \text{floor}(\text{Raw} \times (\text{Defend} ? 0.7 : 1) \times (\text{ShieldOrb} ? 0.8 : 1) \times \text{OtherDefMults})$$

4. Throughput floor (see §4.4a)

$$\text{DMG} = \max(\text{DMG}, \text{ceil}(\text{ATK_Power} \times \text{DMG_FLOOR}))$$

For multi-hit moves, apply this floor once after summing all hits (see §4.4a).

Interpretation: BRW pushes damage up through the weapon scaler. **VTL** improves *PDEF* (flat soak), which shaves damage off the top *before* Defend/Shield multiply it down.

PreMit - We refer to ATK_Power/SKILL_Power after TYPE/Crit/buffs as **PreMit** in examples.

3.6.2 Skill (Sigil) damage (MND attack, MDEF soak)

Let S_MND be the universal MND scaler (default 12). SIG is the Sigil's innate power at its level.

1. Pre-MAG

$$\text{PreM} = (\text{SIG} + \text{MND} \times S_MND) \times \text{POT} / 100$$

2. Type / buffs / crit

$$\text{SKILL_Power} = \text{PreM} \times (1 + \text{TYPE}) \times (\text{Crit} ? 2 : 1) \times (1 + \text{buffs} - \text{debuffs})$$

3. Flat soak (MDEF), then post-soak multipliers

(Per-hit MDEF uses the same $\div\sqrt{H}$ rule.)

$$\text{Raw} = \max(\text{SKILL_Power} - \text{MDEF_perHit}, 0)$$

$$\text{DMG} = \text{floor}(\text{Raw} \times (\text{Defend} ? 0.7 : 1) \times (\text{ShieldOrb} ? 0.8 : 1) \times \text{OtherDefMults})$$

4. Throughput floor

$$\text{DMG} = \max(\text{DMG}, \text{ceil}(\text{SKILL_Power} \times \text{DMG_FLOOR}))$$

For multi-hit moves, apply this floor once after summing all hits (see §4.4a).

Interpretation: MND raises skill damage via S_MND . FCS now improves $MDEF$ (flat soak) against Sigils.

- **Midgame single-hit:** PreMit 100, VTL 6, ArmorFlat 24 → PDEF = $24 \times (0.5 + 1.5) = 48$ → Raw 52 → Defend×Shield (0.56) → 29 → min-throughput 20 ⇒ 29.
- **Four-hit flurry:** PreMit 30 per hit (total PreMit = 120), same PDEF → per-hit soak $48/\sqrt{4} = 24$ → Raw 6 → $\times 0.56 = 3$ → sum 12 → floor on total = $\text{ceil}(120 \times 0.20) = 24$ ⇒ final 24.

3.6.3 Flat Defense formulas (derived)

$$PDEF = \text{ArmorFlat} \times (\text{BASELINE} + 0.25 \times \text{VTL})$$

$$MDEF = \text{WardFlat} \times (\text{BASELINE} + 0.25 \times \text{FCS})$$

- **Defaults:** BASELINE = 0.50 (set to 0.00 if you want stricter “ \times stat/4 only” feel).
- **Multi-hit scaling:** per-hit soak uses PDEF/ \sqrt{H} or MDEF/ \sqrt{H} . (Designer knob: exponent = 0.5.)

All TYPE multipliers reference **Weapons triangle** and **Mind wheel** (Ch. 8). Buffs/debuffs include Attack/Mind Up/Down, Speed/Evasion/Accuracy mods, and perk effects.

3.7 Critical, Stumble, and Defend (stat hooks)

- **Critical:** default $\times 2$ damage and **pushback** in initiative. More **TPO** increases your crit **odds** through accuracy and perk synergies. **Defend** blocks crits.
- **Stumble (weakness hit):** +25% damage & **pushback**; if a target suffers **two** weakness hits in the **same round**, they **Fall** (lose their turn). **VTL/FCS** help avoid the second hit by improving evasion buckets.
- **Defend:** -30% incoming damage and blocks crit/stumble until your next action.

(Fully formalized in Ch. 4.3–4.4.)

3.8 Derived Substats (where they come from)

Derived	Main Sources	Notes
Speed	Footwear, some perks	Added to initiative after TPO dice.
PDEF (flat)	ArmorFlat, VTL (§3.6.3)	Subtracts before Defend/Shield; physical only; multi-hit soak uses $\div \sqrt{H}$.
MDEF (flat)	WardFlat, FCS (§3.6.3)	Subtracts before Defend/Shield; Sigils only; multi-hit soak uses $\div \sqrt{H}$.
BaseACC / SkillACCBoost	Weapon line, perks	Base hit for physical; bonus to skill hit.
BaseEVA	Footwear line, perks	Shared baseline for both phys/skill evasion.
Crit Chance	Weapon traits, TPO synergies, perks	Always clamped; Defend blocks crit resolution.
Ailment Resist	Armor/Headwear, perks	Typically +5/10/15% per armor upgrade tier.
Type Resist	Headwear, bracelet inlays; posture (Ch. 8)	Multiplies in TYPE stage (§8.4). Posture: resist own type, weak to its counter; gear stacks multiplicatively.

3.9 Active Sigil & Elemental Posture (stat interaction)

- Your **last used Sigil** sets your current **Mind type** posture: you **resist** your own type and are **weak** to its counter on the wheel.
 - **Omega** posture removes weaknesses while active.
 - This posture interacts with the formulas above as part of the **TYPE** multiplier.
(Full wheel: **Ch. 8.**)
-

3.10 Recommended Tunables (designer defaults)

- **S_MND = 12** (MND scaler for skills).
 - **BASELINE = 0.50** (flat defense baseline multiplier).
 - **MultiHitExponent = 0.5** (per-hit soak uses $\div H^{0.5}$).
 - **Accuracy/Evasion per stat unit:** $\pm 0.25\%$ per TPO/VTL/FCS (§3.5).
 - **Stumble bonus:** +25% damage & 1-slot pushback.
 - **Hit/Eva clamp:** [5, 95].
 - **DMG_FLOOR (split default):** **Enemy→Player = 0.15, Player→Enemy = 0.20.** (Global mode 0.20 available; see §4.4a.)
 - **Flat defense bands (examples):**
PDEF_flat_by_tier = 14/20/26/32 (cloth/light/med/heavy)
MDEF_flat_by_headwear = 10/16/22 (band/circlet/helm)
 - **UAT multipliers:** 1.10 / 1.20 / 1.30
-

Quick build guidance (how the stats feel in play)

- **BRW main / VTL off:** frontliner—big weapon scaling and solid toughness; lower MP pool; rely on items or allies for magic.
- **MND main / FCS off:** caster—hard-hitting Sigils with cheaper Overcast risk thanks to larger MP and magic mitigation.
- **TPO main:** striker—earlier, more frequent turns; high reliability (hit/crit), great for interrupts and Stumble chains.
- **VTL main:** tank—massive HP scaling and physical soak; pairs well with **Defend/guard** skills.
- **FCS main:** anti-caster—fat MP, strong magical soak, slippery vs skills; great for channel denial and long fights.

The system goal is that **any 4x9 + 1x11** stat layout (your endgame target) is viable, with different tactical identities emerging from which stat you push to **11**.

Chapter 4 — Combat System

What this chapter is:

The round engine: who acts, what they can do, how hits/crit/stumble/fall resolve, how Burst builds/spends, and how capture/non-lethal works. It's the player-facing grammar for every battle.

Covered systems:

- **Round anatomy & initiative:** From roll to re-roll.
- **Actions:** Attack/Skill/Item/Defend/Capture/Run/Burst.
- **Hit/Eva order:** Resolution and clamps.
- **Damage + Mitigation Clamp:** Pre-mit, soak, and floors.
- **Crit/Stumble/Fall:** Interrupt rules and windows.
- **Channeling/Interrupts:** CH1/CH2 telegraphs and breakers.
- **Burst Gauge:** Build caps, Tier costs, Singles/Duel/Omega gating (ties **Ch. 11**).
- **Capture & non-lethal:** Bind math; reverse blades; economy links (**Ch. 7**, **Ch. 15**).
- **Run:** Escape chances and locks.
- **Micro example:** One round, fully worked.

How to read it:

Use alongside **Ch. 3** (stat sources), **Ch. 8** (TYPE), **Ch. 10** (AI & bosses), and **Ch. 11** (Burst gating from Affinity).

4.0 Anatomy of a Round (high level)

1. **Initiative roll** for everyone (rerolled **each** round).
 2. **Start-of-round timing:** ticks & finishes (DoT/HoT, duration counters, CH1/CH2 completions).
 3. **Turns in order:** each combatant chooses **one**:
Attack / Skill / Item / Defend / Capture / Run / Burst.
 4. **Resolution:** apply hit/eva, damage, buffs/debuffs, interrupts, captures, escapes.
 5. **Round end:** ends when all characters have
acted/fallen/channeling/Bound/KO'd/fled.
 6. **Reroll initiative** for the next round.
-

4.1 Initiative & Turn Order

Dice tiers by TPO (keep highest):

- **TPO 1–3:** 1d20
- **TPO 4–6:** 2d20 (H)
- **TPO 7–9:** 3d20 (H)
- **TPO 10:** 4d20 (H)

Then **add Speed** (footwear & effects). Ties: **TPO → Speed → coinflip**.

Initiative is **rerolled every round** (gives TPO builds tangible tempo).

4.2 Action Types

- **Attack (physical)**: uses weapon stats; single-roll or multi-hit per move data.
- **Skill (Sigil)**: consumes MP (or **Overcast** HP cost), uses MND scaling & Mind wheel.
- **Item**: consume an item; instant unless marked **CH1/CH2** (rare).
- **Defend**: –30% damage taken until your next turn; **blocks crit & stumble**.
- **Capture**: throw a Bind at a valid target (see **§4.8**).
- **Run**: attempt to flee (see **§4.9**).
- **Burst**: spend **Burst Gauge** to fire off Single/Duel/Omega Psyokins (see **§4.7**).

Bound: certain effects/items leave a target **Bound** (immobile, can still take some actions as tagged; cannot **Run/Capture** others; easier to **Capture**).

KO: HP $\leq 0 \rightarrow$ downed; can be revived by skills/items; **KO at victory** halves that character's LXP (Ch. 2.1).

4.3 Accuracy & Evasion (resolution order)

All hit checks clamp to [5%, 95%].

Physical

- $\text{Hit\%} = \text{WeaponBaseACC} + 0.25 \cdot \text{TPO} + \text{mods}$
- $\text{Eva\%} = \text{FootwearBaseEVA} + 0.25 \cdot \text{VTL} + \text{mods}$
- $\text{Final} = \text{clamp}(\text{Hit} - \text{Eva}, 5, 95)$

Skill (Sigils)

- $\text{Hit\%} = \text{SkillBaseACC} + \text{WeaponSkillBoost} + 0.25 \cdot \text{TPO} + \text{mods}$
- $\text{Eva\%} = \text{FootwearBaseEVA} + 0.25 \cdot \text{FCS} + \text{mods}$
- $\text{Final} = \text{clamp}(\text{Hit} - \text{Eva}, 5, 95)$

Order within a turn (for each target):

1. Compute **Final%**.
2. Roll d100. If \leq **Final%** → **hit**, else **miss**.
3. On hit, apply **Crit/Stumble** checks (below), then **damage**.

Multi-hit moves: either **single check** applied to all hits or **per-hit checks** (flag per move).

AOE: each target resolves separately; AOE potency typically ~70% of single-target (data-driven).

4.4 Damage

Formulas are in **Ch. 3.6**. Short restatement:

Physical (Attack)

$$\text{Pre} = (\text{BaseWATK} + \text{BRW} \times \text{Scale_BRW}) \times \text{POT}/100$$

$$\text{ATK_Power} = \text{Pre} \times (1+\text{TYPE}) \times (\text{Crit?2:1}) \times (1+\text{buffs}-\text{debuffs})$$

$$\text{Raw} = \max(\text{ATK_Power} - \text{PDEF_perHit}, 0) \quad \# \text{ PDEF or PDEF}/\sqrt{\text{H}}$$

$$\text{DMG} = \text{floor}(\text{Raw} \times (\text{Defend?0.7:1}) \times (\text{ShieldOrb?0.8:1}) \times \text{OtherDefMults})$$

$$\text{DMG} = \max(\text{DMG}, \text{ceil}(\text{ATK_Power} \times \text{DMG_FLOOR}))$$

Sigil (Skill)

$$\text{PreM} = (\text{SIG} + \text{MND} \times \text{S_MND}) \times \text{POT}/100$$

$$\text{SKILL_Power} = \text{PreM} \times (1+\text{TYPE}) \times (\text{Crit?2:1}) \times (1+\text{buffs}-\text{debuffs})$$

$$\text{Raw} = \max(\text{SKILL_Power} - \text{MDEF_perHit}, 0) \quad \# \text{ MDEF or MDEF}/\sqrt{\text{H}}$$

$$\text{DMG} = \text{floor}(\text{Raw} \times (\text{Defend?0.7:1}) \times (\text{ShieldOrb?0.8:1}) \times \text{OtherDefMults})$$

$$\text{DMG} = \max(\text{DMG}, \text{ceil}(\text{SKILL_Power} \times \text{DMG_FLOOR}))$$

Midgame single-hit: PreMit 100, VTL 6, ArmorFlat 24 → PDEF = $24 \times (0.5 + 1.5) = 48$ → Raw 52 → Defend×Shield (0.56) min-throughput = 20; final = max(29, 20) = 29.

Four-hit flurry: PreMit 30 per hit (total PreMit = 120), same PDEF → per-hit soak $48/\sqrt{4} = 24$ → Raw 6 → $\times 0.56 = 3$ → sum 12 → floor on total = ceil(120×0.20)=24 ⇒ final 24.

TYPE is the triangle/wheel chain from Ch. 8. *Flat defense always occurs before Defend/Shield.* DoT/fixed-damage ignore PDEF/MDEF.

4.4a Mitigation Stack Clamp (Defensive Floor)

- **Purpose:** prevent stacks (posture + type resists + buffs) from collapsing hits to 0 except on Immune/Invulnerable.
 - **Placement (default): after flat soak and after Defend/Shield.**
 - 1) Compute **PreMit** (ATK_Power/SKILL_Power after TYPE, Crit, buffs).
 - 2) Subtract **PDEF/MDEF** (use $\div \sqrt{H}$ for multi-hit), then apply **Defend/Shield/other** → DMG_raw.
 - 3) Apply floor: **DMG_final = max(DMG_raw, ceil(PreMit × DMG_FLOOR_effective))**.
 - **Defaults (split, on by default):**
 - **Enemy→Player = 0.15, Player→Enemy = 0.20.**
 - **Global mode:** set both to the same value if you prefer symmetry.
 - **Multi-hit scope:** apply the floor **once** against the **sum** of hits (PreMit refers to the move's total after TYPE/Crit/buffs).
 - **Exceptions:** Miss/Reflect, Immune/Invulnerable, pure DoT/fixed damage. Barriers absorb first, then floor applies to the remainder.
 - **Designer toggle (alternative):** optional variant that applies the floor **before** Defend/Shield (off by default).
-

4.5 Crit, Stumble, Fall (interrupt rules)

- **Critical:** on crit flag, damage $\times 2$ and **push target back** in initiative. **Defend** prevents crit.
 - **Stumble (weakness hit):** +25% damage and **push back 1 slot**.
 - If a target suffers **two weakness hits in the same round**, they **Fall** → **lose their next turn**.
 - If channeling (CH1/CH2), Fall **interrupts** the channel (MP still consumed).
 - **Priority:** if both would apply, resolve **Defend check first** (can block both), then apply **Crit** and **Stumble** (order doesn't matter for damage since both are multiplicative; apply pushbacks once each).
-

4.6 Channeling & Interrupts

Some moves are tagged **CH1** (resolves at **start of your next turn**) or **CH2** (two turn starts later). While channeling, the user is **locked** (can Defend automatically if specified by move; default: **no**).

- **Interrupt sources:** taking damage with **Stumble**, **Crit**, or being **Bound/KO'd** before resolution → **fail** and **MP/HP Overcast cost is still spent**.
 - **Skill Stumble moves:** certain moves add **extra** interrupt chance against channelers; model as **flat -15% Stumble Resist** on enemies unless flagged immune.
 - **Defend** on a channeling target still blocks Crit/Stumble (if allowed).
-

4.7 Burst Gauge (build & spend)

Building the gauge (defaults; designer-tunable)

- Basic attack hit: **+10**
- Skill hit: **+12**
- Take damage: **+6**
- Exploit weakness (Stumble): **+8** (*once per target per round*)
- Crit: **+6**
- KO an enemy (*kill or pacify/capture*): **+8**
- **Per-unit round cap:** each actor can contribute at most **+25 Burst per round** from hits/crit/stumble/taken-damage (multi-hit and multi-target still obey this cap).
- **Gauge cap:** 0..100. **Overflow is lost** at 100.

Spending the gauge

- **Tier 1 (25):** trigger one Single Psyokin (must be unlocked per character).
- **Tier 2 (55):** trigger any two Singles **or** a **Duel** Psyokin (*requires that specific pair at AT2*).
- **Tier 3 (90):** three Singles, **Duel+Single**, **or OMEGA** (*requires MC active and exactly two allies active where both MC↔Ally pairs are AT3; see §4.7a*).

Activation rules

- Consumes the MC's action (MC presses Burst).
 - Burst actions do not cost MP and cannot Overcast.
 - Targets are chosen per move; resolve as a contiguous sequence in the current initiative slot.
 - **MC must be on the field** for **Duel/OMEGA**.
-

4.7a OMEGA Eligibility & Lighting Rules — New Subsection (place immediately after §4.7 “Burst Gauge”)

- **Live check (all must be true):**
 - MC is active in the current party.
 - Exactly two allies are active in the current party.
 - Both MC↔Ally pairs are AT3 (Resonant) per the most recent Sunday conversion.
 - The two allies do not need AT3 with each other.
 - **When to recompute readiness:** on party edit, KO/revive, tag in/out, Sunday conversion, and after any Affinity tier change.
 - **Disabled-state lock text:**
 - “Need MC active”
 - “Need two AT3 allies active (MC↔Ally pairs)”
 - “OMEGA not available in this encounter”
 - **Ready toast:** “OMEGA ready — MC with two AT3 allies.”
 - **Edge safety:** if an AT3 ally KOs before commit, the OMEGA button disables and the selection cancels without cost.
-

4.7b — Partner Aura vs Dorm Adjacency (Runtime Application)

What this is

- Deterministic, single-source rule for applying either a pair aura (from Affinity Tier) or a dorm adjacency effect (Bestie / Rival) to an individual actor at the moment of action/defense.
- No stacking: exactly one source applies per actor at a time.

When it evaluates

- On each actor's action and on each defensive resolution that needs Hit/Eva/Speed.
- Re-checks whenever the active party changes (swap/KO/revive/tag).

Inputs (read-only)

- Current partner (locked by the sortie Partner Picker).
- Pair Tier for actor↔partner (AT0..AT3) from the most recent Sunday conversion.
- Weekly adjacency snapshot (Bestie / Rival / None) from the Sunday 00:00 layout (per §11.2).
- Which allies are currently active.

Precedence (deterministic)

- **Rival override at low tier**
 - If the actor is adjacent to a Rival this week, that Rival is active, and the Rival pair < AT2 → **Apply Rival adjacency penalty** to the actor.
 - This cannot be offset by any aura or Bestie adjacency.
- **Otherwise, pick one better source**
 - Candidate A — **Partner Aura**: from the actor's current partner per §11.3 (AT1/AT2/AT3 tables).
 - Candidate B — **Bestie Adjacency**: if the actor has any Bestie who is active **and** adjacent this week, use the Bestie bonus (do not stack multiple Besties).
 - Choose the single better candidate for that actor's net Hit/Eva/Speed; apply **only** that one.
- **Rival at AT2+ (no hard lockout)**
 - If an adjacent Rival is active and the Rival pair \geq AT2, compare **Partner Aura** vs **Rival penalty** and apply whichever is strictly better (effectively the aura in most cases).

Adjacency eligibility

- “Adjacent” is strictly from the weekly dorm layout snapshot (Sunday 00:00).
- Both the actor and the adjacency candidate must be active in battle.

No double-dipping

- Do not apply a Partner Aura and an Adjacency effect together.
- Do not merge multiple Besties; take **one** Bestie bonus at most.

Edge cases

- No partner selected (failsafe): no aura candidate; only adjacency may apply.
- Multiple Besties active: still one Bestie bonus (effects are identical).
- Bestie + Rival present: if Rival < AT2, Rival penalty applies; at AT2+, compare Rival penalty vs Partner Aura and apply the better; ignore Bestie if not strictly better than the chosen effect.
- Mid-fight swaps/KO: re-evaluate candidates on the change.

Numerical effects (from §11.3)

- **Auras:** AT1 (+5% Hit, +5% Eva), AT2 (+7% Hit, +7% Eva, +1 Speed), AT3 (+9% Hit, +9% Eva, +2 Speed).
- **Adjacency:** Bestie (+5% Hit, +5% Eva); Rival (-5% Hit, -5% Eva, -1 Speed).

OMEGA note (clarity only)

- This rule does **not** gate OMEGA. OMEGA lighting follows §4.7a and §11.3: MC active + two allies active where **both MC↔Ally pairs are AT3**; the two allies do **not** need AT3 with each other.

UI & telemetry

- Battle toast (short): “Aura (A↔B) +7%/+7% +1 Spd” or “Rival Adj -5%/-5% -1 Spd”.
 - Designer builds can log Candidate A vs B and picked source per actor.
-

4.8 Capture & Non-Lethal

You can **Capture** with Binds or **Pacify** (reduce to 0 using Pacify Sigil or Reverse Blades). Bosses are capturable **only in flagged windows**.

Capture formula

$$\text{Catch\%} = \text{clamp}(\text{Base} + \text{ItemMod} - \text{EnemyResist} - k \cdot \text{HP\%} + \text{StateBonus}, 0, 100)$$

- **Base:** encounter default (e.g., 35).
- **ItemMod:** Weak +10 / Standard +25 / Strong +40 / Elite +60 / **Omega = 100%**.
- **EnemyResist:** per enemy (0–60 typical; bosses higher).
- **HP\%:** current HP\% of target; **k = 0.4** (so at 25% HP → -10).
- **StateBonus:** **+15 if Sleep/Freeze/Bound, +10 if Stunned/Fallen.**

Rounding & clamp: after computing Catch\%, **round down (floor)** to an integer, then **clamp to [0,100]**, then roll.

Boss vs regular non-lethal LXP behavior mirrors §2.1.

On success: target is captured (removed or flagged per mode).

On fail: Bind consumed; target takes **0** damage.

Non-lethal outcomes & rewards

- **Pacify/Capture LXP:** you still gain LXP but at **×0.30** final (see **Ch. 2.1 NonLethalMod**).
- **Rewards bump:** **money ×1.5** and **each eligible drop ×1.5 probability** (cap at 100%, respect loot table rules).

Reverse Blades: physical non-lethal toggle (–damage) enabling Pacify finishes without Sigils.

4.9 Running from Battle

Run% = clamp(50 + 5·(HeroTPO – EnemyAvgTPO) – (%EnemyHP – %HeroHP), 10, 95)

- %EnemyHP / %HeroHP = team mean percent HP of all living units (0–100).
 - Some encounters are no-escape (story/boss).
 - **If any party member is Bound, the party cannot attempt Run** (skip Run% check; surface a log tip).
 - Smoke Grenade = auto escape (consumes item).
-

4.10 Timing, Durations, and Ticks

Start-of-round (global):

1. Apply **DoT/HoT ticks** (e.g., **Poison/Burn = 5% MaxHP**).
2. Decrement **buff/debuff** durations.
3. Resolve **channel completions** (CH1/CH2).
4. Expire effects that hit 0.

On your turn start: check **Fall** (skip this turn) and clear it.

On your action: consume MP (or Overcast HP), then roll resolution.

On your turn end: process any “until end of turn” flags.

Buff/debuff stacking: by default **same-named** effects **do not stack** (refresh or take stronger). Different named effects stack multiplicatively in this order: **TYPE → Tier/Upgrade → Crit → (1+buffs–debuffs)**.

Cleanse priority: “remove 1 random” vs “remove all” is per item/skill. Cures list is in Ch. 7.

4.11 AI Telegraphs & Windows (designer guidance)

- **Telegraph tags:** *Winds Up (CH1), Charging (CH2), Guard Up, Reflect Active, Vulnerable to Capture.*
 - **Windows:** bosses open **Stumble** or **Capture** windows predictably; teach the player to look for *element color shifts, pose, sound stingers.*
-

4.12 Designer Knobs (quick references)

- **Crit multiplier:** $\times 2$ (global).
 - **Stumble bonus:** +25% & 1-slot push; **two** in a round → **Fall**.
 - **Defend:** $\times 0.7$ damage, blocks **Crit/Stumble**.
 - **Overcast:** $HP = \text{ceil}(1.5 \times MP \text{ cost})$, still paid if interrupted.
 - **Hit/Eva clamp:** [5, 95].
 - **Burst Gauge:** cap 100; gains (10/12/6/8/6/8) per §4.7; costs 25/55/90.
 - **Capture k:** 0.4 vs HP%; **StateBonus:** +15 (Sleep/Freeze/Bound), +10 (Fall/Stun).
 - **AOE potency:** ~70% of single-target by default.
 - **DoT:** 5% MaxHP/turn (Poison/Burn).
 - **No-escape:** per-encounter flag; Smoke Grenade auto-escape.
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Worked micro-example (one round)

- **Init:** You (TPO 7 → 3d20H + Speed 3) beat a Lv25 Soldier.
- **Action:** You cast **Inferno** (POT 125, base 20 MP).
 - **Hit%:** 78, **Eva%:** 22 → **56%** → roll **34** → **hit**.
 - Target is **Air-aspected** → **weakness ×1.25**, triggers **Stumble** (+25%, pushback).
 - Damage computes with **MND/FCS** per §4.4; target pushed.
 - **Burst +8** (weakness).

- **Soldier turn:** was pushed behind an ally; ally acts first.
- **End:** ticks apply (Poison on ally -5%); channel on a Mage resolves now.

With these rules, tempo (TPO), posture (Active Sigil), and windows (channel/weakness/capture) create the core puzzle of every fight.

Chapter 5 — Circle Bonds (CBXP)

What this chapter is:

The social progression loop: how EP moments inside a hangout convert to CBXP, how layers unlock rewards, and how scheduling, gifts, and difficulty affect outcomes.

Covered systems:

- **What Bonds are:** 12 Love + 17 Others; route framing.
- **Event resolution:** EP tally → Pass threshold → CBXP grant; GGT fail-forward.
- **Time & place:** Phase masks, availability, gates.
- **Layer rewards:** Per-layer perks and unlocks.
- **Gifts & preferences:** EP mods and caps.
- **Bonus Dates:** Love-route extras; BAXP ties (**Ch. 11**).
- **Scheduling:** Cast-wide planning guidance.
- **UX:** Cues, ledgers, toasts.
- **Data & knobs:** CSVs and tunables; worked Pass example; Anchor rules.

How to read it:

Use with **Ch. 1** (phase cost), **Ch. 2** (progression hub), **Ch. 11** (Affinity ties), and **Ch. 16** (phone/ledger UI).

5.1 What Circle Bonds Are

Circles are relationship tracks with allies and groups. Advancing them unlocks scenes, combat synergies, perks, and route flags. Scheduling a hangout **consumes one phase** (Morning/Afternoon/Evening) and grants **CBXP** on a **Pass**.

- **Counts:** **12 Love Interests** (8 events each) + **17 Others** (4 events each; **1 per layer**).
 - **Layers:** Outer → Middle → Inner → Core (Love: 2 events per layer; Others: 1 event per layer).
 - **End choice (Love only):** Core concludes with ❤️ Love or 🤝 Friendship; both power-balanced.
-

5.2 Event Resolution (EP → Pass → CBXP)

Each hangout has **3 dialogue beats**. You earn **Event Points (EP)** per beat:

- **Loved** = +2 EP
- **Okay** = +1 EP
- **Miss** = +0 EP

Difficulty mod (per event): Hard: Pass +1 • Easy: Pass -1.

End-of-event adders (once each):

- **Gift (1):** Disliked +0, Neutral +2, Liked +4
- **Synergy cameo / stat fit (optional):** +1 EP
- **Cap:** EP from gift + synergy cannot push you beyond Pass + 1.

Pass targets by layer (both Love & Others):

- **Outer 4 • Middle 5 • Inner 6 • Core 6** (*apply Hard/Easy after*)

CBXP on Pass:

- **Love:** +1 CBXP (thresholds **2/4/6/8** complete layers)
- **Others:** +2 CBXP (thresholds **2/4/6/8** complete layers; total 4 events)

Fail-Forward (GGT): If you fail the Pass, the **next** meeting becomes a **Generic Get-Together** granting **+2 EP** automatically (no gift). If that crosses the prior Pass target, award **CBXP now** and **advance**; you do **not** replay the failed scene. **GGT consumes the phase and grants no CBXP/SXP** (unless explicitly scripted).

5.3 Time, Place, and Gating

- **When:** Events specify allowed phases; most are **Evening**, some allow **Morning/Afternoon**.
 - **VR & Missions:** **VR (Afternoon) ends the day** → no evening hangout. **Missions** do **not** end the day → evening hangout allowed.
 - **Where:** Each event lists one or more **locations** (campus/city).
 - **Gates:** **Stat checks, key items, story flags, weekday windows.** Prefer **soft** gates early (e.g., $BRW \geq 4$), **hard** gates at Inner/Core.
-

5.4 Layer Rewards

Outer — onboarding

- **2 Love events / 1 Other**
- **Rewards:** minor boosts (consumables, creds, tips), unlock basic **Single Psyokin** or enable its growth.

Middle — trust

- **2 Love / 1 Other**
- **Rewards:** useful passives (shop discounts, job buffs, spot bonus when together), unlock **activities** or training spot.

Inner — identity

- **2 Love / 1 Other**
- **Rewards:** exclusive missions, new areas, combat tech (assist, stance, reaction), route flags.

Core — anchor

- **2 Love / 1 Other**
 - **Rewards:** Permanent perk (ally-tuned) and final route scenes.
 - **Omega Psyokin:** still requires **BAXP Tier 3** with MC in party; Core may grant ally-specific Omega variant if conditions met.
-

5.5 Gifts & Preferences

- **Timing:** exactly **1 gift** at event end (not during GGT).
 - **Values:** Disliked **+0**, Neutral **+2**, Liked **+4 EP** (subject to **Pass+1 cap** with synergy).
 - **Discovery:** shops, codex clues, prior scenes.
 - **Visualization:** liked gifts appear in room; disliked may appear in trash; neutral acknowledged.
-

5.6 Bonus Dates (Love-route extras)

- Purpose: relationship flavor that doesn't grant CBXP.
 - Rewards: **BAXP +6..+8** and small **SXP +4 (if flagged)**.
 - **SXP target:** +4 goes to the event's **themed stat**; if not themed, **player chooses**.
 - Use: helps reach Affinity T2 (Duel) and T3 (Omega) without pushing CBXP pacing.
 - Limit: per-month cap per target (e.g., 0–2).
-

5.7 Scheduling the Whole Cast

- **Core scenes needed:** $12 \times 8 + 17 \times 4 = 164$ day slots.
 - **Buffers:** **+12 GGT** recovery slots → **176** total hangout days budgeted.
 - **Pacing tip:** run a **2 Love : 1 Other** cadence, flex around gates & deadlines; finish by **late November**, use **December** for cleanup and specials.
-

5.8 UI/UX Cues

- **Event HUD:** show **layer**, **Pass target**, and a **3-segment EP meter**; apply Gift/Synergy at end with a toast, enforce **Pass+1** cap.
 - **Fail-Forward tag:** phone UI marks targets as “**Ready to catch up (+2)**” when a GGT is queued.
 - **Layer badge:** update Circle wheel with short stinger on Pass.
 - **Anchor preview:** show Love/Friendship perk summaries before commit.
-

5.9 Designer Knobs

- **Pass ladder:** 4/5/6/6 (global); per-event **Hard +1 / Easy -1**.
 - **Gift cap:** enforce **Pass+1** ceiling (gift+synergy).
 - **GGT:** always **+2 EP**, no gift, no SXP (unless explicitly scripted).
 - **Phase masks:** control Morning/Afternoon/Evening availability; remember **VR ends day**.
 - **Affinity hooks:** let **Bonus Dates** raise BAXP without altering CBXP.
 - **Gate style:** soft gates early, hard gates at Inner/Core.
-

5.10 Data Spec (CSV)

circles_events.csv

character_id, is_love(0/1), layer(Outer/Middle/Inner/Core), event_no,
phase_mask(M/A/E), locations(; -sep ids), weekday_mask(Mon..Sun bits), pass_target,
difficulty(Hard/Easy/Normal), allows_gift(0/1), allows_synergy(0/1), gives_baxp(0/1),
is_bonus_date(0/1), stat_gate(expr), item_gate(ids), story_gate(flags),
rewards(ids/notes)

circles_gifts.csv

character_id, gift_id, reaction(Disliked/Neutral/Liked), ep_mod(0/2/4)

circles_rewards.csv

character_id, layer, reward_type(perk/consumable/area/discount/psyokin), reward_id,
value

circles_flags.csv

character_id, flag_key, value (*route locks, Anchor choice, etc.*)

5.11 Worked Example (Love Event → Pass)

- **Target:** Red Girl — **Middle**, Event 3 (**Hard**)
 - **Pass:** Middle 5 → **Hard** makes it **6**
 - **Beats:** Loved(+2), Okay(+1), Loved(+2) → **5 EP**
 - **Synergy:** +1 (dance club cameo) → **6 EP** → **Pass**
 - **Gift:** Liked(+4) would be truncated by **Pass+1** cap → only **+1** would count (to 7)
 - **Award:** **+1 CBXP**; Middle progress ticked; next event unlocks.
-

5.12 Anchor Bond (Core Resolution, Love only)

At Core's second scene (8th Love event), choose:

- ❤️ **Love**: romance scenes, duo activities, **route perk** themed to partner.
- 🤝 **Friendship**: trust/collective scenes, Circle-wide bonuses, teamwork-focused **route perk**.

Both paths are **power-balanced**, diverging in flavor and build synergies.

5.13 System Interactions

- **BAXP**: Bonus Dates feed **+6..+8/date**. **Duel** unlocks at **T2**, **Omega** at **T3** (**MC required**).
 - **SXP**: Hangouts give **0 SXP** (unless explicitly flagged); training remains in **Ch. 1**.
 - **Pacifist** ↔ **Bloodlust**: select scenes branch on morality band; pacifying bosses can unlock unique scenes (see **Ch. 13**).
 - **BPP**: certain **Tier-5** perks may be **route-gated** behind Anchor or Core completions.
 - **Calendar**: follow **Ch. 1**—VR afternoons end the day; Missions don't.
-

Implementation checklist

- Track **EP** per event; apply **Hard/Easy**, **Gift**, **Synergy**, **Pass+1 cap**.
 - On **Pass**: award **CBXP** (Love +1 / Others +2); tick layer threshold.
 - On **Fail**: flag **GGT** next time (+2 EP).
 - Enforce **phase masks** and **VR ends day**.
 - Use **data CSVs** above for content authoring.
-

Chapter 5.14 — Love Connections & Poly Routes

What this is:

A system-level rule that lets the cast's relationships breathe beyond the MC. If two Romance-Capable allies max out their **Battle Affinity (AT3)** with each other, and the MC does not choose either of them during Anchor resolution, the two may form a relationship of their own. This creates dynamic endings and surprise payoffs in epilogues.

Rules:

- **Eligibility:** Only Romance-Capable allies with a listed Love Connection are valid.
- **Trigger:** Both must reach AT3 (Resonant) with each other *and* remain unchosen by the MC's Anchor Bond decision.
- **Selection:** If an ally has multiple possible partners, the game randomly selects one valid pairing.
- **Outcome:** A special cutscene plays, confirming the relationship in epilogue.

Poly Routes (Special Cases):

- If the MC romances two allies who also have a valid Love Connection with each other, and all three meet AT3 with one another, the trio unlocks a unique **Poly Love Ending**.
- Poly endings use special cutscenes and perks to reflect this outcome.

Canonical Pairing Table:

- **Secret Girl** → AI Friend, Red Girl, Scientist
- **Best Friend** → None
- **Blue Girl** → None
- **Therapist** → App Gamer, Host Manager
- **Red Girl** → Scientist, Secret Girl, App Gamer
- **Green Friend** → None
- **Scientist** → Kopper, Red Girl, Secret Girl
- **AI Friend** → None
- **Kopper** → Scientist
- **Host Manager** → Therapist
- **Brainiac** → None
- **App Gamer** → Therapist, Red Girl

Poly Endings (MC + Pair):

- Secret Girl + AI Friend
- Secret Girl + Red Girl
- Therapist + App Gamer
- Red Girl + Scientist
- Scientist + Secret Girl
- Kopper + Scientist
- Host Manager + Therapist
- App Gamer + Red Girl

CSV spec:

love_connections.csv

character_id, partner_id, type(LoveConnection/Poly),
requirements(AT3/AnchorChoiceNone/etc)

Chapter 5.15 — Date Spots

What this is:

A list of authored locations where the MC can take allies for **Dates**. Dates act as enhanced hangouts: they give normal CBXP/EP progression plus optional gift exchange opportunities and unlock special dialogue and bonding scenes.

Examples of Date Spots:

- Fancy Restaurant
- School Café
- Karaoke
- Card Shop (Strategy/Group)
- Bowling Alley
- Pizza Shop
- Divebar
- Jewelry Shop
- Gift Stalls
- Movie Theater
- Theme Park
- Museum
- Dance Club

System Hook:

- Some spots have stat-theming for gift bonuses or SXP flavor text.

CSV spec:

date_spots.csv

spot_id, name, category(Food/Entertainment/etc), stat_theme(optional),
gift_bonus(optional), baxp_bonus_range

Chapter 6 — Equipment, Upgrades & Crafting

What this chapter is:

The gear spine: slots, families, upgrade ladders (UWT/UAT), crafting, and where resistances actually live. Also the non-lethal kit hooks that change economy and Morality.

Covered systems:

- **Slots & families:** Weapons, armor, headwear, footwear, bracelets.
- **Scaling:** Weapon family stats, BRW scales, skill boosts.
- **Upgrades:** UWT (+1→+3), UAT (+1→+3) shorthand & mats.
- **Resists:** Headwear/gear sources; posture vs. resist difference.
- **Footwear:** Speed vs Eva trade-offs.
- **Bracelets:** Slot grades and caps.
- **Materials & crafting:** Tech Lab recipes; drops.
- **Shops & unlocks:** Economy pacing (**Ch. 15**).
- **Non-lethal kit:** Reverse blades, binds synergy (**Ch. 7**, **Ch. 14**).
- **Data & knobs:** CSVs and fast tuning.

How to read it:

Pair with **Ch. 10** (drop tables), **Ch. 15** (prices), and **Ch. 8/Ch. 3** for TYPE and derived stats.

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6.0 Equipment Slots (what each slot actually does)

- **Weapon** — sets **BaseWATK**, **BaseACC**, **Crit traits**, optional **SkillACCBoost**, type tag (Slash/Pierce/Impact/Wand), and special flags (**Reverse Blades**, **Non-Lethal**).
- **Footwear** — sets **BaseEVA** and **Speed** (added to initiative after TPO dice). Trade-off patterns: more **Speed** often means less **BaseEVA**.
- **Armor** — **PDEF**: provides **ArmorFlat** that becomes **PDEF** via §3.6.3; often adds **Ailment Resist %**.
- **Headwear** — **MDEF & Type Resist**: provides **WardFlat** that becomes **MDEF** via §3.6.3; can add MaxHP/MaxMP % and **Type Resist** lines (element-specific multipliers used in TYPE stage).
- **Bracelet** — determines **Sigil slots** and **slot quality** (higher grades can host more Sigils and higher-tier ones).

Derived hooks:

- **BaseACC/BaseEVA** feed **§3.5 Accuracy**.
 - **Armor/Ward** feed **§3.6 Damage mitigation**.
 - **Speed** feeds **§3.4 Initiative**.
 - **Active Sigil** posture from Ch. 3.9 is set via **Bracelet + last Sigil used**.
-

6.1 Weapon Families & Scaling

Effective attack power

$$\text{WATK}_{\text{eff}} = \text{BaseWATK} + \text{BRW} \times \text{Scale_BRW}$$

Reverse Blades (flag): -40% lethal damage by line; enables non-lethal physical finishes (see Ch. 4.8 & 6.8).

Family identities (defaults; per-line variants may tweak):

Family	Type	BaseACC	Crit	Scale_BRW	Notes
Sword	Slash	80	+5%	×10	Balanced; many get SkillACCBoost +5
Spear	Pierce	75	+7%	×11	Longer reach; slightly lower BaseACC
Hammer	Impact	70	+10%	×12	Heavy stun bias; highest scaler
Wand	Wand	85	+3%	×6	Often SkillACCBoost +10~15 ; pairs with MND builds

Example line — Swords (shop tiers + Tech Lab upgrades)

- **Iron** → 40 + BRW×8
- **Iron+** → 55 + BRW×9
- **Steel** → 80 + BRW×10
- **Steel+** → 100 + BRW×11
- **Mythril** → 140 + BRW×12
- **Hero** → 200 + BRW×13
- **Omega (craft)** → 280 + BRW×14

(You can provide analogous tables for Spears/Hammers/Wands with their scalers.)

6.2 Upgrading Weapons (UWT) — two interoperable models

A) Universal 3-step shorthand (quick balance)

- **+1 Tempered** — ATK_Power ×**1.12**, Crit ×**1.05**
- **+2 Forged** — ATK_Power ×**1.24**, Crit ×**1.10**
- **+3 Masterwork** — ATK_Power ×**1.36**, Crit ×**1.15**

B) Hybrid (shop tiers + Tech Lab scaling) (*recommended*)

Per **Tech Lab** upgrade on a specific weapon:

- +1: +20% **BaseWATK**, +1 **Scale_BRW** (*cost: 1x Alloy Ingot, 500 creds*)
- +2: +15% **BaseWATK**, +1 **Scale_BRW** (*1x Tempered Core, 1,500 creds*)
- +3: +15% **BaseWATK**, +1 **Scale_BRW** (*1x Mystic Lattice, 4,000 creds*)

Stacking: Shop tier sets a new **BaseWATK**; Tech upgrades modify that base and scaler.

You can use **either model** per line—just don't double-apply both on the same step.

6.3 Armor (UAT), Headwear, and Resistances

Armor — Universal 3-step (UAT)

- +1 Reinforced — **ArmorFlat ×1.10**, +5% Ail Resist
- +2 Fortified — **ArmorFlat ×1.20**, +10%
- +3 Impenetrable — **ArmorFlat ×1.30**, +15%

Headwear

- Grants **WardFlat** (feeds MDEF), MaxHP%/MaxMP%
 - Grants **Type Resist** (e.g., FireResist +15% → multiplies into TYPE_mind in §8.4).
Late sets may add small SkillACC/EVA bonuses.
-

6.4 Footwear — Speed vs Evasion

Typical patterns:

Line	BaseEVA	Speed	Note
Runners	15	+5	High initiative, modest dodge
Boots	25	+2	Tanky evasion profile
Sandals	10	+6	Glass-cannon tempo
Combat Shoes	20	+4	Balanced

- **Speed** adds straight to your initiative roll result each round (after TPO dice).
 - **BaseEVA** feeds both **physical** and **skill** evasion formulas (Ch. 3.5).
-

6.5 Bracelets — Sigil Slots & Grades

Grades (examples):

- **Student Band** — 2 slots, Tier cap: I
- **Research Band** — 3 slots, Tier cap: II
- **Prototype Brace** — 4 slots, Tier cap: III
- **Omega Conduit** — 5 slots, special: +1 Upgrade level cap per Sigil

Slot quality can be typed (e.g., “Red slot boosts Fire by +5%”).

Active Sigil posture: last used Sigil sets your resistance/weakness (Ch. 3.9).

6.6 Materials, Drops & Crafting

Core mats (examples):

- **Alloy Ingot** (common) — early weapon upgrades
- **Tempered Core** (uncommon) — mid upgrades
- **Mystic Lattice** (rare) — late upgrades
- **Aegis Fiber** — armor upgrades
- **Mind Prism** — headwear/bracelet tuning
- **Element Shards** (Fire/Water/Earth/Air/Data/Void) — **Mirrors/Bombs** (Ch. 7) & Sigil reforges

Sources: enemy drop tables, mission chests, salvage nodes, boss rewards.

Pacify/Capture bonus: **money ×1.5** and **drop chances ×1.5** per eligible entry (Ch. 2.1 & 4.8).

Crafting verbs (Tech Lab):

- **Refine** (combine lower mats → higher)
 - **Reforge** (apply **Upgrades I–III** to a Sigil; Ch. 2.3)
 - **Augment** (apply UWT/UAT steps; see above)
 - **Inlay** (embed slot boosts into bracelets/headwear, optional)
-

6.7 Shops & Unlocks (economy pacing)

- **Campus Protectors (on campus):** base weapon tiers, shooting range, early upgrades.
- **Hospital Pharmacy:** defensive gear, headwear with MP/HP% lines.
- **Secret Facility → Tech Lab:** **all upgrading/crafting**, Sigil reforges, late-game lines.
- **Black-Market (Downtown Back Alley):** niche lines (Reverse Blades, capture-biased weapons), rare mats.

Typical price curve (weapon line):

- Early tier: **600–1200** creds
- Mid tier: **1800–3200**
- Late tier: **5000–9000**
- End craft: mat-gated + **10k–20k** service fee

Use **Pacify/Capture** routes to afford late upgrades without grinding money excessively.

6.8 Non-Lethal Kit

- **Reverse Blades (weapon flag):** physical KOs become **Pacify**; damage –30~50% by line.
- **Pacify Sigil:** converts lethal skill finishes to **non-lethal**; still grants **SigXP**; enables **Capture windows** where scripted.
- **Capture Binds:** Weak/Standard/Strong/Elite/**Omega (100%)**—see **Ch. 4.8**.

Non-lethal yields **LXP ×0.30** (per character) **but +50% credits** and **×1.5** drop chances—strong route for materials/economy.

6.9 Data Spec (CSV)

equipment_weapons.csv

weapon_id, family(Sword/Spear/Hammer/Wand), type(Slash/Pierce/Impact/Wand),
base_watk, base_acc, crit_bonus_pct, scale_brw, skill_acc_boost,
flags(ReverseBlade;NonLethal;...), shop_tier, price, notes

weapon_upgrades.csv (hybrid model)

weapon_id, step(+1/+2/+3), basew_atk_pct, scale_brw_delta, mat_id, mat_qty, price

equipment_armor.csv

armor_id, armor_flat, ail_resist_pct, uat_step(0..3), price, notes

equipment_headwear.csv

head_id, ward_flat, maxhp_pct, maxmp_pct, type_resists(Fire=15;Air=10;...), price, notes

equipment_footwear.csv

foot_id, base_eva, speed, price, notes

bracelets.csv

bracelet_id, slots, tier_cap(I/II/III), slot_bonuses(Red+5;Blue+5;...), price, notes

materials.csv

mat_id, rarity(Common/Uncommon/Rare/Epic), sources(encounter ids), sell_price, notes

crafting_recipes.csv

recipe_id, type(Refine/Reforge/Augment/Inlay), input(list), output(list), station(TechLab/BlackMarket), price, story_gate

6.10 Designer Knobs (fast tuning)

- **Scale_BRW by family** (10/11/12/6 default).
- **BaseACC/Crit per line** (Spear/Hammer swingier, Wand most accurate).
- **UWT/UAT multipliers** (1.12/1.24/1.36 and +8,+6/+18, +12/+24, +18 defaults).
- **Reverse Blade penalty** (-40% nonlethal damage).
- **Headwear Ward/HP/MP % ceilings** (e.g., 12/10/10 early → 20/18/18 late).
- **Footwear Speed/EVA envelope** (+6 Speed cap early → +8 late).
- **Bracelet slot/tier caps** to gate Sigil loadouts.
- **Flat defense** (see §3.10)

Worked Example — Building a midgame striker

- **Weapon: Steel+ Sword** → $100 + \text{BRW} \times 11$, BaseACC 80, Crit +5%, SkillACCBoost +5
 - **Footwear: Combat Shoes** → BaseEVA 20, Speed +4
 - **Armor: Fortified (UAT +2)** → DEF $\times 1.20$, Ail Resist +10%
 - **Headwear: Scholar's Band** → WardFlat +12, MaxMP +10%
 - **Bracelet: Research Band** → 3 slots, Tier cap II
 - **Outcome:** high hit reliability and tempo (Speed +4), solid physical soak from UAT +2, early Tier-II Sigils via bracelet; great platform for **TPO-heavy** builds (Ch. 3 & 4).
-

Chapter 7 — Items, Consumables & Status

What this chapter is:

Everything you can use: heals, buffs, debuffs, mirrors, bombs, binds, escape tools, study items, UXBs, and gifts—plus exactly when effects stack and how durations tick.

Covered systems:

- **Global timing/stacking:** Action costs, duration rules.
- **Healing/resources:** Battle vs field.
- **Buffs/debuffs/ailments:** Catalog and cure links.
- **Elemental tools:** Mirrors & bombs; craft links.
- **Binds & non-lethal:** Capture ladder; economy ties (**Ch. 15**) and Morality (**Ch. 14**).
- **Escape tools:** Smoke and locks.
- **Study items & UXBs:** Phase-consuming XP tools; weekly caps.
- **Gifts:** With Bond hooks.
- **Knobs & data:** Tuning and CSVs; “Boss Run, No MP” example.

How to read it:

Cross-check capture with **Ch. 4** and **Ch. 10** (boss windows), craft/economy with **Ch. 6/15**, and Bond effects with **Ch. 5**.

7.0 Use Timing & Stacking (global rules)

- **Action cost:** Using an item in battle consumes your **turn**. Using **study items** or **UXBs outside combat** consumes a **phase** per **Ch. 1.2** (UXBs can also be used from menus; still consumes a phase).
 - **Resolution order (on use):** pay cost → apply effect → set **duration counters** (count down at **Start of Round**, Ch. 4.10).
 - **Stacking:**
 - Same-named buffs/debuffs do **not** stack; take the stronger and **refresh** duration.
 - Different buffs **multiply** in this order: **TYPE** → **Tier/Upgrade (Sigils)** → **Crit** → **(1 + buffs – debuffs)**.
 - **Durations (default):** **3 rounds** for short buffs/debuffs, **5 rounds** for Reflect/Regen; items can override.
 - **DoTs: Poison/Burn = 5% MaxHP/turn** (ticks at **Start of Round**).
-

7.1 Healing & Resource Items

Item	Use	Effect	Notes
Balm	Battle/Field	Restore HP (small/med/large lines)	Percent or flat; data-driven
Inhaler	Battle/Field	Restore MP (small/med/large)	Overcast still allowed (Ch. 3.3)
Revive Kit	Battle	Revive KO to 25–50% HP	KO at victory still halves LXP (Ch. 2.1)
Elixir	Battle/Field	Restore HP+MP (mid/mega)	Rare; set late-game prices

7.2 Buff Items (self/ally)

Item	Buff	Default	Notes
Protein Drink	Attack Up	+25% ATK, 3r	Affects physical damage step
Espresso Shot	Mind Up	+25% MND, 3r	Affects Sigil damage step
Regen Orb	Regen	5% MaxHP/turn, 5r	Ticks at Start of Round
Speed Orb	Haste/Quick	+10 Speed (init add), 3r	Don't stack with footwear Speed; take higher
Shield Orb	Protect/Shell	-20% dmg taken, 3r	Applies after flat PDEF/MDEF soak (Applied in the same post-soak stage as Defend; they stack multiplicatively (Defend ×0.7, Shield ×0.8 → ×0.56))
Eye Drops	Accuracy Up	+10 Hit%, 3r	Applies before clamp
Candy	Evasion Up	+10 Eva%, 3r	Applies before clamp
Focus Tonic	Skill ACC Boost	+10 SkillHit%, 3r	Adds to skill accuracy bucket

All % are defaults; tune in data. Buffs refresh if re-applied.

7.3 Debuffs, Ailments & Cures

Ailments (defaults):

- **Poison** (DoT 5% MaxHP/turn) → **Antidote**
- **Burn** (DoT 5% MaxHP/turn) → **Ointment**
- **Sleep** (skip turns) → **Smelling Salts**
- **Freeze** (skip turns) → **Heated Blanket**
- **Mind Block** (*skill lock / skill Hit% down*) → **Stimulant Pill**
- **Confused** (random targeting) → **Clarity Water**
- **Charm** (acts for enemies) → **Zapper**
- **Berserk** (forced attack, −EVA, +ATK) → **Stress Ball**
- **Malaise** (initiative delay, −Speed) → **Energy Drink**

Stat-Down cures (vitamins):

- **Attack Down** → **Vitamin D**
- **Defense Down** → **Vitamin C**
- **Mind Down** → **Vitamin B**

Defend blocks crit/stumble but not most standing ailments. Cleanse priority is per item (remove 1 vs remove all).

7.4 Elemental Tools — Mirrors & Bombs (Tech Lab)

Mirrors (Reflect): Fire / Water / Earth / Air / Data / Void

- **Effect:** Reflects the **next** incoming skill of that element (or **all for 1 round** on deluxe versions).
- **Duration:** **1 reflected hit** (basic) or **1 round** (deluxe).
- **Crafting:** Element Shards × N + creds (see §7.10).

Bombs (Offense): Fire / Water / Earth / Air / Data / Void

- **Effect:** Fixed-potency **AOE** elemental damage (ignores weapon ACC; uses item ACC = 100% unless target has **Reflect**).
 - **Potency:** tune per tier (Basic ~100 POT single-target equiv; AOE factor ~0.7).
 - **Use cases:** chip + trigger **Stumble** via weaknesses without MP.
-

7.5 Capture Binds & Non-Lethal Kit

Binds (Capture): Weak / Standard / Strong / Elite / Omega (100%)

- **Use:** Attempt to **Capture** a valid target (formula in Ch. 4.8).
- **State bonuses:** +15 if **Sleep/Freeze/Bound**, +10 if **Stunned/Fallen**.

Pacify & Reverse Blades:

- **Pacify Sigil:** converts lethal finishes to **non-lethal KOs**; still grants **SigXP**.
- **Reverse Blades:** weapon flag—**non-lethal physical**; –30–50% lethal damage by line.

Rewards for non-lethal (Pacify/Capture):

- **LXP ×0.30** (per character; still uses their own level diff ladder, Ch. 2.1)
 - **Money ×1.5** and **each eligible drop ×1.5 probability** (*cap to 100%, respect table caps*)
-

7.6 Escape Tools

Item	Effect
Smoke Grenade	Auto escape from non-locked battles
Flash Pop	Party Evasion Up + attempt Run with +20% to Run% (Ch. 4.9)

7.7 Study & Training Items (consume a phase; see Ch. 1.2)

Item	SXP	Target
Study Guide	+15	Any stat
Workbook	+12	TPO/FCS only
Field Manual	+20	BRW/VTL only
Tutor	+12	Any stat (<i>weekly-limited</i>)

Weekly diminishing (7 actions/stat at 100%, beyond at 50%) applies **after** adding SXP (Ch. 1.4).

7.8 UXBs — Universal eXperience Boosts (*LXP only*)

Pack	LXP
UXB-S	300
UXB-M	900
UXB-L	2400
UXB-XL	6000

- Apply to any party member (great to catch up under-leveled allies).
 - **Field-only; cannot be used in battle.**
 - Consumes a phase when used from the menu.
-

7.9 Gifts (Bond System tie-in)

- **When:** At the end of a bond event (not during GGT).
 - **Effect on event EP:** Disliked +0, Neutral +2, Liked +4 (subject to **Pass+1 cap** with synergy; Ch. 5.2).
 - **Presentation:** liked gifts appear in rooms; disliked may appear in trash.
 - **Purchase:** around town (Café, Card Shop, Florist, etc.).
-

7.10 Crafting & Shops (where to get what)

- **Tech Lab (Secret Facility):** craft **Mirrors/Bombs**, apply **Sigil Upgrades I–III**, perform **UWT/UAT** upgrades, and **bracelet inlays**.
- **Campus Protectors:** weapon tiers & some Reverse Blades.
- **Hospital Pharmacy:** defensive gear, cures, **Headwear** lines (HP/MP%).
- **Back-Alley Market:** rare **Binds**, niche Reverse Blades, high-tier bombs/mirrors.
- **Materials:** **Element Shards** (Fire/Water/Earth/Air/Data/Void), **Alloy Ingot**, **Tempered Core**, **Mystic Lattice**, **Aegis Fiber**, **Mind Prism**.

Sample craft recipe (Bomb, Fire-Basic):

ElementShard(Fire)×2 + AlloyIngot×1 + 300 creds → Fire Bomb×1

7.11 Designer Knobs (quick tuning)

- **Buff magnitudes:** Attack/Mind **+25%**, ACC/EVA **+10%**, Shield **-20%**, Regen **5%**—safe defaults.
 - **Durations:** 3r short, 5r long; Reflect 1 hit vs 1 round.
 - **Reverse Blade penalty:** **-30~—50%** lethal damage.
 - **Bomb potency:** single-target equiv **POT 100–140**; AOE factor **0.7**.
 - **Bind ladder:** ItemMod (+10/+25/+40/+60/auto).
 - **Non-lethal rewards:** **LXP ×0.30, credits ×1.5, drops ×1.5** (cap).
 - **Study item stock:** limit **Tutor** per week; rotate store stock for Study Guides/Workbooks/Field Manuals.
-

7.12 Data Spec (CSV)

items_core.csv

item_id, category(Heal/Buff/Debuff/Cure/Bomb/Mirror/Bind/Study/UXB/Gift/Key), name, tier, price, shop_tags(...),"battle_use"(0/1),"field_use"(0/1), notes

items_effects.csv

item_id,
effect_type(HP%/HPflat/MP%/MPflat/Buff/Debuff/Cleanse/Reflect/GrantStatus/RunMod), value, duration_rounds, stacks(Refresh/Replace/None),
target(Self/Ally/Party/Enemy/AllEnemies),
element(None/Fire/Water/Earth/Air/Void/Data), flags(…)

bombs.csv

item_id, potency_single_equiv, is_aoe(0/1), aoe_factor, element, craft_cost(mats+creds)

mirrors.csv

item_id, element, mode(Hit/Duration), duration_rounds, craft_cost

binds.csv

item_id, tier(Weak/Standard/Strong/Elite/Omega), item_mod, notes

study_items.csv

item_id, sxp, stat_mask(BRW;VTL;TPO;FCS;MND), weekly_cap, consumes_phase(1)

uxbs.csv

item_id, lxp, consumes_phase(1)

gifts.csv

gift_id, shop_id, price, liked_by(ids), neutral_for(ids), disliked_by(ids)

materials.csv

mat_id, rarity, sources(encounters;nodes;bosses), sell_price

Worked Example — “Boss Run, No MP”

- **Turn 1: Eye Drops** (+10 Hit%) → striker lands Stumble reliably next turn.
 - **Turn 2: Fire Bomb** triggers weakness → team gains Burst, boss **Stumbles**.
 - **Turn 3: Shield Orb** pre-telegraph → boss ultimate hits into **−20% dmg taken**; healer uses **Balm+**.
 - **Add-phase:** bind a weakened elite with **Elite Bind**; next cycle you **Pacify** boss → you gain **LXP ×0.30** but **credits ×1.5** and **drops ×1.5**.
-

Chapter 8 — Weapon & Mind Types, and the Active Sigil

What this chapter is:

The TYPE layer: the physical triangle, the Mind wheel (including Data/Void/Omega), and how your active Sigil sets defensive posture.

Covered systems:

- **At a glance:** All advantages/weaknesses.
- **Weapon triangle:** Physical matchups and where TYPE multiplies.
- **Mind wheel:** Elemental relations, including Data/Void; Omega behavior.
- **Active posture:** How last cast sets defense.
- **Where TYPE applies:** Exact step in the damage pipeline.
- **Hybrids & edge cases:** Multi-type skills, reflects.
- **Defaults & guidance:** Authoring rules, CSVs, examples.
- **Checklist:** Implementation order.

How to read it:

Keep open alongside **Ch. 3/4** for math placement and **Ch. 10** for authoring enemies postures.

8.0 Type Advantage at a Glance

- **Physical layer:** Slash > Impact > Pierce > Slash. Wand is neutral.
- **Mind layer:** Fire > Air > Earth > Water > Fire and Data ↔ Void (each is strong vs the other).

- **Posture:** Your **Active Sigil** (last Sigil used) sets your **self-type** until you use another. You **resist your own type** and are **weak to its counter**.
- **Omega:** While the **Omega Sigil** is active you have **no weaknesses** (neutral to incoming), but your outgoing skills still use their own Mind type for offense.

Default multipliers (designer-tunable, used throughout the book):

- **Weakness (you hit their weakness):** $\times 1.25$
 - **Resist (they resist your type):** $\times 0.75$
 - **Neutral:** $\times 1.00$
-

8.1 Weapon Type Triangle (physical)

Attacker (weapon)	Strong vs ($\times 1.25$)	Weak vs ($\times 0.75$)	Notes
Slash	Impact	Pierce	Many swords offer small SkillACCBoost
Pierce	Slash	Impact	Spears skew toward Crit
Impact	Pierce	Slash	Hammers have the highest Scale_BRW
Wand	—	—	Always neutral for the triangle

Where it applies: the triangle contributes a **TYPE** multiplier in the **physical** damage pipeline (see §8.4).

Stumble hook: landing a **weakness** (e.g., Slash into Impact) still counts as a Stumble source (+25% & pushback; Ch. 4.5).

8.2 Mind Type Wheel (Sigils)

Attacker (Sigil)	Strong vs ($\times 1.25$)	Weak vs ($\times 0.75$)	Notes
Fire	Air	Water	
Water	Fire	Earth	
Earth	Water	Air	
Air	Earth	Fire	
Data	Void	—	Rivalry pair with Void
Void	Data	—	Rivalry pair with Data
Omega	—	—	See §8.6

Where it applies: a **TYPE** multiplier in the **skill** (Sigil) damage pipeline (see §8.4).

Reflect note: **Mirrors** (Ch. 7) check the **skill's element**, not your posture.

8.3 Active Sigil Posture (your defensive typing)

- **Setting posture:** Your posture becomes the type of the **last Sigil you cast**.
- **Self-type effects:**
 - **Resist your own type** (incoming Fire vs Fire-posture uses $\times 0.75$ by default).
 - **Weak to the counter** (incoming Water vs Fire-posture uses $\times 1.25$).
- **Duration:** persists until you cast a different Sigil, swap mid-battle through a posture skill (if present), or enter battle with a **preset starting posture** from the menu.
- **Physical attacks:** posture **does not** affect physical TYPE (triangle only).
- **Gear synergy:** Headwear/bracelet **Type Resist %** applies multiplicatively with posture (see §8.4 order).

UI: Show a small **type crest** under the HP/MP frame; pulse when posture changes.

8.4 Where TYPE math applies (order of operations)

For physical damage (full formula in Ch. 3.6.1):

$$\text{Pre} = (\text{BaseWATK} + \text{BRW} \cdot \text{Scale_BRW}) \cdot \text{POT}/100$$

$$\text{ATK_Power} = \text{Pre} \cdot (1 + \text{TYPE_weapon}) \cdot (\text{Crit?2:1}) \cdot (1 + \text{buffs} - \text{debuffs})$$

Flat soak happens per hit (H hits $\rightarrow \sqrt{H}$)

$$\text{PDEF_perHit} = \text{PDEF} / (H^{**0.5})$$

$$\text{Raw} = \max(\text{ATK_Power} - \text{PDEF_perHit}, 0)$$

$$\text{DMG} = \text{floor}(\text{Raw} \cdot (\text{Defend?0.7:1}) \cdot (\text{ShieldOrb?0.8:1}) \cdot \text{OtherDefMults})$$

$$\text{DMG} = \max(\text{DMG}, \text{ceil}(\text{ATK_Power} \cdot \text{DMG_FLOOR}))$$

For Sigil damage (Ch. 3.6.2):

$$\text{PreM} = (\text{SIG} + \text{MND} \cdot \text{S_MND}) \cdot \text{POT}/100$$

$$\text{SKILL_Power} = \text{PreM} \times (1+\text{TYPE}) \times (\text{Crit?2:1}) \times (1+\text{buffs}-\text{debuffs})$$

$$\text{MDEF_perHit} = \text{MDEF} / (H^{**0.5})$$

$$\text{Raw} = \max(\text{SKILL_Power} - \text{MDEF_perHit}, 0)$$

$$\text{DMG} = \text{floor}(\text{Raw} \cdot (\text{Defend?0.7:1}) \cdot (\text{ShieldOrb?0.8:1}) \cdot \text{OtherDefMults})$$

$$\text{DMG} = \max(\text{DMG}, \text{ceil}(\text{SKILL_Power} \times \text{DMG_FLOOR}))$$

TYPE_mind order (multiplicative):

1. Wheel (attacker's element vs defender's posture) \rightarrow 2) Gear Type Resist (headwear/bracelet) \rightarrow 3) Story/arena modifiers.
TYPE multiplies **before** flat defense. Then subtract PDEF/MDEF, then Defend/Shield, then apply the throughput floor (§4.4a).

8.5 Hybrids & Edge Cases

- **Hybrid moves (rare):** if a move is flagged **Hybrid**, resolve **two pipelines**—a physical line using the triangle and a Sigil line using the wheel—then **sum** (each portion can Stumble independently).
 - **Neutralization:** If both a **weakness** and a **resist** would apply from different sources (e.g., posture says weak but headwear has +25% Type Resist), they multiply ($\times 1.25 \times 0.75 \times 0.75$ for extra gear, etc.). No additive canceling.
 - **AOE:** TYPE checks are **per target** (so mixed-posture packs yield mixed results).
 - **Reflect (Mirrors):** If the target has a **matching Mirror**, the skill **bounces**; posture does not stop a Mirror.
-

8.6 Omega Sigil (no weaknesses)

- **Defensive effect:** While **Omega** is active, you count as **neutral** to incoming Mind hits (no wheel weakness). Gear Type Resist still applies.
 - **Offense:** Outgoing skills still have their **own element** and therefore can **hit weaknesses** normally.
 - **Duration & access:** Tied to route/story unlocks and **Burst Tier 3** rules (Ch. 4.7 / Ch. 5 Core), as authored in your content.
-

8.7 Stumble, Fall, and TYPE

- **Stumble trigger:** Any **weakness hit**—triangle or wheel—adds the Stumble bonus (**+25% damage & pushback**; Ch. 4.5).
 - **Fall:** Two weakness hits on the same target **in the same round** → **Fall** (skip next turn); interrupts channeling.
 - **Defend:** Cancels Stumble/Crit resolution for the defending turn.
-

8.8 Design Defaults & Knobs

- **Wheel & triangle multipliers:** Weakness **+25%**, Resist **-25%** ($\times 1.25/\times 0.75$).
 - **Posture change:** **On cast** of any Sigil (no extra action). Optional perk can add “**Guarded Shift**” (posture swap on **Defend**).
 - **Headwear Type Resist bands:** **+10% / +15% / +20%** are safe tiers (stack multiplicatively).
 - **Wand policy:** always neutral on triangle, but lines can carry **SkillACCBoost** to make casters reliable.
 - **AOE tuning:** most AOE skills use **~70%** of single-target potency (Ch. 4).
 - **Omega stance limits:** consider disabling passive posture resist while **Omega** is active (already neutralizes weaknesses) to avoid over-tanking—current rule: **neutral only**.
-

8.9 Authoring Guidelines (content)

- **Always tag:** weapon_type (Slash/Pierce/Impact/Wand) for attacks; element (Fire/Water/Earth/Air/Data/Void/Omega) for skills.
 - **Set SkillBaseACC** per move; do not infer from element.
 - **Signal posture** changes in VFX/SFX; color the actor rim with the current **posture color**.
 - **Teach:** early dungeons should showcase one triangle corner and one wheel arc with obvious telegraphs.
-

8.10 Data Spec (CSV)

types_weapon_triangle.csv

attacker_type, strong_vs, weak_vs, neutral_vs

Examples:

Slash,Impact,Pierce,Wand

Pierce,Slash,Impact,Wand

Impact,Pierce,Slash,Wand

Wand,always_neutral

types_mind_wheel.csv

element, strong_vs, weak_vs

Fire,Air,Water

Water,Fire,Earth

Earth,Water,Air

Air,Earth,Fire

Data,Void,

Void,Data,

Omega,, (Rivalry = each strong vs the other; no inherent weak_vs. Omega has neither.)

skills.csv (*relevant columns; others live in your skills DB*)

skill_id, name, element(Fire/Water/Earth/Air/Data/Void/Omega/None), base_mp,
base_pot, base_acc, flags(CH1;CH2;Hybrid;StumbleBoost;...), upgrade_tier_cap(I/II/III)

attacks.csv

attack_id, name, weapon_type(Slash/Pierce/Impact/Wand), pot, base_acc,
flags(MultiHit;Hybrid;...)

gear_type_resists.csv

gear_id, element, resist_pct (*applies multiplicatively in TYPE_mind step*)

posture_rules.csv

actor_type(Player/Enemy/Boss), start_posture(element or None),
change_rule(OnCast/OnDefend/Scripted), omega_neutralize(0/1)

8.11 Worked Examples

A) Physical triangle Stumble

- You use **Steel+ Sword** (Slash) vs **Armored Bruiser** (Impact).
- Triangle gives **×1.25** TYPE; you also trigger **Stumble** (+25% & push).
- Damage pipeline applies **triangle** before Crit/buffs; then Armor/VTL/Defend per Ch. 3 & 4.

B) Wheel with posture & headwear

- You cast **Inferno (Fire)** on a **Wind Dancer** currently in **Air** posture with **Headband(+15% Fire resist)**.
- Wheel: Fire **strong vs Air** → **×1.25**.
- Gear: +15% Fire Resist → **×0.85**.
- Net TYPE = **1.25 × 0.85 = 1.0625 (~+6.25%)**. You **do** Stumble (because wheel weakness was hit), then proceed to Crit/buffs and Ward/FCS.

c) Omega defense

- You toggle **Omega**. An enemy casts **Water** at you.
 - Defensive TYPE is **neutral** (no weakness), then Headwear's **Type Resist** applies if present (e.g., +10% → $\times 0.90$).
 - Your own outgoing **Fire** still hits **Air** for **$\times 1.25$** .
-

Implementation Checklist

- Apply **TYPE_weapon** only to **physical** moves; **TYPE_mind** only to **Sigils** (unless **Hybrid**).
 - **Active posture** updates **on Sigil cast**; store it per combatant.
 - Multiply **wheel result × gear type resist × story modifiers** into a single **TYPE_mind** factor before Crit/buffs.
 - **Omega** sets a flag that forces **neutral defensive TYPE** (do not remove gear resist).
 - Ensure **Stumble** can come from **either** triangle or wheel weakness hits.
-

Chapter 9 — Campaign Pacing & Calendar

What this chapter is:

The macro-metronome: month flow, action budgets, social cadence, mission frequency, VR catch-up, deadlines, and pacing targets.

Covered systems:

- **Season overview:** May 5 → Jan 1 scaffold.
- **Action budget:** Monthly templates and variance.
- **Bond throughline:** What must be scheduled to complete arcs.
- **Weekly rituals:** Sundays; restocks; conversions.
- **VR scaling & catch-up:** Keeping replays relevant.
- **Targets:** Month-by-month goals for stats/levels/affinity.
- **Deadlines:** Warning windows and fail behavior.
- **Availability:** Who's around when.
- **Knobs & CSVs:** Calendar data; worked September week.

How to read it:

Use it to validate outcomes from **Ch. 2** (total SXP/LXP/BAXP possible), and to time **Ch. 11** (Affinity conversions) and **Ch. 15** (restocks).

9.0 Season Overview (May 5 → Jan 1)

Story beats & intended level bands

Month	Narrative Milestones	Enemy Lv (area)	Intended Hero Lv (end)	Roster notes
May (tutorial)	Wake in hospital; meet Secret Girl	1–5	5	Party: you + Secret Girl
June	First mission; recruit Best Friend ; rescue Blue Girl	5–15	12–14	Secret Girl + Best Friend dorm join
July	Blue Girl recovers & joins; meet Therapist & AI Friend (in disguise); save Red Girl	15–25	20–22	Best Friend officially active
August	Red Girl joins; find Scientist	25–35	30–32	Midgame unlocks start
September	Scientist joins; Green Friend joins; rescue AI Friend	35–45	40–42	All dorm members online
October	Secret Girl kidnapped (unavailable)	45–55	50–52	Party comp changes
November	Big Mansion arc; “fake ending”	55–70	65–67	By late Nov you can max Core Bonds
December	2 weeks for bond catch-up, 2 weeks for specials	65–75	72–75	Social cleanup, prep
Jan 1	True Endgame	70–90	80–90	Final builds & routes lock

Design note: These are **targets**, not walls. VR exists to raise enemy Lv on past content (see §9.4) so players can grind **LXP** inside the calendar without breaking bond pacing.

9.1 Monthly Action Budget (default template)

Each month you get roughly **30 days × 3 actions = 90 actions** (May has fewer; Jan 1 is a single set-piece day).

Recommended monthly cadence (baseline tuning):

- **Missions:** 3 Afternoons (do **not** end the day)
- **VR runs:** 1–2 Afternoons (**end the day** → you lose that Evening)
- **Hangouts:** plan ~20–24 day-slots for bonds (more in summer/fall; fewer in May/Jan)
- **Stat training / jobs / classes:** fill the rest around gates, fatigue, and attendance
- **Bonus Dates:** 0–2 per Love per month (if the player wants Affinity push)

Quick math (example month, 30 days):

- **Raw slots:** 90
 - **VR penalty:** 2 days lose Evening → **–2** slots (down to **88**)
 - **Everything else** (Missions, training, hangouts, items) still **consumes a slot**—this template is about *mix*, not “free” time.
-

9.2 Bond Throughline (what you must schedule)

- **Total core scenes:** **164** ($12 \text{ Loves} \times 8 + 17 \text{ Others} \times 4$)
- **Buffers (GGT):** **+12** salvage slots by design → **176** total **hangout** day-slots budgeted
- **Finish line:** You should be able to **complete all Core Bonds** by **late November**, leaving **December** for clean-up and specials.
- **Cadence that works:** **2 Love : 1 Other** rotation, flexing for gates and recruitment timing (some characters aren't available until July–September).

Full rules for Pass/EP/Gifts/GGT are in **Ch. 5**. Remember **VR afternoons end the day**—don't schedule an Evening hangout after VR.

9.3 Weekly Rituals (Sundays matter)

- **BAXP conversion:** Pairwise battle points tally all week, then **convert on Sunday** (see **Ch. 2.6**).
 - **Dorm management:** You can **reassign rooms on Sundays** (Bestie adjacency bonuses / Rival penalties; see Dorm System).
 - **Fatigue reset: SXP diminishing** per stat resets **every Monday** (Ch. 1.4).
 - **Planner tip:** Front-load training Mon–Thu; reserve **Fri/Sat** for hangouts and **Sun** for logistics or a Mission.
-

9.4 VR Scaling (how re-runs stay relevant)

Goal: revisit an old mission in **VR** and fight **up-leveled** enemies for modern **LXP** (no SXP, ends day).

Enemy level in VR

`EnemyLv_VR = max(OriginalLv, floor(AvgPartyLv) + Boost) with presets
(+2/+5/+8/+12).`

- **Boost presets:** +2 (Casual) • +5 (Standard) • +8 (Hard) • +12 (Over)
- Designers may expose a slider; cap with content tier if desired.

Persistence: the **chosen Boost is stored per mission instance**; re-runs keep the same Boost unless the player changes it at VR setup. (Prevents silent difficulty drift mid-day.)

Everything else stays canonical: same formations, same bosses (with level-scaled stats). **LXP** uses the **per-character** level-difference ladder (Ch. 2.1).

Pacify/Capture still pay **0.30× LXP** but **1.5× credits** and **1.5× item odds**.

Why this works: Players can choose **VR** to hit the Δ -ladder sweet spot ($\Delta \geq 0 \rightarrow \times 1.00$) and trade one Evening for a big **LXP** push.

9.5 Encounter Rails & Catch-Up

- **Under-leveled detection:** If the hero is ≥ 5 levels below the area's **median enemy Lv**, surface **VR (Standard)** as a tip and stock **UXBs** in shops.
 - **Boss gates:** If the player enters at $\Delta \leq -7$, allow a **one-time assist** (temporary **Shield Orb** effect for the first 3 rounds) and hint the relevant **weakness**.
 - **Economy bridge:** Promote **Pacify/Capture** for **materials/money**—it pays **1.5× creds & drops** even while giving **0.30× LXP** (good for mats while leveling via VR/Missions).
 - **Study surge:** After a major loss, unlock **Tutor +1** extra that week.
-

9.6 Month-by-Month Targets (what “good pace” looks like)

Month	Target Lv	Missions	VR	Hangouts	SXP Focus	Sigil Targets	BPP gain*
May	1→5	2	0	6–8	Learn loop; light SXP	1–2 sigils to Lv2	+1 (creation)
June	5→12/14	3	1	16–18	Core stats to 3–4	Main sigil Lv3	+3 (Lv 3/6/9)
July	14→20/22	3	1–2	18–20	Push chosen build	Main sigil Lv4; UST II unlock	+2 (Lv 12/15)
August	22→30/32	3	1–2	20–22	Start second tree	Start Upgrades I	+2 (Lv 18/21)
September	32→40/42	3	2	20–22	Sustain 4× stats	Finish Upgrades II	+2 (Lv 24/27)
October	42→50/52	3	2	18–20	Cover weaknesses	Prep UST III	+2 (Lv 30/33)
November	52→65/67	3–4	2	20–22	Gate clears for Core	Upgrades III on mains	+3 (Lv 36/39/42)
December	67→72/75	2	1	10–14	Clean-up to 4×9, 1×11 path	Finish reforges	+2 (Lv 45/48)
Jan 1	75→80–90	—	—	—	Final tune	Omega route active	+? (Lv 51... up to 99)

* **BPP gain:** +1 at creation, then **+1 every 3 levels** (Ch. 2.4). Hidden world BPP (**+22**) are placed across June–December.

Interpretation: By late **November**, players who keep up with the social cadence should be on track for **all Core Bonds** and have **every stat ~9–10**. With the tuned SXP curve, a run that **finishes all Bonds** can just barely reach **all 10s** by **December**. Any **11s** require trading away **~33 training slots** each (often at the expense of hangouts or by leaning on scarce study items). **NG+** is the clean route to push **multiple 11s** or **11×5** if you dedicate the calendar to training.

9.7 Mission Cadence & Deadlines

- **Default cadence:** **~3 Missions/month**, spaced ~10 days apart.
 - **Deadline policy:** Some Missions mark **hard deadlines** (UI-visible). Missing a deadline → **game over** (or alternate fail route, per content).
 - **Prep windows:** Each Mission telegraphs **recommended Lv** and **type hints** (triangle/wheel).
 - **Evening after Missions:** free for **hangouts** or **Secret Training** (VR would have ended the day—don’t mix those).
-

9.8 Social Windows (who’s available when)

- **Recruitment timing:** Several allies are **unavailable** for hangouts until joined:
 - **Blue Girl** (June → July recovery), **Red Girl** (July → August join),
Scientist/Green Friend (September), **AI Friend** (rescued by mid-Sept).
- **October constraint:** **Secret Girl** is kidnapped—flag events as **locked** until that arc completes.
- **Love-route caps:** Core **Anchor** is reachable by **late November** if you kept pace.
Bonus Dates (0–2/mo) should **not** count toward CBXP (Ch. 5).

9.9 Exam & Attendance Rewards (monthly)

- Attendance check: If **≥75%** Morning Class/Elective, award **+10 SXP** at month end (**+6 FCS / +4 MND**).
 - **Overflow:** spill to **weakest non-capped** stat (player chooses on tie). If all stats capped, excess is lost.
 - UI timing: Pay this after the last day of the month, before any auto-sleep into the next month.
-

9.10 Designer Knobs (pacing levers)

- **Missions/month:** 2–4 (default 3).
 - **VR/month:** 1–3 (default 1–2).
 - **VR Boost presets:** +2/+5/+8/+12; cap against content tier.
 - **Hangout budget:** 18–24 per 30-day month (target 176 total across the season).
 - **BPP world count:** 22 hidden; spread their availability with soft stat gates.
 - **Under-level assist:** enable/disable one-time **Shield Orb** pre-buff when $\Delta \leq -7$.
 - **Deadline strictness:** hard fail vs soft fail route.
-

9.11 Data Specs (calendar & pacing CSVs)

calendar_days.csv

date, month, weekday, is_storylock(0/1), allows_mission(0/1), allows_vr(0/1), notes

pacing_targets.csv

month, enemy_lv_min, enemy_lv_max, hero_lv_target_min, hero_lv_target_max, missions_target, vr_target, hangout_target_min, hangout_target_max

vr_rules.csv

mission_id, original_lv, vr_boost_default(+5), vr_boost_min, vr_boost_max, cap_lv, ends_day(1)

deadlines.csv

mission_id, date_due, fail_behavior(GameOver/AltRoute), ui_warning_days

availability.csv

character_id, available_from_date, unavailable_to_date(optional), phase_mask(M/A/E), gate(StoryFlag/StatGate)

bpp_world.csv

bpp_id, location_id, gate(Story/Stat/Item), hint_text, month_hint

9.12 Worked Week (September, “all systems on”)

- **Mon:** Morning **Class** (+6 SXP FCS); Afternoon **Clinic** (+8 VTL); Evening **Hangout** (Love) → **Pass +1 CBXP**
- **Tue:** Morning **Elective** (+6 to weakest → MND); Afternoon **Mission** (LXP only); Evening **Bonus Date** (+BAXP, +4 SXP if flagged)
- **Wed:** Morning **Skip School (Fishing)** (+8 BRW); Afternoon **Track** (+8 TPO); Evening **Secret Training (TPO)** (+6 + synergy +4)
- **Thu:** Morning **Class** (+6 FCS); Afternoon **VR (Standard)** (LXP only, **ends day**)
- **Fri:** Morning **Library** (+8 MND); Afternoon **Meditation** (+8 FCS); Evening **Hangout** (Other) → **Pass +2 CBXP**
- **Sat:** Morning **Basketball** (+6 VTL); Afternoon **Gym** (+8 BRW); Evening **Karaoke** (+8 TPO)
- **Sun:** **BAXP converts, reassign dorm, fatigue resets Mon.**

This cadence hits **LXP** via Mission/VR, **CBXP** via two hangouts, **SXP** across four stats with one **Secret Training** synergy, and **BAXP** via a Bonus Date.

Chapter 10 — Enemies, Encounters & Boss Playbooks

What this chapter is:

How foes are built and behave: stat curves, posture rules, loot, encounter budgets, boss phases/telegraphs, and AI packages. Includes corrected defense fields and posture authoring.

Covered systems:

- **Enemy anatomy:** Fields and curves.
- **Resist/posture/ailments:** Correct locations; start_posture & rules.
- **Capture/pacify:** Eligibility and windows.
- **Loot & rewards:** Drops, creds, VR parity.
- **Encounter building:** EP budgets, formations, multi-wave.
- **Boss playbooks:** Phases, CH telegraphs, windows.
- **VR variants:** Boosts and constraints.
- **AI:** Weights, triggers, packages.
- **CSVs & knobs:** Specs, examples, checklist.

How to read it:

Authoring reference for **Ch. 4** timing and **Ch. 14** boss pacify deltas; ties to **Ch. 15** for rewards.

10.0 Enemy Anatomy (what every enemy has)

- **Identity:** enemy_id, name, archetype (Bruiser / Skirmisher / Caster / Tank / Glass / Balanced), environment tag (Regular / Miniboss / Boss).
 - **Level:** drives stat/HP/MP generation and LXP payout (Ch. 2.1).
 - **Stats:** BRW, VTL, TPO, FCS, MND (1–10 scale like players; generated by archetype + level).
 - **Derived:** MaxHP, MaxMP, PDEF (from ArmorFlat & VTL), MDEF (from WardFlat & FCS), BaseACC, BaseEVA, Speed seed.
 - **Typing:** Weapon type (Slash/Pierce/Impact/Wand) for physical; Mind type (Fire/Water/Earth/Air/Data/Void/Omega) for skills; posture rules (fixed or scripted).
 - **Ailments:** inflict list, ailment susceptibility table.
 - **Capture & Non-lethal:** BindResist score and windows (bosses only in flagged phases); Pacify-eligible flag.
 - **Loot:** creds, materials, optional equipment, drop odds.
 - **AI:** package name + weights, priority rules, triggers.
 - **Telegraphs:** CH1/CH2 moves, stance shifts, vulnerability windows.
-

10.1 Stat Curves & Generation

Goal: “same language as players” (1–10 stats) with leaner HP/MP so %-based effects stay relevant.

10.1.1 Archetype baselines (A) & growth (G)

For each stat $S \in \{\text{BRW}, \text{VTL}, \text{TPO}, \text{FCS}, \text{MND}\}$ define A_S (baseline at low levels) and G_S (growth per 10 levels):

$$\text{stat_enemy}(S, L) = \text{clamp}(\text{floor}(A_S + G_S \cdot (L / 10)), 1, 10)$$

Recommended presets

Archetype	BRW (A/G)	VTL (A/G)	TPO (A/G)	FCS (A/G)	MND (A/G)
Bruiser	6 / 2.0	6 / 2.0	3 / 1.0	3 / 1.0	3 / 1.0
Skirmisher	5 / 1.5	4 / 1.2	6 / 2.2	3 / 1.0	3 / 1.1
Caster	3 / 1.0	4 / 1.1	4 / 1.4	6 / 2.0	6 / 2.2
Tank	4 / 1.2	7 / 2.4	2 / 0.8	5 / 1.6	3 / 1.0
Glass	6 / 2.0	3 / 0.8	6 / 2.2	3 / 1.0	5 / 1.8
Balanced	5 / 1.5	5 / 1.5	5 / 1.5	5 / 1.5	5 / 1.5

Example: **Bruiser Lv30** → BRW = $\text{floor}(6 + 2 \cdot 3) = 12 \rightarrow \text{clamp to } 10$, VTL = 10, TPO = $\text{floor}(3 + 1 \cdot 3) = 6$, FCS=6, MND=6.

10.1.2 Enemy HP/MP (leaner than players)

- **MaxHP** = $100 + (\text{VTL} \times \text{Level} \times 4)$
- **MaxMP** = $10 + (\text{FCS} \times \text{Level} \times 1.0)$

Players use ×6 HP and ×1.5 MP (Ch. 3.3). Leaner enemies keep DoTs (5% MaxHP) meaningful and reduce sponge risk.

10.1.3 Offensive baselines (data-driven)

- $\text{BaseWATK_enemy}(L) = 30 + 5L$ (line-tunable per family)
- $\text{SIG_enemy}(L) = 20 + 4L$ (per element line)
- **Scale_BRW precedence:** weapon-family base (Sword ×10, Spear ×11, Hammer ×12, Wand ×6) → add **archetype delta** (from `enemy_archetypes.scale_brw_delta`) → **per-enemy override** in `enemy_offense.scale_brw` if present (override wins).

All other combat math uses the same formulas as players (Ch. 3.5–3.6, Ch. 4).

10.2 Resistances, Posture & Ailments

- Weapon triangle and Mind wheel apply normally (Ch. 8).
 - **Posture policy:** Most regular enemies fix posture to their element; elites/bosses shift posture by script (OnCast or OnPhase).
 - **Ailment susceptibility:** per ailment 0–100 chance scalar; bosses often –30% across the board except flagged “windowed” moments (sleep/freeze stuns are powerful).
 - **Stumble/Fall tuning:** give elites +10% Stumble Resist; bosses +20–30% except during exposed windows (reset to 0).
-

10.3 Capture & Pacify

- **BindResist:** 0–60 typical; add +20–40 for bosses outside windows.
 - **HP factor (k):** 0.4 vs current HP% (Ch. 4.8).
 - **State bonuses:** +15 if Sleep/Freeze/Bound, +10 if Stunned/Fallen.
 - **Pacify flag:** enable on any enemy; Reverse Blades and Pacify Sigil convert lethal into non-lethal.
 - **Non-lethal rewards:** LXP $\times 0.30$, credits $\times 1.5$, drops $\times 1.5$ per eligible entry (Ch. 2.1, 4.8).
 - **Boss capture windows:** author per-phase windows; outside windows Omega Bind only.
-

10.4 Loot & Rewards (drop math)

Each enemy references one loot table:

- **Credits:** creds_base with $\pm 20\%$ roll; Pacify/Capture $\times 1.5$ (round down).
- **Drops:** list of (item_id, base_pct); on non-lethal, multiply each by $\times 1.5$, then clamp to table caps.
- **Rounding order:** *roll → apply $\times 1.5$ for non-lethal → clamp to cap → floor final count.*

Example: Rare drop 10% → 15% on non-lethal. A second rare at 24% → 36% (cap if table max is 35%).

Environment bonus flags: Miniboss/Boss can add +5–10% **absolute** to “boss chest” rolls rather than the per-item scale (pick one approach per table to avoid double dipping).

10.5 Encounter Building (formations & budgets)

Encounters are crafted by combining enemy formations with point-based budgets.

Designers slot foes into front/back rows, balance type coverage, and mix standard mobs with elites to set pacing. Budgets scale by story chapter and difficulty, ensuring consistency in XP, credits, and drops while still allowing variety. This system keeps battles fair, thematic, and tuned to player progression.

10.5.1 Encounter Points (EnP) budget

- Assign costs: **Trash 1–2, Soldier 3–4, Elite 5–7, Miniboss 10–12, Boss 20+**.
 - Per area/chapter bands: **Early (Lv1–10): 6–8 · Mid (Lv20–40): 10–14 · Late (Lv50–70): 14–18 · End (Lv70–90): 18–24.**
 - Formations: sum EnP \leq band; add synergy tags (Healer + Bruiser; Skirmisher packs; Mixed wheel). Avoid stacking **3+** of the same hard CC unless telegraphed.
-

10.5.2 Position & initiative seeding

- If you use rows, put Tanks/Healers **back** row, Skirmishers **front**.
 - Initiative seed: enemies roll TPO tiers (Ch. 4.1); add a Speed seed **0–4** per unit for variety.
-

10.5.3 Waves & reinforcements

- Use Wave 2 reinforcements to teach targeting priority.
 - Reinforcement arrives at **Start of Round** after a KO threshold (e.g., “when ≤ 1 foe alive”).
-

10.6 Boss Playbooks (phases & telegraphs)

Phase design template (3 phases)

- **Phase 1 — Pattern learning:** Fixed posture, 1 CH1 move, 1 wheel-weakness the party can discover. Capture/Pacify closed.
- **Phase 2 — Pressure & windows:** Adds CH2 ultimate; telegraph with VFX/SFX & readable stance. **Vulnerability window:** for 2 rounds after ultimate, **Stumble Resist = 0, BindResist -20**. Capture/Pacify open (window).
- **Phase 3 — Identity twist:** Posture shifts on cast, or mirror reflects chosen element; adds minions or an arena hazard. **Omega Bind** allowed; normal binds **-20% success**.

Minibosses: one windowed phase; keep the loop to ~4–6 rounds.

10.7 VR Variants

- Level via §9.4: **EnemyLv_VR = max(OriginalLv, floor(AvgPartyLv) + Boost)**.
- Tables: keep same loot; **+10% credits baseline** in VR to compensate for lost Evening.
- LXP: per-character Δ ladder (Ch. 2.1) still applies; non-lethal modifiers remain active.

10.8 AI Packages (weights & triggers)

An AI package is a weighted set of intents plus targeting rules and phase triggers.

- **Intents** (weights sum to 100): Offense-Phys, Offense-Sigil, Control (ailments/interrupts), Support (buff/heal/summon), Survival (Defend/Guard/Channel cancel).
- **Targeting rules:** Focus Weakness; Punish Low HP (+X weight vs targets <35% HP); Interrupt Channels; **Threat Bias** (prefer MC if Burst \geq 55).
- **Triggers (examples):** HP < 60% → enable Support (self-shield/heal), posture change. After CH2 ultimate → open Vulnerability window (see §10.6). Ally KO → cast revive/summon (Miniboss/late only).
- **Fallbacks:** If MP < move cost and no Overcast allowed, switch to Offense-Phys or Defend. If Overcast is allowed, enforce HP_Overcast_Cost and block if it would reduce HP < 1 (see §3.3).
- **Repeat gap for CH2 ultimates:** add a per-unit min_turn_gap_ch2 (default 2 rounds) to prevent back-to-back CH2 ult spam. AI cannot select a CH2 move again until the gap expires.

10.9 CSV Data Specs

enemies.csv

enemy_id,name,archetype,env_tag,level,weapon_type,element,start_posture,posture_rule,base_acc,base_eva,speed_seed,armor_flat,ward_flat,ailment_suscept,bind_resist,pacify_ok,notes

enemy_archetypes.csv

archetype, A_BRW, G_BRW, A_VTL, G_VTL, A_TPO, G_TPO, A_FCS, G_FCS, A_MND, G_MND, hp_mult(4), mp_mult(1.0), scale_brw_delta(0)

enemy_growth.csv (optional per-enemy overrides)

enemy_id, stat, A_override, G_override

enemy_offense.csv

enemy_id,base_watk_a,base_watk_b,sig_a,sig_b,scale_brw,skill_list

loot_tables.csv

table_id, creds_base, creds_var_pct(20), entries(item_id, pct, cap_pct, quantity_minmax, notes)

enemy_loot_map.csv

enemy_id, table_id

encounters.csv

encounter_id, area_id, env_tag, ep_budget,
formation(enemy_id:pos:ep;enemy_id:pos:ep;...), waves(phase2:enemy_id;...),
run_locked(0/1) — where pos ∈ {front,back}

boss_phases.csv

boss_id,phase_no,posture,adds,open_capture,vuln_window_rounds,window_effects,notes

ai_packages.csv

package_id, offense_phys_w, offense_sigil_w, control_w, support_w, survival_w, target_rules(FocusWeakness+20;PunishLowHP+15;...), triggers(HP<60%→Support+20;AfterCH2→VulnWindow;BurstMC≥55→Control+15), min_turn_gap_ch2(2)

capture_windows.csv

boss_id, phase_no, start_cond, end_cond, bind_resist_delta, notes

10.10 Designer Knobs (fast tuning)

- **HP/MP multipliers:** 4× and 1.0× (default). Raise HP to 5× on late bosses if needed; prefer flat PDEF/MDEF and Defend/Shield behaviors over raw HP bloat.
 - **BaseWATK / SIG slopes:** 5 and 4 per level—nudge by ±1 to re-center damage.
 - **Environment LXP:** Regular ×0.90, Miniboss ×1.20, Boss ×1.50 (Ch. 2.1).
 - **Ailment susceptibility bands:** Commons 60–80, Elites 30–50, Boss 0–30 (except windows).
 - **Stumble Resist:** Elites +10%, Boss +20–30%; 0 during windows.
 - **EP budgets:** keep within bands (§10.5) to avoid spikes.
 - **Loot economy:** prefer materials on commons; creds/material bundles on elites; unique drops on bosses. Let non-lethal ×1.5 pay for upgrade economies.
-

10.11 Worked Examples

A) Regular enemy — Data Sentinel (Tech Tower)

- Lv: 22, Archetype: Caster, Env: Regular
- **Stats:** BRW = $\text{floor}(3 + 1.0 \cdot 2.2) = 5$; VTL = $\text{floor}(4 + 1.1 \cdot 2.2) = 6$; TPO = $\text{floor}(4 + 1.4 \cdot 2.2) = 7$; FCS = $\text{floor}(6 + 2.0 \cdot 2.2) = 10$ (clamp); MND = $\text{floor}(6 + 2.2 \cdot 2.2) = 10$ (clamp)
- **HP/MP:** MaxHP = $100 + 6 \times 22 \times 4 = 628$; MaxMP = $10 + 10 \times 22 \times 1.0 = 230$
- **Offense:** BaseWATK = $30 + 5 \cdot 22 = 140$; SIG = $20 + 4 \cdot 22 = 108$; Scale_BRW = Wand (×6)
- **Typing:** Weapon = Wand (neutral triangle); Element = Data; Posture = Fixed Data
- **Ailments:** Sleep 35, Freeze 30, Poison 80, Burn 80
- **BindResist:** 25; Pacify OK
- **Loot:** creds 120 ±20%; drops: Mind Prism 18%, Alloy 22%, Element Shard(Data) 10%

- **AI:** OffSig 55 / Control 25 / Survival 10 / Support 10; FocusWeakness+20, InterruptChannels+25

Δ with MC Lv20 ($\Delta = +2$): Δ ladder $\rightarrow \times 1.00$.

BaseLXP = $25 + 6 \cdot 22 = 157$. Regular env $\times 0.90$; Trio party $\times 1.00$; standing $\times 1.00 \rightarrow [157 \times 1.00 \times 0.90] = 141$ LXP each (before solo/duo mods).

On Capture: $\times 0.30 \rightarrow 42$ LXP, but credits $\times 1.5$ and each drop $\times 1.5$ (e.g., Mind Prism 27%).

B) Boss — Mansion “Flame Regent” (Fire)

- Lv: 60, Archetype: Glass (hard offense, low VTL); Env: Boss
- **Stats (sketch):** BRW 9, VTL 5, TPO 9, FCS 8, MND 10
- **HP/MP:** MaxHP = $100 + 5 \times 60 \times 4 = 1,300$; MaxMP = $10 + 8 \times 60 = 490$
- **Offense:** BaseWATK 330; SIG 260; Scale_BRW Hammer ($\times 12$) for punishing physicals
- **Typing:** Weapon Impact; Mind Fire; Posture OnCast (shift to Fire on skills)
- **Ailments:** Sleep 0, Freeze 0, Poison 40, Burn immune; Stumble Resist +25% except windows
- **BindResist:** 60 (windows -30)
- **Phases:**
 1. P1 teaches triangle (Impact), wheel (Fire weak to Water). CH1 “Ember Spiral”. No capture.
 2. P2 adds CH2 “Hell Pyre” (2-round). After resolving, **Vulnerability 2 rounds**: StumbleResist=0, BindResist-20, Capture window open.
 3. P3 summons 2 Fire Wraiths; posture swaps on cast; **reflects 1 Fire skill/round**. **Omega Bind** allowed.
- **AI:** OffSig 45 / OffPhys 25 / Control 15 / Survival 15; triggers: HP<60%→Support+20; AfterCH2→VulnWindow
- **Loot:** boss chest (unique Flame Crest 12%, Mythic Lattice 35%, creds $2500 \pm 10\%$)

LXP: BaseLXP = $25 + 6 \cdot 60 = 385 \rightarrow$ Boss $\times 1.50 = 577$ (pre party/participation).

Non-lethal: $\times 0.30 \rightarrow 173$, but chest unaffected; kill or capture both award chest.

Implementation Checklist

- Generate stats via A/G tables; clamp to 1–10.
 - Compute HP/MP with leaner multipliers.
 - Use Ch. 3/4 math for accuracy, damage, crit/stumble, defend.
 - Author AI via weights + triggers; verify phase scripts align with telegraphs.
 - Validate loot math with non-lethal ×1.5 behavior; clamp probabilities (apply rounding order).
 - Tag VR missions with boost ranges (Ch. 9.4).
 - Ensure boss windows expose Stumble/Capture fairly (2–3 turns).
-

Chapter 11 — Dorms, Party Affinity (BAXP) & Burst Synergy

What this chapter is:

The trust engine. It specifies how pairs earn BAXP, how Sunday converts to tiers, how dorm adjacency modifies both scoring and combat auras, and exactly what Burst unlocks at each tier.

Covered systems:

- **BAXP sources & caps:** Co-presence, synergy, social boosts, dorm adjacency; weekly 30 cap.
- **Sunday conversion:** Floor→cap→lifetime→tier at 20/60/120.
- **Tiers & benefits:** AT1–AT3 aura numbers; Duel unlock; OMEGA gating.
- **Dorm system:** Bestie/Rival adjacency, move penalties, Sunday snapshot.
- **Runtime precedence:** Aura vs adjacency (non-stacking rules).
- **MC/Non-MC pairs:** Activation requirements.
- **CBXP interactions:** Dates, cameos, and non-overlap.
- **UI/data/checklist:** Ladders, toasts, CSVs.

How to read it:

Use with **Ch. 4.7** (Burst), **Ch. 5** (Dates), **Ch. 9** (Sunday rituals), and **Ch. 16** (Affinity ledger).

11.0 Affinity at a Glance

- **Unit:** BAXP per **pair** (A,B).
- **When it accrues:** during the week from **co-battles, synergy/Burst moments, Bonus Dates, and Dorm adjacency.**
- **When it converts:** **Sunday** at week end; tiers update and unlocks fire.
- **Tiers (AT0–AT3):**

Tier	Name	Unlocks
AT0	Acquainted	Baseline; Single (Tier-1 Burst) available for everyone (not Affinity-gated).
AT1	Synchronized	Pair aura (small passive), context assists.
AT2	Partnered	Duel Psyokin for this pair.
AT3	Resonant	Counts toward OMEGA (need MC + two allies at AT3 in active party).

11.1 Weekly BAXP Sources (how pairs earn points)

Let (A,B) be any two characters. Over **Mon–Sun**, accumulate:

- **Combat Co-Presence (per battle):**
 - Both active at victory: +2
 - One KO at victory (either): +1
 - Loss/flee: 0
 - Per-day co-presence cap +6 (per pair).
- **Synergy Moments (per battle; each can score once):**
 - Weakness chain together: +1
 - Participated in the same Burst: **Duel (A↔B)** +2; **OMEGA** +1 if both are among the three **OMEGA** participants.

- Channel interrupt together: +1
 - Per-battle synergy cap +3 (score the best three).
 - **Social Boosts (out of combat):**
 - Bonus Date (A & B): +6..+8 (authored)
 - Circle event cameo synergy: +2
 - **Dorm Adjacency (weekly; applied on Sunday before conversion):**
 - Bestie neighbors: +5
 - Neutral: +0
 - Rival neighbors: -4
 - Weekly flooring rule lives in §11.2.
 - **Weekly Safety Cap:**
 - Weekly BAXP cap 30 per pair (after all adds, before conversion).
 - **Anti-farm knobs (defaults OFF):**
 - Per-pair daily hard cap 12 BAXP (sum of A-C).
 - Co-presence value can be lowered to +1 (from +2).
 - Enable via affinity_rules.csv flags; defaults remain +2 co-presence, no daily hard cap.
-

11.2 Sunday Conversion → Affinity Tier (order matters)

- **End-of-week steps (per pair):**
 - Sum sources: co-presence + synergy + bonus dates + cameo + dorm adjacency.
 - **Floor to zero:** weekly total cannot go below 0 (Rival penalties cannot make the weekly sum negative).
 - **Apply weekly cap 30:** clamp to 30.
 - Add to lifetime; recompute tier at thresholds **AT1=20, AT2=60, AT3=120.**
 - Reset weekly counters (lifetime persists).

Snapshot: Sunday 00:00. The dorm layout used for week W is whatever was in place immediately before Sunday 00:00. Moves made on Sunday apply starting week W+1; any room-move penalty window begins Monday 00:00..

- **UI:**
 - Sunday ladder with ticks at **20 / 60 / 120** and unlock toast.
-

11.3 What Each Tier Does (numbers) — Revised (OMEGA clarity)

- **AT1 — Synchronized (passives)**
 - **Pair Aura:** when both are active, each gains **+5% Hit, +5% Eva**.
 - Context assists can appear (small follow-ups on weakness hits).
 - **AT2 — Partnered (Duel Psyokin)**
 - **Duel move unlock:** the specific pair's Duel appears in **Burst Tier-2** (cost 55).
 - Aura upgrade: **+7% Hit, +7% Eva, +1 Speed**.
 - **AT3 — Resonant (counts for OMEGA)**
 - **OMEGA requirement:** counts when **MC is active and two allies are active** such that **both MC↔Ally pairs are AT3**.
 - Those two allies **do not** need AT3 with each other.
 - Aura upgrade: **+9% Hit, +9% Eva, +2 Speed**.
 - Optional content flag: Duel+ variant may replace/augment base Duel.
 - **Burst gating (explicit):**
 - **Single (Tier-1):** always available; not Affinity-gated.
 - **Duel (Tier-2):** requires **AT2 on that specific pair; MC must be active** to fire Burst.
 - **OMEGA (Tier-3):** requires **MC active and two allies at AT3 with the MC** in the active party; the button lights immediately when true.
-

11.4 Dorm System (weekly structure & penalties)

- **Room changes:** Sundays only (Ch. 9.3).
 - **Bestie adjacency bonus:** +5 (weekly).
 - **Rival adjacency penalty:** -4 (weekly).
 - **Relocation stress:** moving any ally applies -1 BRW and -1 MND (effective) for 7 days (Mon–Sun).
Stacks if moved repeatedly; **cap -2 total**; cannot reduce an effective stat below 1.
 - **Adjacency cutoff (weekly snapshot):** layout used for dorm bonuses is the last state before Sunday 00:00
Moves made on Sunday apply starting **week W+1** only.
-

11.4a — Combat Adjacency vs Aura (Deterministic Precedence)

Purpose

- Freeze a single, predictable rule for how **weekly dorm adjacency** interacts with **pair auras** in combat.
- Keep weekly scoring (BAXP) separate from runtime combat effects.

Weekly snapshot (source of truth)

- The adjacency layout used for week **W** is the **last state before Sunday 00:00** per §11.2.
- Moves made on Sunday apply beginning **week W+1**.

Runtime application (mirrors §4.7b)

- **Rival < AT2 overrides:** if both rivals are active **and** adjacent this week, apply **Rival penalty** to each rival when they act/defend; this cannot be offset by an aura or Bestie adjacency.
- Otherwise, per actor, compare **Partner Aura** (from the currently selected partner) vs **Bestie Adjacency** (if any active adjacent Bestie exists) and apply **only the better**; no stacking.

- At **AT2+** for a Rival pair, compare Rival penalty vs Partner Aura and apply the strictly better effect (usually the aura).

Separation of systems

- **Combat adjacency** is a **runtime** check (who's active + weekly snapshot adjacency).
- **Weekly BAXP** uses dorm adjacency as a **weekly add** before conversion, and should not read from combat logs (**§11.2**).

Numbers (for reference)

- **Bestie adjacency** (combat): +5% Hit, +5% Eva.
- **Rival adjacency** (combat): -5% Hit, -5% Eva, -1 Speed.
- **Auras** by tier: AT1 (+5/+5), AT2 (+7/+7, +1 Spd), AT3 (+9/+9, +2 Spd) per **§11.3**.

UI wording (keep consistent)

- Lock reasons:
 - “Rival adjacency (AT1) overrides aura.”
 - “Applying partner aura (better than adjacency).”
- Snapshot phrasing everywhere: “**Sunday 00:00 snapshot**.”

Cross-refs

- Burst/Aura timing and OMEGA lighting: **§4.7 / §4.7a**.
 - Weekly conversion & snapshot timing: **§11.2**.
 - Tier benefits and aura numbers: **§11.3**.
-

11.5 MC Requirement & Non-MC Pairs

- **Duel/Omega activation:** MC must be active to trigger Burst (Ch. 4.7).
 - **Non-MC pairs still progress:** all pairs earn BAXP and tier up with the **same rules**; their **auras** apply when they're the selected partner, even if the MC rotates teammates.
-

11.6 Interaction with Bonds (CBXP) & Dates

- CBXP does **not** directly change Affinity Tier.
 - Bonus Dates (Love-route extras; Ch. 5.6) grant **+6..+8 BAXP** for the pair but **no CBXP** (unless the scene explicitly also gives CBXP).
 - Core/Anchor completions may unlock **pair-specific Duel variants** or **Omega choreography**; **Tier gates** still control Burst eligibility.
-

11.7 Designer Knobs (quick tuning)

- Co-presence: +2 standing win; +1 if one KO.
 - Per-day co-presence cap: **+6** (per pair).
 - Per-battle synergy cap: **+3** (best three triggers).
 - Bonus Date grant: **+6..+8** (content-authored).
 - Cameo grant: **+2** (author-flagged).
 - Adjacency: **+5 Bestie, -4 Rival** (weekly).
 - Weekly BAXP cap: **30**.
 - Tier thresholds: **20 / 60 / 120**.
 - Auras: AT1 (**+5/+5**), AT2 (**+7/+7, +1 Spd**), AT3 (**+9/+9, +2 Spd**).
 - Room-move penalty: **-1 BRW, -1 MND for 7 days** (stacks to **-2**; min stat **1**).
-

11.8 Examples

Selection note (applies to all examples)

- Synergy scoring per battle picks the three highest-value events; if more than three tie on value, it takes the earliest timestamps in battle order. This produces stable logs and replays.

Example 1 — “Steady partners”

- **Week:** 2 Missions (8 battles together), 1 VR (ends day; 4 battles), 1 Duel fired, neighbors as **Besties**.
- **Co-presence:** 12 battles across 3 separate days \Rightarrow day cap **+6/day \Rightarrow +18**.
- **Synergy:** **Duel (+2) + one weakness chain (+1) \Rightarrow raw +3.**
 - If more than three synergy events occurred across the week in a single battle, **only the best three by value** are counted; if equally valued, **the earliest in battle order** are kept.
- **Dorm Bestie:** **+5.**
- **Weekly raw = 18 + 3 + 5 = 26 \Rightarrow floor(0) = 26 \Rightarrow cap(30) = 26 \Rightarrow 26 BAXP converts.**
- **Pace:** AT0→AT1 ~1 week; AT1→AT2 ~2–3 more; AT2→AT3 ~4–5 more at similar pace.

Example 2 — “Messy week”

- **Battles:** three wins with one KO (**+1 each = +3**) and five shared wins (**+2 each = +10**) over two days.
 - **Day 1** (e.g., 4 shared wins + 1 KO win): raw **+9 \Rightarrow clamp to +6** (daily cap).
 - **Day 2** (1 shared win + 2 KO wins): raw **+4 \Rightarrow +4**.
 - **Co-presence total: +10.**

Synergy: one channel interrupt together (+1).

- If multiple equal-value synergy events occurred in a battle (e.g., several weakness chains), **keep the earliest three** by timestamp to reach the per-battle **+3** cap; extras don't score.
 - **Dorm Rival adjacency:** **-4.**
 - **Weekly raw = 10 + 1 - 4 = 7 \Rightarrow floor(0) = 7 \Rightarrow cap(30) = 7 \Rightarrow 7 BAXP converts.**
-

11.9 Data Specs (CSV)

(UTF-8, header row, , delimiter, ; for lists, enums as shown, 0/1 booleans.)

affinity_pairs.csv — lifetime ledger

pair_id(A-B),lifetime_baxp,tier(AT0/AT1/AT2/AT3),last_convert_date

affinity_weekly_log.csv — weekly tallies

week_id,pair_id,co_presence_battles,co_presence_baxp_raw,ko_penalty_count,synergy_weakness_chains,synergy_duel,synergy_omega,synergy_interrupts,synergy_baxp_raw,bonus_dates_count,bonus_dates_baxp,cameo_baxp,dorm_bonus(+5/0/-4),moved_penalty_applied(0/1),total_baxp_capped(≤ 30)

- **co_presence_baxp_raw** = sum **before** daily +6 clamps (telemetry).
- **synergy_baxp_raw** — sum **after** applying “**best three by value, earliest-wins tiebreak**” per battle per pair.
- **Optional telemetry columns (designer builds):** **battle_clock_ix** list for included synergy events and a **synergy_pick_order** field to show the sorted selection that produced

synergy_baxp_raw.affinity_thresholds.csv — tiers & auras

tier,min_lifetime_baxp,aura_hit_pct,aura_eva_pct,aura_speed,unlocks_text

dorm_rooms.csv — layout

room_id,neighbor_ids(; -sep),special_tags(; -sep)

dorm_assignments.csv — who sleeps where (history)

date,character_id,room_id,adjacency_status(Bestie/Neutral/Rival/None),moved_this_sun(day)(0/1)

affinity_rules.csv — central knobs

WeeklyCap,30

SynergyPerBattleCap,3

CoPresencePerWin,2

CoPresenceKO,1

BestieWeekly,5

RivalWeekly,-4

AT1,20

AT2,60

AT3,120

CameoGrant,2

11.10 UI/UX Notes

- **Pair Ledger (Phone → Affinity):** stacked bars for **Co-presence, Synergy, Dates, Dorm + Sunday projection.**
- **Battle toasts:** compact “**+BAXP (A↔B) +N**” on Duel/Omega and weakness-chain; aggregate into **Victory** screen.
- **Dorm Map:** highlight shared walls; Bestie/Rival icons with **+5/-4** tooltips.
- **Burst menus:** show locked reasons (e.g., “Duel: need AT2 (A↔B)”).
- **Partner picker:** at sortie, selecting a partner visually locks whose aura can apply

11.11 Implementation Checklist (OMEGA)

- **Track** per-pair BAXP live; write to the weekly log.
 - **Enforce** daily co-presence cap **+6** and per-battle synergy cap (**best 3**).
 - **Convert on Sunday:** sum → **floor(0)** → **cap(30)** → add to lifetime → recompute tier → toasts.
 - **Gate Burst:** Duel at **AT2** (pair); **OMEGA** requires **MC active + both MC↔Ally pairs at AT3**; allies do **not** need AT3 with each other.
 - **Apply one source in combat:** only the current partner’s **aura** can be live; do **not** stack with adjacency—apply the **single better** effect (Rival special case at AT1 still overrides).
 - **Room-move penalty:** **-1 BRW/-1 MND** for **7 days**; stacks to **-2**; min stat **1**.
-

Chapter 12 — World Spots & Tracks (Where SXP Comes From)

What this chapter is:

The catalog and math for training. It defines base SXP by spot/phase, Track bonuses, weekly fatigue, special adders, study items, and worked pacing targets for “all-10s” vs. “chasing 11s.”

Covered systems:

- **Short rules:** BaseSXP → mods → weekly multiplier → floor.
- **Tracks & classes:** +10% TrackMod sources.
- **World spots:** Morning/Afternoon/Evening default yields.
- **Dorm study/books:** Split handling.
- **Study items:** SXP values and caps.
- **Gates/bonuses:** Weather, events, tournaments.
- **What doesn't grant SXP:** Clear reminders.
- **Knobs & CSVs:** Rules files and examples; worked week.

How to read it:

Pair with **Ch. 2** budgets and **Ch. 9** pacing; confirm fatigue UI in **Ch. 16**.

12.0 SXP Math (the short rules)

- **Base award:** every authored activity has a BaseSXP to one or more stats.
- **Phase cost:** every SXP source consumes its phase (M/A/E).
- **Weekly diminishing (per stat):** first **7** actions **to a given stat** pay **100%**; the **8th+** action **to that same stat** pays **50%**. Resets Monday.
 - If an action splits SXP across multiple stats, increment each stat's weekly counter separately (prevents dodging fatigue via splits).
- **Zero-SXP sources:** Missions, VR, Bonus Dates (unless that scene explicitly grants SXP).
- **Study Items:** grant SXP and consume a phase.
- **Fatigue-immune awards:** Attendance (**+10 SXP: +6 FCS / +4 MND**) and any **Bonus-Date SXP (+4, if flagged)** ignore weekly diminishing.
- **Final SXP per target stat:** apply TrackMod/Weather/AddMods, then WeeklyMult; floor; **min 1** if taken and not explicitly zeroed.

SXP Modifiers (per action)

- **TrackMod** = $\times 1.10$ if the action matches your chosen Track (or the Elective is authored under your Track); else $\times 1.00$.
- **WeatherMod** = designer-tunable (default $\times 1.00$).
- **AddMods** = sum of additive bonuses on that action:
 - Secret Training (same-stat synergy, Evening only if trained that stat earlier that day) **+4**
 - First-time clear **+2**
 - Weekend librarian (Library only) **+2**
 - Tournament win (Dojo/Bowling/DDR) **+2**
 - Other spot-specific **+N** (data-driven)

- **WeeklyMult** = 1.0 for the first 7 actions to that stat this week, 0.5 thereafter until Monday.
- **Floor/Clamp:** after flooring, minimum 1 SXP if the spot is taken and not explicitly zeroed by design; negative additive stacks cannot reduce below 1.

Consistency note: The Secret Training synergy is always **+4**. This is the value used in pacing targets and examples.

Seasonal Budgets (balance anchors)

- **Training-first ceiling (no hangouts):** $\approx 4,800$ SXP
 - Typical training day yields ~24 SXP (e.g., Class/Elective +8-spot + Secret Training with +4 synergy = $6 + 8 + (6+4) = 24$).
 - **All-Bonds route budget:** $\approx 3,488$ SXP
 - Doing all 164 bond events displaces ~1,312 SXP worth of actions (avg ~8 SXP/slot).
 - $4,800 - 1,312 = 3,488$ SXP.
-

Why This Matters (targets)

- **Cost 1→10 per stat = 697 SXP** → All-10s across 5 stats = **3,485 SXP**.
- With ~3,488 SXP on the all-bonds path, players can just barely finish all 10s (~ +3 slack).
- **Cost 10→11 (secret) = 263 SXP** → ≈ 33 actions (~8 SXP/slot).

- Chasing 11s means skipping hangouts or relying on limited study stock—this is the intended tradeoff.
-

Designer Knobs (affecting this envelope)

- Shop stock & weekly caps for Study Items (e.g., Tutor/week, rotating stock).
 - Frequency of VR (ends day) and Missions (don't) per Ch. 9.
 - Attendance threshold/split (+6 FCS / +4 MND) if loosening/tightening the “just-barely all-10s” outcome.
 - Per-stat fatigue remains the main nudge to spread training.
-

Planner UI Hints (player-facing copy)

- **“All-10s path (complete all Bonds):** needs 3,485 SXP — you’re on track.”
 - **“Chasing 11s:** +263 SXP each (~33 actions). Expect to skip hangouts or invest in study items.”
-

12.1 Tracks & Classes (Morning)

At character creation, pick one Track: **Art**, **Medical**, or **Science**. Tracks determine which **Morning classes/electives** get your **+10% TrackMod** and which **stat pairs** they usually feed.

Track	Core Classes (examples)	Typical SXP	Primary Stats
Art	Animation Lab, Temple Art, Music, Painting	+6	TPO, FCS
Medical	First Aid, PT Shadowing, Surgical Basics	+6	VTL, FCS
Science	Programming, Robotics, Hospital Lab	+6	MND, BRW (Robotics)

- **Electives:** weekly-rotating Morning classes that can target **any stat**; baseline **+6 SXP** and gain **TrackMod** if authored under your Track.
 - **Attendance bonus (month-end):** if $\geq 75\%$ Morning classes attended, award **+10 SXP** split (**+6 FCS, +4 MND**) (Ch. 9.9). (*Fatigue-immune; no phase cost.*)
-

12.2 World Spots (by phase)

Below are defaults. You can author variants per location while keeping these baselines for balance.

Morning — Classes & Skip School

- Basketball (Gym): **+6 VTL**
- Fishing (Pier): **+8 BRW** (*risky/skip-school*)
- **Dance Game** (Arcade): **+6 TPO**
- Temple Art (Sand Garden): **+6 FCS**
- Hospital Lab (Science Wing/Hospital): **+6 MND**
- Robotics (Tech Building): **+6 BRW**
- Programming (Computer Lab): **+6 MND**
- Surgical Basics (Med Wing): **+6 FCS**

Rule of thumb: **+6** for classes / **+8** for risky/skip-school training (Fishing).

Afternoon — Training & Study

- Dojo (Temple Grounds): **+8 BRW** (*weekend tourneys can add +2*)
- Gym Weights (University): **+8 BRW**
- Clinic Volunteering (Hospital): **+8 VTL**
- Physical Therapy (Hospital): **+8 VTL**
- Track (Auditorium/Field): **+8 TPO**
- Meditation (Temple Grounds): **+8 FCS**
- Bowling Practice (Alley): **+8 FCS**
- Library Study (Campus/City): **+8 MND** (*weekend librarian +2*)
- **VR (Afternoon): LXP only; ends the day (no Evening).**

Evening — Jobs, City Spots & Secret Training

- Shipper (Dockyard): **+8 BRW + Creds**
- Dojo Night Spars (Temple): **+8 BRW**
- Stocking (Convenience Store): **+8 VTL + Creds**
- Dance Competition (Arcade): **+8 VTL**
- Club Floor (Dance Club): **+8 VTL**
- Karaoke (Entertainment): **+8 TPO**
- Line Cook (Café): **+8 TPO + Creds**
- Card Group (Game Shop): **+8 FCS**
- Register (Convenience Store): **+8 FCS + Creds**
- Promoter (Downtown): **+8 MND + Creds**
- Strategy Night (Game Shop): **+8 MND**
- Movies (Theater): **+8 RND** (*random featured stat; changes weekly—see data*)
- **Secret Training (Dorm): +6 to one chosen stat.** If you **also trained that same stat earlier that day** (any phase, including Study Items), gain **+4 synergy (AddMods)**. (*Once per day.*)

Jobs also pay Creds (economy in Ch. 15), but still consume the phase. Their SXP matches peer spots to keep choices horizontal.

12.3 Dorm Study & Books (Any Phase if authored)

- **Handheld Games (Dorm):**
 - Dating Sim → **+6 FCS**
 - Strategy → **+6 MND**
 - Platformer → **+6 TPO**
 - **Books** and other split sources **apply formula per target stat and advance each stat's weekly counter separately.**
-

12.4 Study Items (consume a phase; Ch. 7)

- **Study Guide:** +15 SXP to any stat.
- **Workbook:** +12 SXP to TPO/FCS only.
- **Field Manual:** +20 SXP to BRW/VTL only.
- **Tutor:** +12 SXP to any stat, 1 per week per student.

All Study Items respect the per-stat weekly rule (they advance the weekly counter for the stat they target).

12.5 Gating & Bonuses

- **Soft gates:** stat thresholds (e.g., $BRW \geq 3$ for advanced Dojo drills).
 - **Hard gates:** key items, story flags, weekday hours.
 - **Weekly events:** Dojo/Bowling/DDR **weekend ladders:** +2 SXP if you clear.
 - **Weather hooks (optional):** e.g., **Rain** boosts Library +2; **Heat** reduces Track SXP -1 unless $VTL \geq 6$. (*Defaults off. Weather never reduces a spot below 1 SXP.*)
-

12.6 What Doesn't Grant SXP (repeat for clarity)

- **Missions (Afternoon)** → LXP only, day continues.
 - **VR (Afternoon)** → LXP only, ends the day.
 - **Bonus Dates** → BAXP, no SXP (*unless that scene is explicitly flagged for +4 SXP; if so, it's fatigue-immune*).
 - **Most Circle events** → CBXP only (see Ch. 5).
-

12.7 Designer Knobs (fast tuning)

- **BaseSXP:** Morning classes **6**, Morning skip **8**, Afternoon **8**, Evening **8**, **Secret Training 6**, Dorm games **6**, Books **6–10**, Study items per table above.
 - **Secret Training synergy:** **+4** (*same-stat earlier that day; once/day*).
 - **TrackMod:** **1.10 (10%)**.
 - **First-time bonus:** **+2** (per spot).
 - **Weekend librarian:** **+2** (Library).
 - **Tournament bonus:** **+2** (Dojo/Bowling/DDR, once per weekend).
 - **Weekly cap rule:** **7 actions/stat @ 100%, then 50%**.
 - **Monthly attendance award:** **+10 SXP split (+6 FCS, +4 MND)**.
 - **Movies featured stat:** author via data (*rotates weekly; single-stat or small split*).
-

12.8 CSV Data Specs

(*UTF-8, header row, , delimiter, ; for lists, enums as shown, 0/1 booleans. Weekday masks are Mon..Sun bits; e.g., 1111100 = Mon–Fri.*)

world_spots.csv

```
spot_id,name,phase(M/A/E),location_id,base_sxp,stats(BRW;VTL;TPO;FCS;MND),track_tags(Art;Med;Science;None),first_time_bonus(0/2),weekend_bonus(0/2),tournament_bonus(0/2),cred_payout(min;max),gates(stat_expr;item_ids;story_flags;weekday_mask),notes
```

- stats may be **single** or **split** (*e.g., MND;FCS=6;2*). Apply formula **per stat**.
- Movies may set stats=RND and an external weekly map chooses the real stat.

classes_electives.csv

```
class_id,track(Art/Med/Science),stat(BRW/VTL/TPO/FCS/MND),base_sxp(6),weekday_mask(1111100),room(location_id),attendance_credit(1/0)
```

study_items.csv (*dup ref; also in Ch. 7*)

item_id,sxp,stat_mask,weekly_cap,consumes_phase(1)

books.csv

book_id,title,once_only(1),sxp,stat,location_id/shop_id,notes

sxp_rules.csv

rule,value

Examples:

WeeklyFullActionsPerStat,7

PostFullWeeklyMultiplier,0.5

TrackMod,1.10

FirstTimeBonus,2

WeekendLibrarianBonus,2

TournamentBonus,2

SecretTrainingBase,6

SecretTrainingSynergyAdd,4

MoviesStatMode,FeaturedWeekly

Weather_Rain_Library_Add,2

Weather_Heat_Track_Sub,1

Weather_Heat_Track_VTL_Bypass,6

Optional movies_featured.csv (*if you rotate Movies stat*)

week_id,stat(BRW/VTL/TPO/FCS/MND),notes

12.9 Worked Day (with diminishing returns)

- **Mon Morning:** Programming (+6 MND) → MND weekly count = 1
- **Mon Afternoon:** Library (+8 MND, weekend bonus off) → count = 2
- **Mon Evening:** Strategy Night (+8 MND) → count = 3
- **Tue Morning:** Temple Art (+6 FCS) → FCS count = 1
- **Tue Afternoon:** Track (+8 TPO) → TPO count = 1
- **Tue Evening:** Karaoke (+8 TPO) → TPO count = 2
- **Wed Morning:** Fishing (+8 BRW) → BRW count = 1
- **Wed Afternoon:** Dojo (+8 BRW) → BRW count = 2
- **Wed Evening:** Shipper Job (+8 BRW) → BRW count = 3
- **Thu Afternoon:** Library (+8 MND) → MND count = 4
- **Fri Evening:** Library (+8 MND) → MND count = 5
- **Sat Morning:** Programming (+6 MND) → MND count = 6
- **Sat Afternoon:** Library (Weekend +2 → +10 MND) → MND count = 7
- **Sat Evening:** Strategy Night (over the weekly 7) → $8 \times 0.5 = +4$ MND → count = 8 (*fatigue triggers*)
- **Sun:** weekly reset preparations; **BAXP converts**; room changes allowed.

(Example training day that hits ~24 SXP: Morning Class +6 → Afternoon spot +8 → Evening **Secret Training** +6 + synergy +4 = 24.)

Implementation Checklist

- Apply **BaseSXP** → **modifiers** → **weekly rule** in that order; compute **per target stat**.
 - Track **per-stat weekly counts**; reset **Monday**.
 - **VR ends the day; Missions don't.**
 - Respect **gates** (stat/story/items), **weekday masks**, and **hours**.
 - Author **Track** tags so the **+10%** bonus only hits appropriate classes/spots.
 - **Secret Training:** enforce **Evening**, **+6 base**, and **+4 same-stat synergy once/day** if any earlier action that day targeted that stat (classes, spots, study items all count).
 - **Movies:** bind the weekly featured stat if using RND.
 - Ensure **fatigue-immune** awards (Attendance, flagged Date SXP) **ignore WeeklyMult**.
-

Chapter 13 — Missions & VR

What this chapter is:

The content pipeline: mission types, node graphs, objectives, deadlines/fails, rewards, and VR replay rules (ends day, creds bonus, no SXP).

Covered systems:

- **Taxonomy:** Main/Side/Personal/VR.
- **Calendar rules:** Afternoon only; VR ends day.
- **Structure:** Nodes, checkpoints, persistence.
- **Objectives:** Primary vs optional; stealth/alarm layers.
- **Difficulty bands:** Floor ranges and boss offsets.
- **Rewards:** LXP deltas, creds, drops, non-lethal multipliers; VR creds bonus.
- **Deadlines & locks:** Fail behavior and warnings.
- **Quests:** Bindings and triggers.
- **CSVs & checklist:** Authoring + worked flow.

How to read it:

Cross with **Ch. 4** (combat), **Ch. 14** (morality changes live-only), **Ch. 15** (economy), **Ch. 16** (journal UI).

13.0 Mission Taxonomy (authoring lanes)

- **Main Missions** — campaign-critical areas (Parking Garage → Military Base → Tech Tower → Factory → Mansion → Endgame).
- **Side Missions** — optional areas or sub-wings; often unlock BPP caches, materials, gifts, or Circle hooks.
- **Personal/Circle Missions** — authored off ally arcs (gated by CBXP; Ch. 5).
- **VR Replays** — simulated versions of cleared floors/areas with up-leveled enemies and no SXP; ends the day (see §13.8).

Each mission is a node graph with objectives and checkpoints; progress persists between days via Safe Rooms (see §13.2).

13.1 Calendar & Time Rules (how days are consumed)

- **Launch window:** Afternoon only.
- **Live Missions:** do not end the day, but there are no actions left. After you exit or clear, Must Sleep.
- **VR training:** does end the day → you auto-sleep (Ch. 1).
- **Duration:** unlimited days; progress persists at Safe Rooms (checkpoints) and opened shortcuts.
- **Typical cadence:** 2–4 mission days per month (pacing in Ch. 9).
- **Retreating mid-mission:** costs the current Afternoon, keeps checkpoint progress, resets non-checkpoint rooms.
- **KO handling:** KO at victory halves LXP for that character (Ch. 2). Full party wipe → Fail & Evacuate: pulled back to the last Safe Room; Evening still available.

13.2 Level Structure — Node Graph & Checkpoints

Node types (per level design):

- **EN (Entrance)** — spawn/start.
- **HL (Hall/Connector)** — traversal; may host lightweight encounters.
- **AR (Arena)** — curated fights; can be multi-wave.
- **PU (Puzzle/Interaction)** — locks, terminals, stat gates, stealth segments.
- **SR (Safe Room/Checkpoint)** — heal/save; VR terminal disabled in live missions.
Resumes here next day.
- **BG (Boss Gate)** — objective verification (keys, pacify quota, console hacks).
- **BS (Boss)** — phase script (Ch. 10).
- **EX (Exit)** — mission end and reward payout.

Edges may require: Keycards, Switch states, Stat gates (e.g., FCS ≥ 5), Circle perk tags (“Scientist present”), or Stealth clear.

Persistence model

- **Persistent:** SR activation, one-way doors, unlocked shortcuts, collected keys/quest items, BG progress.
 - **Resets daily:** HL/AR spawns not tied to objectives, Alarm state, minor props.
-

13.3 Objectives (what “success” means)

Define each mission with primary and optional objectives (all data-driven).

Primary

- **Defeat/Pacify Boss** — open BG, then BS phase script.
- **Secure Nodes N/Total** — capture/clear specific AR/PU nodes.
- **Escorted Extraction** — move an NPC from EN → EX with hazard triggers.
- **Pacify Quota** — end with K non-lethal finishes (ties to Ch. 14).
- **Hack Terminals M/Total** — PU interactions (minigame/stat checks).

Optional

- **Time Challenge** — beat boss within T rounds / reach BG in $\leq X$ rooms.
- **Treasure Caches** — hidden BPP cache, materials, gifts.
- **Stealth Route** — reach BG without raising Alarm.
- **Capture Target** — capture a named elite (bind window).

Alarm/Stealth (optional layer)

- **Alarm raises** when cameras see you, you fail PU stealth checks, or you flee a pulled pack.
 - **Alarm effects:** +ReinforcementChance, +SpeedSeed (enemy initiative bias), closes some shortcuts.
 - **Stealth success:** optional bonus chest or +Creds% at EX.
-

13.4 Difficulty & Level Bands

Recommended area bands are set in Ch. 9. Within a mission, define per-floor bands:

- floor_lv_min, floor_lv_max (e.g., Parking Garage — F1: 5–8; F2: 8–12; F3: 12–15)

Enemy level for node n (on that floor):

```
L_enemy(n) = random_integer(floor_lv_min, floor_lv_max)
```

Miniboss / Boss (offsets relative to the floor band)

- miniboss_offset ∈ {0, +1}
- boss_offset ∈ {+0, +1, +2}

```
L_Miniboss = clamp(floor_lv_max + miniboss_offset, floor_lv_min, floor_lv_max + 2)
```

```
L_Boss    = clamp(floor_lv_max + boss_offset,   floor_lv_min, floor_lv_max + 2)
```

VR exception (ignores per-floor bands; see Ch. 9.4 for VR pacing)

```
L_VR = max(L_Original, floor(avg_active_party_level) + Boost)
```

Boost presets: +2 (Casual), +5 (Standard), +8 (Hard), +12 (Over).

(After level is set, enemy stats/skills are generated via Ch. 10 curves.)

13.5 Rewards & Payouts

Per-enemy LXP: per-character via Δ ladder (Ch. 2.1). Non-lethal: ×0.30 LXP, but ×1.5 credits and ×1.5 drop odds for that entry.

Mission Clear Bonus (LXP):

$$\text{ClearLXP} = \text{floor}(60 + 10 \times \text{BossLv})$$

- applied to active party (still halved for anyone KO'd on clear).

Creds payout: sum of enemy/chest drops + ClearCreds (banded by area; data).

Materials: from chests, minibosses, boss. Late areas add Mystic Lattice, Mind Prism.

BPP caches: 22 world BPP placed across Side/Personal Missions & optional wings (Ch. 2.4); one-time pickups.

Sigil XP: from use; bosses often add Sigil Upgrade mats in chests.

(Missions and VR never grant SXP.)

13.6 Deadlines, Locks & Fail States

- **Deadline (hard):** due_date. Miss = Game Over or AltRoute (author choice). UI warns at X days prior (Ch. 9.11).
- **Soft lock:** story flag freezes mission until a Circle/Stat/Item requirement is met.
- **Fail (wipe):** Evacuate to last SR; Alarm clears; day continues (Evening available).
- **Retreat:** manual exit to EN or SR Exit; keys and SRs persist.
- **KO on clear:** still halves LXP for that character.

13.7 Quests & Mission Binding

Quest types

- **MainQuest** — binds to Main Mission nodes (required primary).
- **SideQuest** — binds to side nodes; can spawn optional objectives/chests.
- **PersonalQuest** — appears when CBXP layer is met; injects PU/AR nodes or alters boss script (dialogue, capture window).

Routing

- A quest subscribes to node events (OnEnter, OnClear, OnInteract) and emits progress.
 - Multiple quests can target the same node; the node lists quest hooks and the quest holds objective state.
-

13.8 VR Replays (Afternoon → ends day)

What

- Replay any cleared floor/mission in simulation.

Enemy level

- **L_VR** = $\max(\text{L_Original}, \text{floor}(\text{avg_active_party_level}) + \text{Boost})$ with presets **+2 / +5 / +8 / +12** (optional cap vs mission tier).

Rewards

- **LXP**: awarded normally (Δ ladder).

- **Creds:**
 - **Compute as if live:** (enemy + chest drops + ClearCreds + authored clear-time bonuses). Then apply one VR Creds Bonus at EX.
 - **Default source of truth:** prices_rules.csv → VR_Creds_Bonus (e.g., 0.10 → +10%).
 - **Optional per-mission override:** vr_rules.csv → vr_creds_bonus_pct.
 - Apply once at EX; floor after multiplier. Do not stack.
 - **Drops:** identical to live.
 - **SXP:** none (VR never grants SXP).

Capture/Pacify

- Allowed. **Non-lethal multipliers** ($\times 0.30$ LXP; $\times 1.5$ Creds/drops) apply. **Calculate non-lethal Creds first**, then apply the **VR Creds Bonus**. Lethal kills do not count towards bloodlust here.

Calendar

- Ends the day on use, no more actions available. Must sleep.

Notes

- The **VR Creds Bonus** affects **creds only**—never LXP, SXP, drop odds.
-

13.9 CSV Data Specs (authoring)

missions.csv

```
mission_id,name,type(Main/Side/Personal/VR),area_id,floor_band(5-8;8-12;12-15),boss_lv,recommended_lv,due_date(optional),fail_behavior(GameOver/AltRoute/None),allows_vr(1/0 for non-VR),ends_day(0 for live missions),notes
```

mission_nodes.csv

mission_id,node_id,node_type(EN/HL/AR/PU/SR/BG/BS/EX),floor_ix,encounter_id(optional),puzzle_id(optional),gates(stat_expr;item_ids;story_flags;ally_required),alarm_raises(0/1),neighbors(node_id;...),notes

mission_objectives.csv

mission_id,obj_id,obj_type(DefeatBoss/PacifyQuota/SecureNodes/HackTerminals/Escort),target(value),count_req,count_opt(optional),timer_rounds(optional),reward_bundle_id,is_primary(1/0)

mission_rewards.csv

reward_bundle_id,clear_lxp_base,clear_creds_base,chest_table_id,bonus_rules(stealth_ok→+Creds10;time_clear→BPP_cache),notes

vr_rules.csv

mission_id,boost_default(+5),boost_min(+2),boost_max(+12),vr_creds_bonus_pct(10),cap_lv(optional)

quests.csv

quest_id,name,type(Main/Side/Personal),giver(char_id/system),gates(story/cbxp/stat),deadline(optional),rewards(bundle_id),notes

quest_bindings.csv

quest_id,mission_id,node_id,trigger(OnEnter/OnClear/OnInteract),progress(delta),completes(0/1)

alarms.csv

mission_id,alarm_on(conditions:list),effects(+SpeedSeed2;+ReinfChance15;LockShortcutA),clear_on(SafeRoom/DayEnd/BossClear)

bpp_world.csv (reminder)

bpp_id,mission_id,node_id,gate(Story/Stat/Item),hint_text,month_hint

13.10 Worked Example — June “Parking Garage”

Bands: F1: 5–8, F2: 8–12, F3: 12–15; BossLv 15

Primary: DefeatBoss (or PacifyBoss for alt reward)

Optional: PacifyQuota 6, HackTerminals 3, StealthRoute

Day 1 (Afternoon):

EN → HL (minor AR) → PU (Terminal A) → SR (Floor 1 Office).

You clear to SR1, unlock a shortcut to EN. Retreat to go to sleep for the day.

Day 2 (Afternoon):

SR1 → HL → AR (Elite pair) → PU (Terminal B) → BG check (need 3 terminals) → SR2.

Alarm tripped once; Stealth bonus still possible if ≤ 1 alarm (author rule). Retreat to go to sleep for the day.

Day 3 (Afternoon):

SR2 → PU (Terminal C) → BG opens → BS (Boss Lv15).

You Pacify the boss in the vulnerability window. Retreat to go to sleep for the day.

Payout:

- Per-enemy LXP per character via Δ ladder.
 - ClearLXP = $\text{floor}(60 + 10 \cdot 15) = 210$ to active party (KO halves for anyone down).
 - Non-lethal: credits $\times 1.5$, drops $\times 1.5$ on boss table.
 - Optional BPP cache behind Stealth door (one-time).
-

13.11 Designer Knobs (fast tuning)

- **ClearLXP base:** $60 + 10 \cdot \text{BossLv}$ ($\pm 20\%$ safe).
 - **VR creds bonus:** +10% baseline (0–20%).
 - **Alarm effects:** +SpeedSeed +2, +ReinforcementChance +15%, LockShortcut A.
 - **Stealth tolerance:** allow ≤ 1 alarm ping to keep bonus.
 - **Floor reset rules:** respawn “trash” daily; keep elites down once per day.
 - **Boss windows:** 2–3 rounds post-ultimate (Ch. 10).
 - **Pacify quotas:** 25–40% of total population for area-flavored challenge.
-

13.12 Implementation Checklist

- Enforce Afternoon-only launch; Mission ≠ end day, VR = end day.
 - Save SR/shortcuts/keys persistently; reset non-checkpoint content daily.
 - Apply per-character Δ ladder for all LXP; apply non-lethal modifiers to creds/drops.
 - Pay ClearLXP and ClearCreds at EX; KO halves on clear apply.
 - Surface deadlines in UI with warnings; respect fail behavior.
 - Drive objectives and quests via CSV bindings; avoid hardcoding.
 - Author VR boosts per mission; apply optional cap vs tier; ensure no SXP flag.
 - Validate Evening availability after live missions.
-

Chapter 14 — Morality: Pacifist ↔ Bloodlust

What this chapter is:

A global, MC-led meter that responds to live mission choices and outcomes. It drives world reactions, economy shifts, surrender/capture ease, and ending routes—with explicit diminishing and caps.

Covered systems:

- **Core meter:** Range, tiers, live-only rule.
- **Event deltas:** Regular/Elite/Boss lethal vs pacify; story hooks.
- **Diminishing & rounding:** α factor, half-away-from-zero, daily cap.
- **Tiers & reactions:** Surrender, bind ease, alarms, shop prices, patrols.
- **Mission scoring hooks:** Area pacify bonuses.
- **Boss pacify windows:** Phase scripting and deltas.
- **UI/UX:** Meter, toasts, summaries.
- **Data/knobs/examples:** CSVs, tests, and worked cases.

How to read it:

Wire into **Ch. 4** (capture), **Ch. 10** (boss windows), **Ch. 15** (prices), and **Ch. 17** (ending gates).

14.0 Core Concepts

- **Global meter (MC-led):** single campaign value $M \in [-100, +100]$ ($+100 = \text{exemplar Pacifist}$; $-100 = \text{notorious Bloodlust}$).
 - **Live only:** VR replays never change M . Only live mission finishes (lethal or non-lethal) and authored story beats do.
 - **Non-lethal ≠ no reward:** Non-lethal finishes grant LXP $\times 0.30$ but credits $\times 1.5$ and drop odds $\times 1.5$ (Ch. 2.1 & 7).
 - **Boss weight:** Boss outcomes swing the meter much more than rank-and-file (narrative goal).
-

14.1 Event Deltas (what changes the meter)

Let p be the **raw** points for an event (before diminishing). Final applied delta uses §14.2.

14.1.1 Defeats (live missions only)

Event	Raw points p
Regular enemy — lethal	-1
Regular enemy — non-lethal (Pacify/Capture)	+1
Elite/Miniboss — lethal	-3
Elite/Miniboss — non-lethal	+3
Boss — lethal	-15
Boss — pacified (in window)	+15

Notes

- “Regular / Elite / Boss” is the **env_tag** from Ch. 10.
 - **Constructs/drones:** optional morality_weight (e.g., 0.5) scales $|p|$ accordingly.
 - **Civilians** (if present): hard rule **-25** for lethal harm. Default content avoids these.
-

14.1.2 Story & Choice Hooks (optional)

Author explicit morality beats that add **p** on resolution:

- Spare/Release target **+5**
- Intimidate/Threaten **-3**
- Execute **-8**
- De-escalate encounter **+4**

(**Data:** morality_events.csv, §14.8.)

14.2 Diminishing Returns (prevent ping-pong & grind)

- **Global meter** (MC-led): $M \in [-100, +100]$.
 - **Applied delta:**
 - $p_{\text{applied}} = \text{sign}(p) \times \text{floor}(|p| \times (1 - \alpha \times |M|/100) + 0.5)$
 - $\alpha = 0.5$ (default).
 - Rounding rule: round-half-away-from-zero (never banker's rounding).
 - Update: $M \leftarrow \text{clamp}(M + p_{\text{applied}}, -100, 100)$.
 - **Keep M as an integer** after each update.
 - **Daily morality cap:** $|\sum p_{\text{applied}}| \leq 30$ per calendar day (live only).
-

14.2a Rounding Rule (Half-Away-From-Zero)

- **Canonical formula:**

$$p_{\text{applied}} = \text{sign}(p) \times \text{floor}(|p| \times (1 - \alpha \times |M|/100) + 0.5); \alpha = 0.5.$$

- **Worked edge cases:**

- **Raw p = ±1:** at M = 0/40/80/100 → applied ±1.
- **Raw p = ±3:** at M = 0 → ±3; at 40/80/100 → ±2.
- **Raw p = ±15:** at M = 0 → ±15; at 40 → ±12; at 80 → ±9; at 100 → ±8.

- **Why it matters:** prevents softening from (Half-Away-From-Zero) rounding and keeps Pacifist/Bloodlust symmetry.

- **Unit test:** assert these exact outputs at $M \in \{0, 40, 80, 100\}$.

Worked Edge Cases

For $\alpha=0.5$: $\alpha = 0.5$:

Raw p = ±1

- At M = 0 → applied ±1
- At M = 40 → factor = 0.80 → 0.8 → rounds to 1
- At M = 80 → factor = 0.60 → 0.6 → rounds to 1
- At M = 100 → factor = 0.50 → 0.5 → rounds to 1

Raw p = ±3

- At M = 0 → applied ±3
- At M = 40 → factor = 0.80 → 2.4 → rounds to ±2
- At M = 80 → factor = 0.60 → 1.8 → rounds to ±2
- At M = 100 → factor = 0.50 → 1.5 → rounds to ±2

Raw p = ±15 (boss swing)

- At M = 0 → applied ±15

- At $M = 40 \rightarrow \text{factor} = 0.80 \rightarrow 12.0 \rightarrow \pm 12$
- At $M = 80 \rightarrow \text{factor} = 0.60 \rightarrow 9.0 \rightarrow \pm 9$
- At $M = 100 \rightarrow \text{factor} = 0.50 \rightarrow 7.5 \rightarrow \pm 8$ (half-away-from-zero ensures $+8/-8$).

Why this matters

- Prevents “softening” of swings from (Half-Away-From-Zero) rounding.
 - Ensures consistency between Pacifist and Bloodlust ends (symmetry).
 - Unit test these exact values at $M \in \{0, 40, 80, 100\}$ to guarantee no regressions.
-

14.3 Tiers & World Reaction

Compute **Tier** from **M** after each update:

Tier	Range	Label	System Effects (summary)
P3	[+80, +100]	Paragon Pacifist	Surrender +10%; Bind Ease +15; University/Hospital -10% price; Back-Alley +10% price; Alarm tolerance +1 ping; some Bloodlust routes lock.
P2	[+40, +79]	Recognized Pacifist	Surrender +5%; Bind Ease +8; University/Hospital -5% price.
N	[-39, +39]	Neutral	No global modifiers.
B2	[-79, -40]	Feared	Intimidation +5% ATK (party); Alarm reinforcements +10%; Back-Alley -5% price; University/Hospital +5% surcharge; Surrender -5%.
B3	[-100, -80]	Infamous	Intimidation +10% ATK; Alarm reinforcements +20%; Back-Alley -10% price; University/Hospital +10% surcharge; patrol inserts enabled; some Pacifist routes lock.

Bindings to systems

- **Surrender chance (regulars only):** when enemy HP $\leq 20\%$ and morale checks pass, add **+TierBonus%** (P2 +5, P3 +10; B2/B3 apply -5/-10).
 - **Bind Ease:** flat **+8 / +15** to **ItemMod** in capture formula at P2/P3 (Ch. 7 & 10).
 - **Alarm behavior:** at B2/B3, add to **ReinforcementChance** and **enemy Speed seed** (Ch. 13, 10). At P-tiers, allow **one extra alarm ping** before stealth bonus fails.
 - **Economy:** per-tier price modifiers by **shop tag** (pricing model in **Ch. 15**).
 - **Encounter tables:** at B3, allow **patrol inserts** (low EP pairs) on certain nodes.
-

14.4 Mission Scoring Hooks (area stabilization)

At **EX** (mission clear), compute:

- **PacifyRatio** = (non-lethal finishes) / (total enemy finishes, live only)

Apply an **Area Bonus once per mission on clear** (treat as a separate event using the same diminishing function at current M):

PacifyRatio	Area Bonus
≥ 0.75	+5 to M (apply diminish), +10% creds on Clear, +1 drop roll in boss chest (small table)
0.50–0.74	+3 to M (apply diminish), +5% creds
0.25–0.49	+1 to M (apply diminish)
< 0.25	0

(*No Area Bonus in VR.*)

14.5 Boss Pacify Windows (recap + hooks)

- **Boss phase scripts** (Ch. 10) open a Pacify window (*2–3 rounds*) after a telegraphed move/condition.
 - **During the window:** StumbleResist = 0, BindResist –20, and Pacify allowed.
 - **On Pacify:** grant +15 raw points (then diminish), award boss chest, and apply non-lethal economy bonus (Ch. 7).
 - **On lethal kill:** –15 raw points.
 - **Optional:** author an alternate scene + reward bundle for pacifying.
-

14.6 UI/UX

- **Meter bar** under MC portrait with color ends (blue/amber), numeric **M** with **Tier badge** (P3/P2/N/B2/B3).
 - **Toasts:** “**+Pacifist**” / “**+Bloodlust**” with **+p_applied** (post-diminish) and reason.
 - **Mission Summary:** show **PacifyRatio**, **Area Bonus**, and **M change** at EX.
 - **Shop screens:** tooltip explains **price modifiers** by Tier.
 - **Glossary:** compendium entry; link from pause and Chapter 2.
-

14.7 Interactions with Other Systems

- **LXP/Rewards:** unchanged, apart from non-lethal multipliers (Ch. 2 & 7).
 - **Bonds/CBXP:** morality does not directly change CBXP, but some Circle events can author morality beats (morality_events.csv).
 - **BAXP/Affinity:** unaffected mechanically; intimidation/surrender are encounter-level behaviors.
 - **Reverse Blades / Pacify Sigil:** enable non-lethal finishes (Ch. 6–7); these indirectly steer M.
 - **Endings:** Tier and key **boss outcomes** are inputs into ending routes (Ch. 17).
-

14.8 CSV Data Specs

morality_rules.csv

rule,value

Examples:

DiminishAlpha,0.5

DailyAbsCap,30

BossPacifyDelta,+15

BossKillDelta,-15

ElitePacifyDelta,+3

EliteKillDelta,-3

RegularPacifyDelta,+1

RegularKillDelta,-1

ConstructWeight,0.5

morality_thresholds.csv

tier,minM,maxM,surrender_bonus_pct,bind_ease_flat,alarm_reinf_bonus_pct,shop_uni_pct,shop_hospital_pct,shop_blackmarket_pct,patrol_inserts,intimidation_atk_pct,schema_version

P3,80,100,10,15,0,-10,-10,10,0,0,1
P2,40,79,5,8,0,-5,-5,5,0,0,1
N,-39,39,0,0,0,0,0,0,0,0,1
B2,-79,-40,-5,0,10,5,5,-5,0,5,1
B3,-100,-80,-10,0,20,10,10,-10,1,10,1

Defaults (corrected to match §14.3):

- P3,80,100,10,15,0,-10,-10,10,0,0
- P2,40,79,5,8,0,-5,-5,5,0,0
- N,-39,39,0,0,0,0,0,0,0,0
- B2,-79,-40,-5,0,10,5,5,-5,0,5
- B3,-100,-80,-10,0,20,10,10,-10,1,10

morality_events.csv (*story/choice hooks*)

event_id,name,p_raw,once_only(1/0),gates(story_flags;dates),notes

morality_sources_map.csv (*what counts and how*)

source,env_tag(Regular/Elite/Boss/Construct/Civilian),lethal_delta,pacify_delta,vr_counts(0/1)

(Default vr_counts = 0.)

mission_pacify_bonus.csv

mission_id,ratio_lo,ratio_hi,m_bonus,creds_bonus_pct,boss_chest_extra_rolls

patrol_tables.csv (*B3 inserts*)

area_id,encounter_id,ep_cost,chance_pct,cooldown_rooms

14.9 Designer Knobs (quick tuning)

- **Boss swing:** $\pm 10\text{--}20$ acceptable; **± 15 default.**
 - **Diminish α :** **0.3** = stickier extremes; **0.7** = looser.
 - **Daily cap:** **20–40**; **30 default**.
 - **Surrender threshold:** $HP \leq 20\%$; set **25%** on Easy.
 - **Bind Ease:** **+8 / +15** at P2/P3; (may migrate to % if desired).
 - **Economy deltas:** $\pm 5\%$ at Tier-2; $\pm 10\%$ at Tier-3 keep shops meaningful.
 - **Patrols:** only at **B3**; keep **EP low (1–2)** to add pressure, not grind.
-

14.10 Worked Examples

A) “The Gentle Route” (Garage, 75% pacified)

- 16 regulars (12 pacified), 2 elites (both pacified), boss pacified.
- Raw $p = 12 \times (+1) + 2 \times (+3) + (+15) = +33$.
- Starting $M = +20 \rightarrow$ diminish factor $1 - 0.5 \times 0.20 = 0.90 \rightarrow p_{\text{applied}} \approx +29.7 \rightarrow +30$ (rounded; daily cap may trim).
- $\text{PacifyRatio} = 15/20 = 0.75 \rightarrow$ Area Bonus **+5 raw** \rightarrow diminished at current M ($\approx +5 \times 0.85 = +4$ after rounding, depending on exact order).
- Net $M \approx +54 \rightarrow +58$ by EX; **Tier P2 attained** \rightarrow shop discounts & Bind Ease online.

B) “Hot-headed” (Factory, 20% pacified)

- 20 regulars (4 pacified, 16 lethal), 3 elites (2 lethal, 1 pacified), boss **killed**.
- Raw $p = 4 \times (+1) + 16 \times (-1) + (-3 - 3 + 3) + (-15) = -30$.
- Starting $M = 0 \rightarrow -30$ applied (no diminish effect at 0) \rightarrow **Tier B2**.
- Next missions: **+10%** reinforcement chance on Alarm; Hospital adds **+5%** surcharge.

(Exact numbers shown with rounding assumptions from §14.2.)

14.11 Implementation Checklist

- Track **live** mission outcomes only; **ignore VR** for morality.
 - On each qualifying event, compute **p_raw** → **p_applied** with diminish; clamp daily totals to **±DailyAbsCap**.
 - Recompute **Tier**; broadcast hooks to **AI, Alarm, shops, capture, and encounter** systems.
 - At **EX**, compute **PacifyRatio** and apply **Area Bonus** (if any) using the same diminish rule.
 - Surface toasts and Mission Summary deltas.
 - Persist **M** and **Tier**; expose to ending logic and save metadata.
-

Chapter 15 — Economy & Shops

What this chapter is:

The money game: where creds come from, how prices are built (ordered multipliers), shop networks/unlocks, crafting/upgrade costs, and non-lethal/VR economy effects.

Covered systems:

- **Price model:** Region → Unlock → Scarcity → Morality → Sale → floor.
- **Faucets:** Battle/VR, mission clear, jobs, treasures, quests.
- **Sinks:** Consumables, binds, mirrors/bombs, study items, UXBs, upgrades, gifts.
- **Shops:** Network, unlock cadence, stock/restock, scarcity, caps.
- **Crafting & upgrades:** Tech Lab costs (UWT/UAT, Sigil Upgrades, recipes).
- **Morality multipliers:** Price shifts by tier.
- **Targets:** Wallet/spend curves per month.
- **CSVs & examples:** Worked price cases; fast-tuning knobs.

How to read it:

Balance loop for **Ch. 6/7** itemization, ensure price readouts in **Ch. 16**, and respect morality ties from **Ch. 14**.

15.0 Currency & Price Model

- **Currency:** Creds (integer).
- **Reference price (design-side):** P0 per item/line in data.
- **Final price shown to the player (ordered multipliers):**

```
P_final = floor(  
    P0  
    × A_region  
    × U_unlock  
    × S_scarcity  
    × M_morality  
    × D_sale  
)
```

Implementation note (morality % → multiplier):

In (morality_thresholds.csv), the shop_*_pct fields are **additive percent deltas** (e.g., -10 means “-10%”). The engine converts them to multipliers when computing price:

$$M_{\text{morality}} = 1.0 + (\text{shop_tag_pct} / 100.0)$$

Final order is unchanged: region → unlock → scarcity → morality → sale → floor().

Where

- **A_region** = regional index (Campus=1.00, Hospital=1.00, Entertainment=1.05, Back-Alley=1.10 by default).
- **U_unlock** = early-access premium (optional) = 1.10 for the first **7** days after an item line initially appears in that shop; else 1.00.
- **S_scarcity** = 1.00 normally; **1.15** if flagged scarce this week; **0.90** on clearance.
- **M_morality** = multiplier by shop tag from Ch. 14 (Pacifist cheaper at Hospital/Uni; Bloodlust cheaper at Back-Alley).
- **D_sale** = temporary sale/markup (e.g., **0.85** sale, **1.10** festival).

Sell-back values

- **Consumables & generic gear:** Sell = $\text{ceil}(P_0 \times 0.50)$
- **Treasures (pure loot):** Sell = listed value (100%)
- **Materials:** Sell = $\text{floor}(P_0 \times 0.35)$ (discourage flipping)

Guardrails

- Clamp $P_{\text{final}} \geq 1$.
 - Apply multipliers **in the order listed** (region → unlock → scarcity → morality → sale) to keep examples and UI breakdowns consistent.
-

15.1 Where Money Comes From (Faucets)

1. Battles (live & VR)

- Per-enemy Creds (from loot tables).
- Non-lethal finishes pay $\times 1.5$ Creds (see Ch. 2 & 7).
- VR runs: after computing the live-style subtotal (enemy + chest drops + ClearCreds + bonuses), apply the **VR Creds Bonus** once at EX.
 - Default value lives in `prices_rules.csv` → `VR_Creds_Bonus` (e.g., 0.10 → +10%).
 - Per-mission override may be authored in `vr_rules.csv` via `vr_creds_bonus_pct`.
 - Applies to Creds only; never to LXP, SXP, drops, or odds.

2. Mission Clear

- ClearCreds by area (see §15.9 `mission_clear_rewards.csv`).

3. Jobs (Evening)

- Fixed band + performance bonus.
- Register / Stocking / Promoter / Line Cook / Shipper: 80–180 base; +0–50 performance; weekends +20.

4. Treasures

- Sell for full listed value.

5. Quests / Events

- Reward bundles (gift packs, materials, Creds).

(No SXP from any faucet above; see Ch. 12 for SXP sources. UXBs are LXP-only.)

15.2 Where Money Goes (Sinks)

- **Core sinks:** consumables, binds, mirrors/bombs, study items, UXBs, weapon/armor upgrades (UWT/UAT), Sigil Upgrades I–III, bracelet/headwear lines, gifts.
- **Secondary sinks:** travel minifees (optional, default **off**), festival tickets (cosmetic), dorm décor (cosmetic).

Target spend curve (cumulative by month end, median player)

Month	Wallet on hand	Cumulative spend	Notes
May	800–1,200	1,200–1,800	Starter cures + a few mirrors
Jun	1,400–2,000	4,500–5,500	First UWT +1, binds, study items
Jul	1,800–2,600	8,000–9,500	Headwear line, more binds, UXB-S/M
Aug	2,000–3,000	13,000–15,000	UWT +2, UAT +1, craft bombs
Sep	2,200–3,200	19,000–22,000	Sigil Upgrade I–II, more gifts
Oct	2,500–3,500	26,000–30,000	UAT +2, bracelet upgrades
Nov	3,000–4,500	36,000–42,000	UWT +3, Sigil Upgrade III, boss kits
Dec	3,500–5,000	43,000–50,000	Cleanup, final kits
Jan 1	2,500–4,000	48,000–55,000	Endgame prep

(Numbers guide drop/clear-creds balancing.)

15.3 Shop Network & Unlocks

- **Campus Protectors (University)** — Weapons, upgrade services, Reverse Blades; early binds.
- **Hospital Pharmacy** — Cures, defensive items, Headwear lines, vitamins.
- **Library/Campus Stores** — Study items, some books.
- **Card & Game Shop** — Gifts, Card Group/Strategy Night tie-ins.
- **Café/Cafeteria** — Food buffs (if authored), Line Cook job.
- **Back-Alley Market** — Strong/Elite/Omega Binds, high-tier Mirrors/Bombs, rare materials (markup).
- **Secret Facility – Tech Lab** — Crafting (Mirrors/Bombs), Sigil Upgrades I–III, UWT/UAT.

Unlock cadence (default)

- **May:** Pharmacy basics; Campus Protectors weapons Tier 1; Campus study items.
 - **June:** Mirrors/Bombs basic; Binds Weak/Standard; **UWT +1** opens.
 - **July:** Headwear set B; gifts expand; **UAT +1**; **Sigil Upgrade I**.
 - **August:** Binds **Strong**; Mirrors/Bombs Tier 2 recipes.
 - **September:** Bracelets grade up; **Sigil Upgrade II**; **UWT +2**, **UAT +2**.
 - **October:** Elite Binds; deluxe Mirrors; Headwear set C.
 - **November:** Omega Bind; **UWT +3**, **UAT +3**; **Sigil Upgrade III**.
-

15.4 Price Ladders (bands)

(All bands are **P0** before multipliers; tweak per shop using §15.0.)

Cures & Buffs (Pharmacy / Campus)

- **Balms, Inhalers:** 60 / 120 / 240 (S/M/L)
- **Revive Kit:** 400–600
- **Vitamins (D/C/B):** 120 each
- **Orbs (Regen/Speed/Shield):** 220
- **Eye Drops / Candy / Focus Tonic:** 90–110

Status Tools

Smelling Salts / Heated Blanket / Ointment / Antidote: 60–90

Mirrors/Bombs (Tech Lab / Back-Alley)

- **Bombs:** basic 180; advanced 300; deluxe AOE 450
- **Mirrors:** 1-hit 220; 1-round 360

Binds

Weak / Standard / Strong / Elite / Omega: 80 / 180 / 400 / 900 / 4000

Study & Progression

Study Guide / Workbook / Field Manual / Tutor: 120 / 100 / 160 / 200

UXB-S / M / L / XL: 300 / 700 / 1500 / 3200

Gear

Headwear (HP/MP% + Type Resist bands): 400 / 800 / 1500

Bracelets (slot grades): 600 / 1200 / 2200

15.5 Crafting & Upgrades (Tech Lab)

The Tech Lab is the hub for transforming drops into lasting power. Players bring in materials from encounters to craft new gear, reinforce weapons and armor, or apply Sigil upgrades. Recipes balance rarity against payoff, with higher tiers requiring elite drops or mission rewards. This system ties combat and exploration back into progression pacing, ensuring upgrades feel earned, not farmed.

15.5.1 Weapon Upgrades (UWT, 3 steps)

- **+1 Tempered:** +12% BaseWATK, **+1 Scale_BRW**
Cost: **Alloy Ingot ×1 + 500 Creds**
 - **+2 Forged:** +24% BaseWATK, **+1 Scale_BRW**
Cost: **Tempered Core ×1 + 1,500 Creds**
 - **+3 Masterwork:** +36% BaseWATK, **+1 Scale_BRW**
Cost: **Mystic Lattice ×1 + 4,000 Creds**
-

15.5.2 Armor Upgrades (UAT, 3 steps)

- **+1 Reinforced:** ArmorFlat +8, WardFlat +6
- **+2 Fortified:** ArmorFlat +16, WardFlat +12
- **+3 Impenetrable:** ArmorFlat +24, WardFlat +18

(Resist values are defaults; tune per armor line.)

15.5.3 Sigil Upgrades (I–III)

- After Sigil Lv4, spend excess SigXP in Tech Lab for permanent upgrades.
- Each tier adds **+5–10% dmg, +5 MP** (Ch. 7).

Costs

- **Upgrade I:** Mind Prism ×1 + 600 Creds
 - **Upgrade II:** Mind Prism ×2 + 1,400 Creds
 - **Upgrade III:** Mind Prism ×3 + 3,000 Creds
-

15.5.4 Mirrors & Bombs (craft)

- **Fire Bomb (basic):** ElementShard(Fire)×2 + Alloy×1 + 300 Creds
 - **Fire Mirror (1-hit):** ElementShard(Fire)×3 + Aegis Fiber×1 + 360 Creds
 - Scale similarly for Water/Earth/Air/Data/Void.
-

15.5.5 Reverse Blades (conversion)

- **Convert a weapon line** to Non-lethal (–30–50% lethal damage)
Cost: Alloy ×1 + 600 Creds (per weapon)
-

15.6 Morality Price Modifiers (shop tags)

Apply M_morality by **Morality Tier** (Ch. 14):

Tier	University/Campus	Hospital	Back-Alley
P3	0.90	0.90	1.10
P2	0.95	0.95	1.05
N	1.00	1.00	1.00
B2	1.05	1.05	0.95
B3	1.10	1.10	0.90

Back-Alley treats Bloodlust as loyalty; Campus/Hospital reward Pacifists.

15.7 Stock, Restock & Scarcity

- **Restock day:** Sunday 00:00 (local time).
 - **Per-week purchase caps (optional):**
 - Binds: Weak/Standard **unlimited**; Strong **5**; Elite **3**; Omega **1**.
 - Mirrors/Bombs: cap **deluxe items at 5** each.
 - UXB-XL: **2/week**.
 - **Scarcity flags:** author random weekly shortages (e.g., *Aegis Fiber scarce* → *S_scarcity = 1.15, stock -50%*).
 - **Rotating stock:** gift sub-catalog rotates weekly to encourage cadence.
-

15.8 Balancing the Loop (targets)

Mid-game kit (per character by September)

- 6–10 cures, 2–3 revives, 3–5 binds (Standard/Strong), 2–4 mirrors, 4–6 bombs, 1–2 UXB in reserve, **UWT +2, UAT +2**, favorite Sigil at **Upgrade II**.

Spending/earning rhythm

- **Daily spend appetite:** 200–600 Creds on consumables when pushing.
 - **Weekly job expectation:** ~600–1,000 Creds if you work 2–4 evenings.
 - **Mission yields:** 1,200–2,000 Creds per mission day (live) including drops; **VR similar** but with **+10% Creds** and no Evening.
-

15.9 CSV Data Specs

shops.csv

shop_id,name,region_tag(Campus/Hospital/BackAlley/Entertainment/Facility),a_region(1.00..1.10),restock_weekday(Sun),notes

shop_stock.csv

shop_id,item_id,p0,stock_cap_week,unlock_flag(story/month/gate),scarce_flag(0/1),rotation_tag(giftsA/giftsB/none)

prices_rules.csv

rule,value

EarlyAccessDays,7

EarlyAccessPremium,1.10

ScarcityPremium,1.15

ClearanceDiscount,0.90

VR_Creds_Bonus,0.10

morality_price_mod.csv

tier,campus_mult,hospital_mult,backalley_mult

crafting_recipes.csv

recipe_id,product_item_id,mats(ElementShard(Fire)=2;Alloy=1),creds_cost,station(Tech Lab),notes

upgrades_weapon.csv

line_id,step(+1/+2/+3),basewatk_pct,scale_brw_delta,mats,creds_cost

upgrades_armor.csv

line_id,step(+1/+2/+3),armor_flat_add,ward_flat_add,mats,creds_cost

sigil_upgrades.csv

sigil_id,tier(I/II/III),dmg_pct_add,mp_add(+5),mats(MindPrism=x),creds_cost

materials.csv

mat_id,name,p0_sell,rarity,sources(encounters;chests;quests),notes

jobs.csv

job_id,name,base_pay_min,base_pay_max,perf_bonus_max,weekend_bonus,stat_tags(TPO;FCS;VTL),minigame(optional)

mission_clear_rewards.csv

area_id,clear_creds_base,chest_table_id,notes

loot_tables.csv (*ref from Ch. 10*)

table_id,creds_per_enemy_minmax,entries(item_id,pct,cap_pct,qty_minmax)

treasures.csv

treasure_id,name,sell_value,area_id,rarity,notes

15.10 Worked Examples (checked)

A) Strong Bind at Back-Alley (Neutral)

P₀=400, A_region=1.10, U_unlock=1.00, S_scarcity=1.00, M_morality=1.00, D_sale=1.00

$$P_{\text{final}} = \text{floor}(400 \times 1.10) = 440$$

B) Same purchase at B3 (Infamous)

$$M_{\text{morality}}=0.90 \rightarrow P_{\text{final}} = \text{floor}(400 \times 1.10 \times 0.90) = \text{floor}(396) = 396$$

C) Hospital Revive Kit at P2 (Recognized Pacifist) with early-access

P₀=500, A_region=1.00, U_unlock=1.10, M_morality=0.95

$$P_{\text{final}} = \text{floor}(500 \times 1.10 \times 0.95) = \text{floor}(522.5) = 522$$

D) Craft Fire Bomb (basic)

Pay ElementShard(Fire)×2 + Alloy×1 + 300 Creds → yields 1 bomb.

E) Weapon UWT +2 total cost (from base)

+1: Alloy×1 + 500 → +2: TemperedCore×1 + 1,500 → **cumulative 2,000 Creds + mats.**

15.11 Designer Knobs

- **Regional multipliers:** Campus/Hospital **1.00**, Back-Alley **1.10**; Entertainment **1.05**.
 - **Morality multipliers:** see §15.6 ($\pm 5\%$ Tier-2, $\pm 10\%$ Tier-3).
 - **Job ranges:** base **80–180**, bonus up to **+50**, weekend **+20**.
 - **Bind ladder:** **80 / 180 / 400 / 900 / 4000** (adjust $\pm 20\%$ to tune capture pacing).
 - **Upgrade costs:** keep **3–4x** total spend from $+1 \rightarrow +3$ relative to $+1$ alone to keep choices meaningful.
 - **Scarcity cadence:** **0–2** scarce flags per week max.
-

15.12 Implementation Checklist

- Apply **P_final** multipliers **in order**: region → unlock → scarcity → morality → sale.
 - Restock **Sundays**, rotate gifts weekly; enforce **per-week caps**.
 - Honor **morality tier** price multipliers by shop tag.
 - Connect **VR +10% Creds** and **non-lethal ×1.5** to payout.
 - Enforce upgrade/crafting **recipes and costs** at Tech Lab.
 - Validate wallet curve via automated playtests (targets §15.2).
 - Emit shop **tooltips** explaining discounts/surcharges (from morality or sales).
-

Chapter 16 — UI/UX, Logging & Accessibility

What this chapter is:

How players see and audit the game. It specifies HUD, combat toasts, phone panels (Calendar/Stats/Bonds/Affinity/Morality), shop/Tech Lab breakdowns, accessibility, localization, and the telemetry contract.

Covered systems:

- **HUD & battle log:** Readouts, toasts, Burst UI.
- **Phone panels:** Calendar, Stats (weekly counters), Bonds, Affinity, Morality, Journal.
- **World/shops/Tech Lab:** Price factor breakdowns and caps.
- **Tutorials & tooltips:** Replayable, chapter-linked help sheets.
- **Accessibility:** Visual, audio, input, cognitive options.
- **Saves & safety:** Autosave beats and undo edges.
- **Telemetry:** Events, fields, IDs; privacy stance.
- **Error states & QA:** Guardrails and checklists.

How to read it:

Use to validate surfacing for **Ch. 1–15**; it's the user-facing manifestation of every spec.

16.0 Principles (design targets)

1. **Signal > Noise** — show only what matters now; one click opens deeper detail.
 2. **Vocabulary Consistency** — use the same names/icons/colors from Ch. 1–15 (LXP / SXP / SigXP / CBXP / BAXP / BPP).
 3. **Explainable Systems** — every bar, bonus, and penalty has a tooltip and a “?” sheet mapped to its chapter.
 4. **Accessibility-first** — all color encodings are backed by icons, text, and shapes (no color-only meaning).
 5. **Frictionless Logs** — players can audit growth: “Where did my SXP go?” “Why did Affinity tier up?”
 6. **Calendar Truth** — VR and Missions end all actions for the day. Must Sleep. (Ch. 13). Weekly resets Monday; BAXP converts Sunday (Ch. 11); all surfaced clearly.
-

16.1 HUD (in-battle)

Layout (top → bottom)

- **Top-left party list (4)**
Portrait, HP bar, MP bar (numeric + %), status icon row, Burst pips (mini), Speed-seed chevron. MC flagged.
- **Top-right enemies**
Nameplates with HP% (hidden until scanned/captured once), weapon-triangle & Mind-wheel badges, Posture (current Mind element) with weakness arrow once discovered.
- **Center-top turn ribbon**
Initiative order (TPO dice per round; ties use Speed). Re-roll at round end (Ch. 4).
- **Center-bottom command bar**
Attack / Skill / Item / Defend / Capture / Run / **Burst** (+ “?”). Disable if CH1/CH2 channel lock.

- **Bottom-left meters**
Burst Gauge with Tier 1–3 bands; tooltip lists current Tier options (Singles/Duel/Omega) per Ch. 4.7 & Ch. 11.
- **Bottom-right contextual**
Move panel: POT, BaseACC, Type, CHx flag, costs (MP / HP Overcast), tags (Stumble/Interrupt/Bind), short notes.

Toasts (compact, stackable)

- Hit/Eva calc: HIT 83% → EVA –12% = 71% (first time per move type until suppressed by option).
- Crit / Weak / Fall / Interrupt tags.
- **BAXP:** +BAXP A↔B (+2) aggregated at Victory.
- **Morality:** +Pacifist (+3) / +Bloodlust (–1) showing **post-diminish** value (Ch. 14.2).

Assist & Burst UX

- When a Tier threshold is met, Burst button soft-glow. Pressing shows Singles/Duel/Omega; locked entries show reason (e.g., “Need AT2 with A”).
 - Enemy channel telegraphs: CH1/CH2 pips + target line; tooltip: “Interrupt with Stumble or Skill: Breaker.”
-

16.2 Victory Screen (post-battle)

- Per-character **LXP** with Δ-ladder breakdown (Ch. 2.1):
 $\text{Base } 157 \times \Delta 1.00 \times \text{Env } 0.90 \times \text{Party } 1.00 \times \text{Standing } 1.00 = 141$ (floor at end).
- Solo/Duo bonus rows (+30% / +15%) if applicable (Ch. 2.1).
- KO penalty rows ($\times 0.50$) per character (Ch. 2).
- **Non-lethal** modifier display: LXP $\times 0.30$, **Creds ×1.5**, **Drop odds ×1.5**.
- **SigXP** per Sigil used.
- Materials/Drops (show pre/post 1.5× if non-lethal).

- **BAXP recap** for all active pairs.
 - **Morality delta** (e.g., M: +4 → +7 (P2)), tooltip explains diminish & daily cap (Ch. 14.2).
 - Buttons: **Retry** (VR only) / **Next**.
-

16.3 Phone & Panels (out-of-battle)

Tabs

1. **Calendar** — Today shows Morning/Afternoon/Evening tiles; VR banner on scheduled Afternoon (ends day). Deadlines marked ! with warning days (Ch. 13).
2. **Stats** — Five cards (BRW, VTL, TPO, FCS, MND): Lv 1–10, SXP to next, **Weekly count** (1–7, then **FATIGUED** >7). Tooltip: “First 7 actions at 100%, then 50% until Monday” (Ch. 12).
3. **Party** — Equipment, Sigils, UWT/UAT visual ladder, Reverse Blade toggle note.
4. **Bonds** — Circle wheel (CBXP Layers 1–4), event counts, Pass/EP/GGT log (Ch. 5).
5. **Affinity** — Pair grid (A↔B) with LifetimeBAXP, Weekly (0–30) bar, Tier markers at **20/60/120**; “Sunday projection: at pace → AT2 in ~N weeks” (Ch. 11).
6. **Morality** — Meter –100...+100 with **B3/B2/N/P2/P3** badges and per-tier world effects (prices, alarms, bind ease) (Ch. 14).
7. **Journal** — Missions/Side/Personal quests; node progress; pacify quotas; alarm/stealth status (Ch. 13).
8. **Logs** — LXP/SXP/SigXP/CBXP/BAXP breakdowns by day/week/month with filters.
9. **Settings** — Accessibility, gameplay, audio, input. (See §16.8.)

Quick actions

- Hold button → Calendar; double-tap → Bonds (social cadence).
-

16.4 World Map & Spots Browser

- **Map pins:** University, Hospital, Temple, Beach, Downtown, Entertainment, Mission Areas.
 - Hover pin → phase-appropriate spots with **BaseSXP**, Track tags, first-time bonus (Ch. 12).
 - Lock icons for gates (Stat threshold / Key item / Story flag).
 - Travel is abstracted; **phase is consumed when you use a spot.**
-

16.5 Shops & Tech Lab

Shop screen

- Left catalog (Cures, Binds, Mirrors, Bombs, Gifts, Study, UXBs, Gear).
- Right item card shows Final Price with **ordered breakdown matching §15.0** (region → unlock → scarcity → morality → sale). Example:
 $P0 \ 400 \times \text{Region} \ 1.10 \times \text{Early} \ 1.00 \times \text{Scarcity} \ 1.00 \times \text{Morality} \ 0.90 \times \text{Sale} \ 1.00 = 396$
- Show per-week caps/stock, restock day (“Restocks Sunday”), and Morality tier badge if affecting price.
- Scarcity banner if active.

Tech Lab

- Tabs: **Weapons (UWT)**, **Armor (UAT)**, **Sigils (I–III)**, **Craft (Mirrors/Bombs)**, **Reverse Blades**.
 - Each recipe: mats, creds, **result deltas** (e.g., “BaseWATK +15% (+1)”; preview compares to current; confirm prompts mats/creds. (Ch. 15.5)
-

16.6 Tutorials, Tooltips & Help Sheets

- First-time entry to any system opens a **skippable, replayable** tutorial (short video + text).
 - **Tooltips:** long-press/hover shows a **Help Sheet** that quotes the core rule and links to its chapter (Δ -ladder, weekly SXP rule, VR ends day, Tier thresholds).
 - **Onboarding (May):** battle basics (Defend/Stumble/Capture), Phone (Calendar/Stats/Bonds), first Shop price breakdown, first Tech Lab upgrade, first Hangout (Pass/EP/GGT loop).
-

16.7 Save, Autosave & Replays

- **Autosave on:** entering Safe Room, Mission EX, after Hangout result, after Shop purchase, **before VR ends day**, on **Sunday BAXP conversion**.
 - **Manual save** anywhere out of battle.
 - **Retry:** Battle Retry (VR only) and authored **Node Retry** (arena).
 - **Safety:** one **Undo last Room Move** on Dorm screen per week (ties to room-move penalty, Ch. 11.4).
-

16.8 Accessibility (options & defaults)

Text & UI

- Font scale **80%–150%** (default 100%).
- High-contrast UI: darker backplates, thicker icon strokes.
- Dyslexic-friendly font toggle.
- Tooltip persist: stays until dismissed.

Color & Vision

- Colorblind palettes: **Protan / Deutan / Tritan** (swaps element palettes and triangle/wheel accents).
- No color-only signaling: every weakness uses arrow + icon; meter tiers use badges.

Motion & Timing

- Reduce camera motion: soften shakes/zooms; disable warps on Stumble/Crit.
- Animation speed: **75% / 100% / 125%**.
- Auto-advance toggles for dialogue w/ delay sliders.

Hearing

- Subtitles on by default (+ speaker name + [SFX cues]).
- SFX ducking during VO.
- Sliders: Master/Music/SFX/VO/UI.

Input

- Full remap (keyboard/controller); hold/toggle for Defend/Run.
- Sticky targeting toggle.
- Confirm-spam guard (prevents accidental multi-buys/uses).

Cognitive

- Numbers→Icons mode (adds stat icons alongside repeated numerics).
- Persistent “?” hints on complex screens until disabled.
- Tutorial replay library.

All accessibility settings **persist across saves** and apply from boot.

16.9 Logging & Telemetry (analytics contract)

Purpose: support balance for LXP pacing, SXP weekly caps, CBXP throughput, BAXP conversion, morality drift, economy pressure.

Conventions: snake_case event names; **UTC timestamps**; anonymized player_id/session_id; no free text.

Core events (fields abbreviated; types implied)

Field gloss:

- **social_baxp** = bonus_dates_baxp + cameo_baxp
- **dorm_adj_applied** ∈ {+5, 0, -4} for Bestie/Neutral/Rival
- **weekly_raw** = sum before floor/cap; **weekly_floored** = max(0, **weekly_raw**); **weekly_capped** = min(**weekly_floored**, 30)
- **battle_start**
area_id, mission_id, node_id, enemy_lv_avg, party_comp[char_id],
party_lv[char_id], burst_tier_start, morality_tier
- **battle_end**
win(0/1), turns, ko_count, nonlethal_finishes, lxp_gained{char_id:int},
sigxp{sigil_id:int}, baxp_pairs{pair_id:int}, morality_delta
- **mission_enter / mission_exit**
mission_id, day_phase, vr(0/1), alarms_trippled, pacify_ratio, clear_lxp,
clear_creds
- **vr_run**
mission_id, boost, ends_day(1), total_lxp, creds, nonlethal_count
- **hangout_result**
char_id, type(Love/Other), event_ix, outcome(Pass/EP/GGT), cbxp_gained,
gift_used(0/1), gift_tier(None/Neutral/Like)
- **affinity_week_convert** (Sunday)
pairs[{ pair_id, co_presence_baxp, synergy_baxp, social_baxp,
dorm_adj_applied, weekly_raw, weekly_floored, weekly_capped,
lifetime_baxp_after, new_tier }]

- **stats_action**
spot_id, phase, stats_awarded{stat:sxp_final}, weekly_counts{stat:int}, track_mod_applied(0/1), fatigue(0/1)
- **shop_purchase**
shop_id, item_id, qty, p0, region_mult, unlock_mult, scarcity_mult, morality_mult, sale_mult, p_final
- **upgrade_make**
type(UWT/UAT/Sigil/Craft/Reverse), line_or_sigil, step, mats_spent{mat:qty}, creds_spent
- **morality_change**
source(regular/elite/boss/story), p_raw, p_applied, m_before, m_after, tier_after, is_boss(0/1), source_id, encounter_id
- **savepoint**
type(autosave/manual),
context(SafeRoom/EX/Hangout/VRPreSleep/SundayConvert)

Privacy: no PII; all IDs reference design data.

- **No PII** → The game shouldn't log or expose things like real player names, emails, or account IDs that could be traced back to a specific person. That keeps the data safe and avoids legal/privacy issues.
 - **All IDs reference design data** → Instead of storing private info, the system uses **internal design IDs** (like enemy_id=ELITE_GOBLIN_02 or sigil_id=FIREBALL_LV2). These IDs are from your CSVs and design tables, not from a player's identity.
-

16.10 Strings, Icons & Color Tokens

localization.csv

key,en-US,es-ES,ja-JP,...

Examples:

ui.sxp.weekly_rule,"First 7 actions at full value; then 50% until Monday."

ui.vr.ends_day,"VR ends the day. You will sleep after the simulation."

icon_map.csv

token,description,svg_id

icon.stat.brw, "BRAWN", "sword-arm"

icon.stat.vtl, "VITALITY", "shield-heart"

icon.stat.tpo, "TEMPO", "wing-foot"

icon.stat.fcs, "FOCUS", "target-eye"

icon.stat.mnd, "MIND", "brain-spark"

icon.xp.lxp, "Level XP", "chevron-up"

icon.xp.sxp, "Stat XP", "hex-dot"

icon.xp.sigxp, "Sigil XP", "sigil-glyph"

icon.xp.cbxp, "Circle Bond XP", "circle-rings"

icon.xp.baxp, "Battle Affinity XP", "link-nodes"

icon.perk.bpp, "Battle Perk Point", "star-node"

theme_colors.csv (includes colorblind variants)

token,default_hex,protan_hex,deutan_hex,tritan_hex

color.mind.fire,#E4572E,#D95C2B,#D85A2F,#E06A37

color.mind.water,#2E86E4,...

color.morality.pacifist,#3AA76D,...

color.morality.bloodlust,#C23B22,...

16.11 Error States & Guardrails

- **Purchase confirm** for expensive items (**> 1000 Creds**) and **Omega Bind**.
 - **VR warning:** “This ends the day—continue?”
 - **Deadline banners** at **X** and **X-1** days remaining (config from Ch. 13).
 - **Diminishing SXP cue** on the **8th** weekly action to a stat (Ch. 12).
 - **Room-move penalty panel** (**-1 BRW, -1 MND** for 7 days) with **Undo (1x/week)**.
-

16.12 QA Checklists (what to test)

- HUD math parity with Ch. 3–4 formulas (Hit/Eva clamp 5–95, Overcast HP cost, Defend 0.7).
 - Δ-ladder visuals per character incl. solo/duo bonuses.
 - VR flow **ends day** and blocks Evening actions.
 - Weekly SXP **reset Monday**; BAXP **convert Sunday**.
 - Morality diminish & daily cap (Ch. 14).
 - Accessibility toggles persist; correctly remap palettes, fonts, motion.
 - Logs emit required events with valid IDs and numbers.
-

16.13 Data Specs (UI & Settings)

ui_settings.csv

setting_id,category(Display/Audio/Input/Accessibility),type(toggle/slider/select),default,min,max,options,notes

Examples:

font_scale,Display,slider,100,80,150,,percent

colorblind_mode,Accessibility,select,None,,,None;Protan;Deutan;Tritan,swaps palettes
reduce_motion,Accessibility,toggle,0,,,reduces shakes/warps

help_sheets.csv

sheet_id,title,chapter_ref,body_md

telemetry_schema.json (outline)

```
{  
  "battle_end": {  
    "win": "bool",  
    "turns": "int",  
    "nonlethal_finishes": "int",  
    "lxp_gained": "map<char_id,int>",  
    "sigxp": "map<sigil_id,int>",  
    "baxp_pairs": "map<pair_id,int>",  
    "morality_delta": "int"  
  }  
}
```

16.14 Worked Flow (player story)

- **Afternoon Mission** → clear ARs, unlock SR; Victory shows LXP with Δ-ladder, non-lethal 1.5× economy, BAXP per pair; **Evening hangout** Pass → CBXP +1 (Love); Logs update.
 - **Next day VR** → confirm ends day; big LXP, +10% Creds; sleep (no Evening).
 - **Saturday:** SXP shows MND 7/7 → tooltip: further actions this week = 50%; player shifts to TPO spots.
 - **Sunday:** Affinity converts; two pairs hit AT2; Phone→Affinity shows unlock; Dorm allows room moves; Autosave fires.
-

Notes on cross-refs:

- **Hit/Eva, Overcast, Defend:** Ch. 3–4.
 - **Δ-ladder & KO/solo/duo bonuses:** Ch. 2.1.
 - **SXP weekly rule:** Ch. 12.
 - **Mission/VR day flow:** Ch. 13.
 - **Affinity conversion & tiers:** Ch. 11.
 - **Morality diminish & tiers:** Ch. 14.
 - **Shop pricing order:** Ch. 15.
-

Chapter 17 — Endings, Postgame & New Game+

What this chapter is:

The resolution and replay model. It selects an ending from gameplay inputs, unlocks postgame, and defines what NG+ carries/reset—with optional challenge toggles and titles.

Covered systems:

- **Ending inputs:** Morality tier, boss outcomes, OMEGA use, Anchors, completions, deadlines.
- **Routes:** A–G with priorities (Bad End → Omega Truth → Anchors → Pacifist/Bloodlust → Standard).
- **Selector logic:** Formal decision tree with telemetry.
- **Epilogues:** Ally sequencing and variants.
- **Postgame:** Freeplay week, Boss Rush, cosmetics/tokens.
- **NG+:** Carryovers vs resets; Standard vs Omega; scaling.
- **Respecs/loadouts/titles:** Economy for experimentation.
- **Challenges:** EX/Iron/Mercy/Wrath/Clockwork.
- **CSVs & examples:** Worked selections and knobs.

How to read it:

Close the loop with **Ch. 14** (morality), **Ch. 11** (AT3/OMEGA), **Ch. 6–7** (carryovers), and reflect results in **Ch. 16** (clear data UI).

17.0 Ending Inputs (the variables that matter)

All endings are computed at **Final Resolve** (after the Jan 1 boss fight and any epilogue scenes). Inputs drawn from earlier systems:

- **M (Morality):** final value and Tier P3/P2/N/B2/B3 (Ch. 14).
 - **Boss outcomes:** lethal vs pacify for each of the ~6 bosses (Ch. 10, 13).
 - **OMEGA availability:** was **OMEGA** used in the final battle (MC + two allies at AT3, Burst Tier 3)? (Ch. 11, 4.7)
 - **Anchor Bonds:** per Love Interest (LI), final route ❤️ Love or 🤝 True Friend (Ch. 5). Track **LoveCount** and **FriendCount** across LIs.
 - **Circle completion:** # of 12 LIs at **Core Layer (Layer 4)**; # of 17 Others at their single-layer cap (Ch. 5).
 - **Calendar fail flags:** any missed **hard** deadline (Ch. 13.6).
 - **Difficulty toggles (optional):** EX Mode flags (see §17.8). Flavor only; not eligibility.
 - **Secret flags:** authored specials (e.g., All Bosses Pacified, No-KO run, 4 stats at 9 & 1 at 11, **BPP Perfect 55**).
-

17.1 Ending Routes (the catalog)

Resolver picks one primary route (A–G), then layers ally epilogues and stingers.

A) Bad End — Deadline Collapse

- **Trigger:** Miss a hard deadline on any Main Mission flagged critical.
- **Notes:** Short resolution → credits; **Clear Data** still produced.

B) Standard End — Neutral Resolve

- **Trigger:** Final boss cleared; OMEGA **not** used; Morality Tier = **N** (−39..+39); no special flags.
- **Notes:** Default wrap with neutral city state.

C) Gentle Horizon — Pacifist Route

- **Trigger:** Final boss **Pacified** and **M** $\geq +40$ (P2/P3), and **Pacify** ≥ 3 bosses total.
- **Notes:** De-escalation, surrenders common; Hospital/Uni cooperation epilogues. Non-lethal economy echoes in postgame flavor.

D) Crimson Ascendancy — Bloodlust Route

- **Trigger:** Final boss **killed** and **M** ≤ -40 (B2/B3), and **Lethal** ≥ 3 bosses total.
- **Notes:** Fear-driven order; Black Market ascendant; harsher patrol epilogues.

E) Anchor: Love — Chosen Heart

- **Trigger:** ≥ 1 LI anchored ❤️, OMEGA used in final battle, and ≥ 8 Core completions among LIs.
- **Notes:** Romantic route; shared future scene with chosen LI; others get short vignettes.

F) Anchor: True Friend — Chosen Circle

- **Trigger:** Majority of LIs anchored 🤝, OMEGA used, and (≥ 8 Core LIs **OR** ≥ 12 Others completed).

- **Notes:** Community-first route; dorm/found-family montage; Duel/Omega choreography stinger.

G) Omega Truth — Secret Ending

- **Trigger (all):**
 1. **OMEGA** used in the final phase,
 2. **Pacify ≥ 4 bosses total,**
 3. **AT3 with ≥ 3 allies at credits,**
 4. **Sigil Upgrade III** on ≥ 1 Sigil,
 5. **$M \in [-39, +79]$** (i.e., not B2/B3; **P2 allowed, P3 excluded by design** to preserve a “pure” Pacifist variant).
- **Notes:** Deeper Psyokin lore; unlocks **Omega New Game+** banner and cosmetic.

Priority if multiple qualify: A (fail) → G → E/F → C/D → B.

17.2 Ending Selector (formal logic)

At Final Resolve:

1. If any **BadEndFlag**: route = A.
2. Else if **G** conditions met: route = G.
3. Else if **E** met and **F** not met: route = E.
4. Else if **F** met and **E** not met: route = F.
5. Else if **E** and **F** both met: choose **E** if LoveCount \geq FriendCount, else **F**.
6. Else if **C** met and **D** not met: route = C.
7. Else if **D** met and **C** not met: route = D.
8. Else if **C** and **D** both met: pick by M sign ($M \geq 0 \rightarrow C$, else **D**).
9. Else: route = B.

Telemetry: ending_selected{route, reasons[]} (Ch. 16.9).

17.3 Ally Epilogues (how bonds resolve)

After the primary route, play ally epilogues in curated order:

- **Love Interests (12):** if ❤ → Love epilogue; if 🤝 → True Friend epilogue; else:
 - Core but unanchored → mid-length vignette,
 - Outer/Middle only → mini stinger.
 - **Others (17):** single epilogue each, with line swaps for **P2/P3 vs B2/B3** tints.
 - **Pair stingers:** if two allies are **AT3 with each other**, include a Duel montage beat.
 - **Runtime target:** total epilogue time $\leq 10 \text{ min}$; Love/True Friend routes may use one extended scene.
-

17.4 Postgame (Clear Save & Freeplay)

On credits:

- Create **Clear Data** snapshot with:
World State (ending route, M, boss outcomes),
Collections (sigils, recipes, mats, gift catalog, discovered weapon/armor lines),
Progression (BPP total/spend, LXP levels, stat levels, Sigil Upgrades, UWT/UAT),
Bonds (CBXP & Anchors), **Affinity** tiers, **Shop unlocks**, **Achievements**.

Then offer:

- **Epilogue Freeplay (Jan week, optional; ON by default):** relaxed city instance (no main combat) to:
 - Run wrap-up hangouts (≤ 1 per ally; does **not** alter Anchor),
 - Spend remaining creds/mats; craft cosmetics,
 - Enter **VR Boss Rush** (below),

- Save again or jump to **NG+**.
 - **VR Boss Rush:** ladder of all bosses with toggles (**Phase Remix ON/OFF**, **Pacify Windows Short/Long**). Rewards **cosmetic titles** and **Respec Tokens** (§17.7).
-

17.5 New Game+ (NG+) — What Carries, What Resets

Start NG+ from **Clear Data**. Choose **Standard NG+** or **Omega NG+** (unlocked by route **G**).

17.5.1 Carries Over (default)

- **BPP total** and all learned **Battle Perks** (with full **respec** option; §17.7).
- **Weapons/Armor** including **UWT/UAT** levels and **Reverse Blade** conversions.
- **Sigils known** + **Sigil Upgrades I–III**.
- **Bracelets/Headwear** inventory.
- **Recipes** (Mirrors/Bombs) & all **Tech Lab** unlocks.
- **Cosmetics/titles/achievements**.
- **UXBs** in inventory.
- **Gifts catalog** (seen items list; not bond points).

17.5.2 Resets

- **Calendar** (back to May 5).
- **Story flags** and missions.
- **Circle Bonds (CBXP)** and **Anchors** (❤️ / 🤝).
- **Party Affinity (BAXP tiers)**.
- **Morality M**.
- **SXP weekly counts** and daily/phase progress.

Hidden BPP caches: respawn in NG+. If player's total is already **> 55 BPP**, each cache instead yields **Respec Token ×1** or **UXB-L ×1** (player choice).

17.6 NG+ Enemy Scaling & Rewards

- **Area base level offset:** +10 to all mission floor bands; bosses +12 vs first run.
- **Dynamic catch-up:**
EnemyLv = max(OrigLv + 10, floor(AvgPartyLv) + Boost)
with **Boost bands** (+5 / +8 / +12) per area gate (VR-style; Ch. 13.8).
- **Difficulty knobs:** +5% enemy BaseWATK and SIG slope; **+1 Stumble Resist stage** on elites/bosses (windows unchanged).
- **Drops/creds:** +10% creds baseline; +5% drop **cap** per table (clamped).
- **SXP system:** unchanged (7 actions/week per stat at full value; Ch. 12).

Omega NG+ (route G bonus)

- Adds **Omega Phantoms** (optional mini-elites) to late floors (EP 2–3) with **Sigil Prism** drops (cosmetic glows) and title challenges.
-

17.7 Respecs, Loadouts & Titles

- **Respec Token:** refunds **all BPP** (free respond), one use per token. Earn via Boss Rush or NG+ cache conversions.
 - **Loadouts:** 3 Battle-Perk loadout slots; accessible at **Dorm/Tech Lab**.
 - **Titles** (cosmetic, Phone profile):
 - **Merciful** — Pacify all bosses.
 - **Relentless** — Kill all bosses.
 - **Catalyst** — Use OMEGA in **10** distinct boss phases across runs.
 - **Scholar** — 4 stats at **9**, 1 at **11**.
 - **Strategist** — **Perfect 55 BPP** set.
-

17.8 Optional Challenge Toggles (per run)

Chosen at **New Game**; can be combined. Rewards **titles only** (no gameplay unlocks).

- **EX Damage:** enemies +15% damage; **Defend** = ×0.75 (vs ×0.70 default).
 - **Iron Psyche:** no Revive Kits; KO = **auto-evacuate** to last SR.
 - **Mercy Oath:** lethal finishes –50% creds; pacify +25% cred bonus (**stacks** with base ×1.5).
 - **Wrath Oath:** pacify **disabled**; Mirrors/Binds –20% prices.
 - **Clockwork:** all deadlines –2 days.
-

17.9 CSV Data Specs

endings.csv

route_id(A..G), name, priority, summary_text_key, unlock_flag(omega_ng_plus? 0/1), notes

ending_conditions.csv

route_id, cond_id, type(Threshold/Count/Flag/All/Any), expr

Examples:

G,1,All, OMEGA_USED==1 && BOSSES_PACIFIED>=4 && AT3_ALLIES>=3 &&

SIGIL_UPG_III>=1 && M>-40 && M<80

C,1,All, FINAL_BOSS_PACIFIED==1 && M>=40 && BOSSES_PACIFIED>=3

ending_epilogues.csv

character_id, type(Love/TrueFriend/Core/Other), route_scope(B/C/D/E/F/G/Any), text_key, variants_by_morality(P3/P2/N/B2/B3), order_hint

postgame_options.csv

option_id, name, enabled_by(route_id or Any), rewards(respec_token;cosmetics), description_key

ngplus_rules.csv

mode(Standard/Omega), area_lv_offset, boss_lv_offset, boost_bands(+5;+8;+12),
dmg_slope_pct(+5), drop_cap_bonus_pct(+5), creds_bonus_pct(+10),
omega_phantoms(0/1)

carryover_rules.csv

system, carries(1/0), notes

Examples:

BPP,1,"Respec tokens available"
CBXP,0,"Bonds reset for re-run"
Inventory,1,"Keep gear, mats, UXBs"

challenge_toggles.csv

toggle_id, name, effect_flags(json), title_reward, description_key

achievements.csv

achv_id, name, condition_expr, reward_title(optional)

clear_save_schema.json (outline)

```
{  
    "world_state": {  
        "ending_route": "G",  
        "morality": 72,  
        "boss_outcomes": {"garage": "pacified"}  
    },  
    "collections": {  
        "sigils": ["Fire", "Data"],  
        "recipes": [],  
        "weapons": []  
    },  
    "progression": {  
        "bpp": 55,  
        "perks": []  
    }  
}
```

```

    "levels": {"mc": 88},
    "stats": {"brw": 9}
},
"bonds": {"anchors": {"RedGirl": "Love"}, "cbxp_summary": {}},
"affinity": {"pairs": {"MC-BlueGirl": {"tier": "AT3", "lifetime": 140}}},
"economy": {"creds": 5820, "mats": {"Alloy": 7}},
"challenge": {"toggles": ["EX_DAMAGE", "MERCY_OATH"]}
}

```

17.10 Worked Examples

Example 1 — “Omega Gentle”

- Final boss **Pacified**; **OMEGA** used; **M=+66 (P2)**; **5/6 bosses pacified**; **AT3 allies = 3**; **Sigil Upg III = 1**.
- **Selector: G** qualifies → **Omega Truth**.
- **Postgame: Omega NG+** unlocked; title “**Catalyst**”; Boss Rush open.

Example 2 — “Red Route”

- Final boss **killed**; **M=−58 (B2)**; **4/6 bosses lethal**; **OMEGA not used**.
- **Selector: meets D** → **Crimson Ascendancy**.
- **Postgame: Standard NG+**; Black Market epilogue tint; prices only flavor during epilogue week.

Example 3 — “Anchor Love”

- **OMEGA** used; **LoveCount=7, FriendCount=5; ≥ 8 Core LIs**.
- **Selector: E** beats C/D/B → play chosen LI long epilogue; others vignette.

Example 4 — “Neutral Standard”

- Final boss cleared; **M=+10 (N)**; **OMEGA not used**; no thresholds.

- **Selector: B → Standard End.**

Example 5 — “Deadline Miss”

- Mansion **due date missed**.
 - **Selector: A → Bad End** (short), **Clear Data** saved.
-

17.11 Designer Knobs (quick tuning)

- Route thresholds: **C/D** at ± 40 with ≥ 3 boss outcomes feel right; ± 35 if too strict.
 - **Omega Secret (G)**: keep multi-axis to protect rarity ($\sim 10\text{--}15\%$ of clears).
 - **E/F Core requirement**: ≥ 8 LIs ensures commitment; or allow ≥ 6 LIs + 8 Others as alt condition.
 - **NG+ offsets**: $+10/+12$ are safe; push $+12/+15$ for a hard NG+.
 - **Respec economy**: 1 token from Boss Rush, 1 from NG+ cache overflow per chapter (cap 3).
 - **Challenge toggles**: titles-only rewards—no gameplay boosts.
-

17.12 Implementation Checklist

- Compute route via §17.2; **log reason set** (Ch. 16.9).
- Play **primary route** → **ally epilogues** (branch by anchors & morality) → credits.
- Generate **Clear Data** per schema and store.
- Offer **Epilogue Freepay** and **NG+** modes.
- Apply **carryover/resets** (inventory vs bonds vs BAXP) cleanly.
- On NG+, set area bands/drops per §17.6; spawn **Omega Phantoms** only in Omega NG+.
- Hook **titles & achievements** to conditions.
- QA: verify **Bad End** path, mixed **E vs F**, and **priority ordering**.

Appendices

Appendix A — Master CSV Registry (Index + Sample Rows)

What this appendix is:

A canonical index of every data file used across systems, including sample rows and version fields. It keeps design, content, and engineering in lockstep.

Covered systems:

- **Conventions:** Encoding, lists, enums, dates, masks, percents.
- **Per-system indexes:** Bonds, Affinity/Dorms, World Spots/Classes, Missions/VR, Enemies/AI/Loot, Items/Gear/Crafting, Economy/Shops, Morality, Calendar/Pacing.
- **Corrections:** Armor/Ward fields, posture encoding, numeric offense lines.
- **Samples:** Minimal, valid entries to copy-forward.

How to read it:

Use as your data dictionary while authoring Ch. 5–15; update schema_version on breaking changes.

A.0 Conventions (applies to all CSVs)

- **Encoding:** UTF-8 with header row. Delimiter: , • Escapes: per RFC 4180.
 - **Booleans:** 0/1. Enums: canonical strings shown below.
 - **IDs:** snake_case; stable and unique within file. Cross-file FKs always point to an ID (never display names).
 - **Lists in a cell:** ; separated (e.g., Poison=80;Sleep=35).
 - **Dates:** YYYY-MM-DD. Times: 24h local unless flagged.
 - **Weekday masks:** bitstring Mon..Sun (e.g., 1111100) or explicit list Mon;Wed.
 - **Percents:** plain numbers (e.g., 15 means 15%).
 - **Clamps:** hit/eva to [5,95]; loot chances clamp to table caps.
 - **Versioning:** include a schema_version column or maintain a metadata.csv with {file_id, schema_version}; bump on breaking changes.
 - **Enemies (Ch. 10 correction):** use armor_flat / ward_flat (no per-enemy elemental resist tables).
 - **Posture:** encode with start_posture and posture_rule (Fixed / OnCast / OnPhase).
 - **Offense curves:** numeric coefficients only (no inline algebra), e.g. base_watk_a + base_watk_b·L.
-

A.1 Index by System

Circles & Bonds (Ch. 5)

`circles_events.csv` (author every bond scene)

- PK: character_id, event_no
- FKs:
 - locations → world_spots.csv:spot_id (optional)
 - item_gate → items_core.csv:item_id

character_id,is_love,layer,event_no,phase_mask,locations,weekday_mask,pass_target,difficulty,allows_gift,allows_synergy,gives_baxp,is_bonus_date,stat_gate,item_gate,story_gate,rewards,schema_version

red_girl,1,Middle,3,AE,card_shop;dance_club,1111100,5,Hard,1,1,0,0,"TPO>=4","rose_perfume",FLAG_DRAMA01,"consumable:protein_drink",1

circles_gifts.csv

character_id,gift_id,reaction,ep_mod,schema_version

red_girl,action_figure,Liked,4,1

circles_rewards.csv

character_id,layer,reward_type,reward_id,value,schema_version

red_girl,Inner,perk,perk_red_counter,1,1

circles_flags.csv

character_id,flag_key,value,schema_version

red_girl,anchor_choice, ❤️ ,1

love_connections.csv (pair links & poly routes, cutscene logic)

- PK: row_id (stable unique)

- FKs:

- character_id → ally_profiles.csv:ally_id

- partner_id → ally_profiles.csv:ally_id

- Notes: type ∈ {LoveConnection,Poly}. Use requirements to encode gates like

min_pair_tier=AT3;mc_romance=none or mc_romance=both.

row_id,character_id,partner_id,type,requirements,cutscene_id,notes,schema_version

lc_secretgirl_redgirl,secret_girl,red_girl,LoveConnection,"min_pair_tier=AT3;mc_romance=none",cs_lc_secret_red,Shows pair ending if MC does not choose either,1

poly_secretgirl_aifriend,secret_girl,ai_friend,Poly,"mc_romance=both;min_pair_tier=AT3",cs_poly_mc_secret_ai,Special triad ending with MC + both allies,1

Affinity & Dorms (Ch. 11)

affinity_pairs.csv — lifetime ledger

- PK: pair_id (A-B form)

pair_id,lifetime_baxp,tier,last_convert_date,schema_version

mc-red_girl,84,AT2,2025-09-21,1

affinity_weekly_log.csv — weekly tallies

- PK: week_id, pair_id

week_id,pair_id,co_presence_battles,co_presence_baxp_raw,ko_penalty_count,synergy_weakness_chains,synergy_duel,synergy_omega,synergy_baxp_raw,bonus_dates_count,bonus_dates_baxp,cameo_baxp,dorm_bonus,moved_penalty_applied,total_baxp_capped,schema_version

2025W38,mc-red_girl,8,16,0,2,1,0,3,0,0,0,5,0,24,1

affinity_thresholds.csv

- PK: tier

tier,min_lifetime_baxp,aura_hit_pct,aura_eva_pct,aura_speed,unlocks_text,schema_version

AT2,60,7,7,1,"Unlocks Duel Psyokin",1

dorm_rooms.csv

- PK: room_id

room_id,neighbor_ids,special_tags,schema_version

A1,A2;B1,Kitchen,1

dorm_assignments.csv (layout snapshot for week W = last assignment before Sunday 00:00; moves on Sun apply to W+1)

- PK: date, character_id

date,character_id,room_id,adjacency_status,moved_this_sunday,schema_version

2025-09-21,red_girl,A1,Bestie,1,1

affinity_rules.csv — central knobs

rule,value

WeeklyCap,30

SynergyPerBattleCap,3

CoPresencePerWin,2

CoPresenceKO,1

BestieWeekly,5

RivalWeekly,-4

AT1,20

AT2,60

AT3,120

CameoGrant,2

MovePenalty_BRW,-1

MovePenalty_MND,-1

MovePenaltyMaxStacks,2

MovePenaltyClampFloor,1

World Spots & Tracks (Ch. 12)

world_spots.csv — “where SXP comes from”

- PK: spot_id

spot_id,name,phase,location_id,base_sxp,stats,track_tags,first_time_bonus,weekend_bonus,cred_payout,gates,notes,schema_version
dojo_main,"Temple Dojo",A,temple_grounds,8,BRW,None,0,2,,," ", "Weekend tournament +2",1

classes_electives.csv

- PK: class_id

class_id,track,stat,base_sxp,weekday_mask,room,attendance_credit,schema_version
prog_101,Science,MND,6,1111100,comp_lab,1,1

study_items.csv (convenience mirror; source of truth in Ch. 7)

- PK: item_id

item_id,sxp,stat_mask,weekly_cap,consumes_phase,schema_version
study_guide,15,BRW;VTL;TPO;FCS;MND,0,1,1

books.csv

- PK: book_id

book_id,title,once_only,sxp,stat,location_id,notes,schema_version
mind_over_matter,"Mind Over Matter",1,8,MND,campus_library,,1

sxp_rules.csv

rule,value,schema_version
WeeklyFullActionsPerStat,7,1
PostFullWeeklyMultiplier,0.5,1
TrackMod,1.10,1
WeekendLibrarianBonus,2,1

movies_featured.csv (optional)

- PK: week_id

week_id,stat,notes,schema_version

2025W38,MND,Campus film fest,1

date_spots.csv (hangout/date venues & bonuses)

- PK: spot_id

Notes: baxp_bonus_range is a dash range; stat_theme optional (nudges +4 SXP on flagged Bonus Dates per Ch. 5).

spot_id,name,category,location_id,stat_theme,gift_bonus,baxp_bonus_range,phase_mask,notes,schema_version

fancy_restaurant,"Fancy Restaurant",Food,downtown_core,FCS,0,"6-8",E,"High-cost date spot; unlocks after Chapter 2",1

karaoke_main,"Karaoke Box",Entertainment,entertainment_district,TPO,0,"6-8",E,"Duet mini-event available",1

Missions & VR (Ch. 13 + Ch. 9)

missions.csv — high-level mission defs

- PK: mission_id

mission_id,name,type,area_id,floor_band,boss_lv,recommended_lv,due_date,fail_behavior,allows_vr,ends_day,notes,schema_version

GARAGE_MAIN,Parking Garage,Main,area_garage,"5-8;8-12;12-15",15,12,2025-06-07,None,1,0,"Tutorial mainline",1

mission_nodes.csv

- PK: mission_id,node_id

mission_id,node_id,node_type,floor_ix,encounter_id,puzzle_id,gates,alarm_raises,neighbors,notes,schema_version

GARAGE_MAIN,EN01,EN,1,,,," ",0,HL01,"Entry ramp",1

mission_objectives.csv

- PK: mission_id,obj_id

mission_id,obj_id,obj_type,target,count_req,count_opt,timer_rounds,reward_bundle_id,is_primary,notes,schema_version

GARAGE_MAIN,OBJ1,DefeatBoss,garage_boss_15,1,,,RB_GARAGE_CLEAR,1,1

mission_rewards.csv

- PK: reward_bundle_id

reward_bundle_id,clear_lxp_base,clear_creds_base,chest_table_id,bonus_rules,notes,schema_version

RB_GARAGE_CLEAR,210,900,LT_GARAGE_T1,"stealth_ok→+Creds10;time_clear→BPP_cache","First main",1

vr_rules.csv

- PK: mission_id

mission_id,boost_default(+5),boost_min(+2),boost_max(+12),vr_creds_bonus_pct,cap_lv(optional)

GARAGE_MAIN,+5,+2,+12,10,

deadlines.csv (optional alias)

mission_id,date_due,fail_behavior,ui_warning_days,schema_version
GARAGE_MAIN,2025-06-07,None,7,1

calendar_days.csv

date,month,weekday,is_storylock,allows_mission,allows_vr,notes,schema_version
2025-06-14,June,Sat,0,1,1,,1

pacing_targets.csv

month,enemy_lv_min,enemy_lv_max,hero_lv_target_min,hero_lv_target_max,missions_target,vr_target,hangout_target_min,hangout_target_max,schema_version
September,35,45,40,42,3,2,20,22,1

availability.csv (hangout availability)

character_id,available_from_date,unavailable_to_date,phase_mask,gate,schema_version
red_girl,2025-08-01,,E,StoryFlag(RED_JOINED),1

bpp_world.csv (hidden BPP placements)

bpp_id,mission_id,node_id,gate,hint_text,month_hint,schema_version
bpp_temple_roof,,temple_roof,Stat(FCS>=5),"Listen for the wind chimes",September,1

Enemies, Encounters, AI (Ch. 10) — Corrected

enemies.csv (uses armor_flat/ward_flat; no type_resists; adds start_posture)

- Enums: posture_rule ∈ {Fixed,OnCast,OnPhase} · start_posture ∈ {Neutral,Fire,Water,Earth,Air,Data(Void),Omega}

enemy_id,name,archetype,env_tag,level,weapon_type,element,start_posture,posture_rule,base_acc,base_eva,speed_seed,armor_flat,ward_flat,ailment_suscept,bind_resist,pacify_ok,notes,schema_version
data_sentinel_22,Data
Sentinel,Caster,Regular,22,Wand,Data,Data,Fixed,78,20,2,10,8,"Poison=80;Sleep=35;Freeze=30",25,1,,1
flame_regent_60,Flame
Regent,Glass,Boss,60,Hammer,Fire,Neutral,OnCast,82,18,3,12,10,"Poison=40;Burn=0;Sleep=0;Freeze=0",60,0,"StumbleResist+25% except windows",1

enemy_archetypes.csv

archetype,A_BRW,G_BRW,A_VTL,G_VTL,A_TPO,G_TPO,A_FCS,G_FCS,A_MND,G_MND,hp_mult,mp_mult,scale_brw_delta,schema_version
Caster,3,1.0,4,1.1,4,1.4,6,2.0,6,2.2,4,1.0,0,1

enemy_growth.csv (optional overrides)

enemy_id,stat,A_override,G_override,schema_version
flame_regent_60,VTL,,1.0,1

enemy_offense.csv (numeric coefficients only)

enemy_id,base_watk_a,base_watk_b,sig_a,sig_b,scale_brw,skill_list,schema_version
data_sentinel_22,30,5,20,4,6,"sig_data_burst:50:0:;sig_confuse:25:2:;atk_wand:25:0:",
1
flame_regent_60,30,5,20,4,12,"ch1_ember_spiral:45:1:CH1;ch2_hell_pyre:25:3:CH2;imp
act_crush:30:0:",1

loot_tables.csv

table_id,creds_per_enemy_minmax,entries(item_id,pct,cap_pct,qty_minmax)

enemy_loot_map.csv

enemy_id,table_id,schema_version
data_sentinel_22,LT_TECH_T2,1

encounters.csv

encounter_id,area_id,env_tag,ep_budget,formation,waves,run_locked,schema_version
MB_E01,MilitaryBase,Regular,10,"soldier_18:front:3;soldier_18:front:3;skirm_19:back:4
",,0,1

boss_phases.csv (adds optional window_effects for vulnerable windows)

boss_id,phase_no,posture,adds,open_capture,vuln_window_rounds,window_effects,not
es,schema_version
flame_regent_60,1,Fire,none,0,0,"","Teach triangle; CH1 only",1
flame_regent_60,2,Fire,none,1,2,"StumbleResist=0;BindResistDelta=-20","Opens after
CH2 resolves",1
flame_regent_60,3,Scripted,wraith_fire_pair,0,0,"BindResistDelta=-20","Summons;
posture swaps on cast; 1 reflect/round",1

ai_packages.csv

package_id,offense_phys_w,offense_sigil_w,control_w,support_w,survival_w,target_rules,triggers,schema_version
caster_glass_agro,15,55,15,10,5,"FocusWeakness+20;InterruptChannels+25","HP<60%
→Support+20;AfterCH2→VulnWindow",1

capture_windows.csv

boss_id,phase_no,start_cond,end_cond,bind_resist_delta,notes,schema_version
flame_regent_60,2,AfterUltimate,2Rounds,-30,"Scripted telegraph",1

Combat Types & Skills (Ch. 8)

types_weapon_triangle.csv

attacker_type,strong_vs,weak_vs,neutral_vs,schema_version
Slash,Impact,Pierce,Wand,1
Pierce,Slash,Impact,Wand,1
Impact,Pierce,Slash,Wand,1
Wand,Wand,Wand,Wand,1

types_mind_wheel.csv (includes Data/Void/Omega)

element,strong_vs,weak_vs,schema_version
Fire,Air,Water,1
Water,Fire,Earth,1
Earth,Water,Air,1
Air,Earth,Fire,1
Data(Void,Omega,1
Void,Data,Omega,1
Omega,All,None,1

skills.csv (subset)

skill_id,name,element,base_mp,base_pot,base_acc,flags,upgrade_tier_cap,schema_version

sig_fire_1,Fireball,Fire,10,120,80,,1,1

attacks.csv

attack_id,name,weapon_type,pot,base_acc,flags,schema_version

slash_basic,Slash Basic,Slash,100,80,,1

gear_type_resists.csv (gear-only elemental resists are the correct place for % type resists)

gear_id,element,resist_pct,schema_version

headband_fire,Fire,15,1

posture_rules.csv

actor_type,start_posture,change_rule,omega_neutralize,schema_version

Player,None,OnCast,1,1

Equipment, Items, Crafting (Ch. 6–7)

equipment_weapons.csv

weapon_id,family,type,base_watk,base_acc,crit_bonus_pct,scale_brw,skill_acc_boost,flags,shop_tier,price,notes,schema_version

sword_steel,Sword,Slash,80,80,5,10,5,,3,3200,,1

weapon_upgrades.csv

weapon_id,step,basew_atk_pct,cale_brw_delta,mat_id,mat_qty,price,schema_version

sword_steel,+1,20,1,mat_alloy,1,500,1

equipment_armor.csv

armor_id,base_def,ail_resist_pct,uat_step,ward_base,price,notes,schema_version
armor_fortified,120,10,2,,2800,,1

equipment_headwear.csv

head_id,ward_resist_pct,maxhp_pct,maxmp_pct,type_resists,price,notes,schema_version
scholar_band,12,0,10,"Fire=0;Water=0;Air=0;Earth=0;Data=0;Void=0",2200,,1

equipment_footwear.csv

foot_id,base_eva,speed,price,notes,schema_version
combat_shoes,20,4,1800,,1

bracelets.csv

bracelet_id,slots,tier_cap,slot_bonuses,price,notes,schema_version
research_band,3,II,,2400,,1

materials.csv

mat_id,rarity,sources,sell_price,notes,schema_version
mat_alloy,Common,"enemies:LT_TECH_T2;nodes:dockyard",50,,1

crafting_recipes.csv

recipe_id,type,input,output,station,price,story_gate,schema_version
refine_alloy,Refine,"scrap_metal:5",mat_alloy:1,TechLab,200,,1

items_core.csv

item_id,category,name,tier,price,shop_tags,battle_use,field_use,notes,schema_version
balm_m,Heal,"Balm M",2,200,Pharmacy,1,1,"Restore HP mid",1

items_effects.csv

item_id,effect_type,value,duration_rounds,stacks,target,element,flags,schema_version
balm_m,HPflat,250,0,Refresh,Ally,None,,1

bombs.csv

item_id,potency_single_equiv,is_aoe,aoe_factor,element,craft_cost,schema_version
bomb_fire_basic,120,1,0.7,Fire,"shard_fire:2;mat_alloy:1;creds:300",1

mirrors.csv

item_id,element,mode,duration_rounds,craft_cost,schema_version
mirror_fire,Fire,Hit,1,"shard_fire:3;creds:500",1

binds.csv

item_id,tier,item_mod,notes,schema_version
bind_elite,Elite,60,,1

study_items.csv (source of truth)

item_id,sxp,stat_mask,weekly_cap,consumes_phase,schema_version
tutor,12,ANY,1,1,1

uxbs.csv

item_id,lxp,consumes_phase,schema_version
uxb_m,900,1,1

gifts.csv

gift_id,shop_id,price,liked_by,neutral_for,disliked_by,schema_version
action_figure,card_shop,180,"red_girl","best_friend","scientist",1

Economy & Shops (Ch. 15)

shops.csv

shop_id,name,region_tag,a_region,restock_weekday,notes,schema_version
campus_protectors,"Campus Protectors",Campus,1.00,Sun,,1

shop_stock.csv

shop_id,item_id,p0,stock_cap_week,unlock_flag,scarce_flag,rotation_tag,schema_version

campus_protectors,sword_steel,3200,1,Story(MIL_BASE_CLEAR),0,none,1

prices_rules.csv

rule,value,schema_version

EarlyAccessDays,7,1

EarlyAccessPremium,1.10,1

ScarcityPremium,1.15,1

ClearanceDiscount,0.90,1

VR_Creds_Bonus,0.10,1

morality_price_mod.csv

tier,campus_mult,hospital_mult,backalley_mult,schema_version

P2,0.95,0.95,1.05,1

mission_clear_rewards.csv

area_id,clear_creds_base,chest_table_id,notes,schema_version

area_garage,900,LT_GARAGE_T1,,1

jobs.csv

job_id,name,base_pay_min,base_pay_max,perf_bonus_max,weekend_bonus,stat_tags,minigame,schema_version

line_cook,Line Cook,100,180,50,20,TPO;FCS,,1

treasures.csv

treasure_id,name,sell_value,area_id,rarity,notes,schema_version

vintage_watch,"Vintage Watch",800,area_downtown,Rare,,1

Morality (Ch. 14)

morality_rules.csv

rule,value,schema_version
DiminishAlpha,0.5,1
DailyAbsCap,30,1
BossPacifyDelta,+15,1
BossKillDelta,-15,1
ElitePacifyDelta,+3,1
EliteKillDelta,-3,1
RegularPacifyDelta,+1,1
RegularKillDelta,-1,1
ConstructWeight,0.5,1

morality_thresholds.csv

tier,minM,maxM,surrender_bonus_pct,bind_ease_flat,alarm_reinf_bonus_pct,shop_uni_pct,shop_hospital_pct,shop_blackmarket_pct,patrol_inserts,intimidation_atk_pct,schema_version
P3,80,100,10,15,0,-10,-10,10,0,0,1
P2,40,79,5,8,0,-5,-5,5,0,0,1
N,-39,39,0,0,0,0,0,0,0,0,1
B2,-79,-40,-5,0,10,5,5,-5,0,5,1
B3,-100,-80,-10,0,20,10,10,-10,1,10,1

morality_events.csv (story/choice hooks)

event_id,name,p_raw,once_only,gates,notes,schema_version
SPARE_TARGET_01,"Spared the courier",+5,1,"story_flag:COURIER_FOUND",,1

morality_sources_map.csv

source,env_tag,lethal_delta,pacify_delta,vr_counts,schema_version
generic_trash,Regular,-1,+1,0,1

mission_pacify_bonus.csv

mission_id,ratio_lo,ratio_hi,m_bonus,creds_bonus_pct,boss_chest_extra_rolls,schema_version
GARAGE_MAIN,0.75,1.00,5,10,1,1

patrol_tables.csv (B3 inserts)

area_id,encounter_id,ep_cost,chance_pct,cooldown_rooms,schema_version
area_factory,FACT_PATROL_01,2,20,3,1

Appendix B — Glossary & Abbreviations

What this appendix is:

Shared vocabulary across disciplines. It prevents naming drift and doubles as a quick refresher on acronyms in UI and logs.

Covered systems:

- **Core stats & XP types:** BRW/VTL/TPO/FCS/MND; LXP/SXP/SigXP/CBXP/BAXP/BPP.
- **Combat terms:** TYPE, POT, Posture, Omega, CH1/CH2, Stumble/Fall, Overcast.
- **Social & calendar:** EP/GGT/Pass, Attendance, Track, VR.
- **Economy:** UXB, regional tags, scarcity.

How to read it:

Reference from **Ch. 16** tooltips and localization keys to keep text consistent.

-
- **BRW / VTL / TPO / FCS / MND** — Core stats: Brown, Vitality, Tempo, Focus, Mind.
 - **SXP** — Stat XP (raises BRW/VTL/TPO/FCS/MND).
 - **LXP** — Level XP (character level; cap 99).
 - **CBXP** — Circle Bond XP (relationship layers & events).
 - **BAXP** — Battle Affinity XP (pairwise; converts weekly to Affinity Tiers).
 - **BPP** — Battle Perk Points (+1 creation; +1 every 3 levels; +22 hidden; target 55).
 - **UST** — Upgraded Sigil Tier (global Tier II/III multipliers).
 - **TYPE** — Element/type multiplier (weapon triangle & mind wheel).
 - **POT** — Potency of a move or item (baseline 100).
 - **Posture** — Defensive element equal to last Sigil; sets resist & weakness.
 - **Omega** — Neutralizes defensive weaknesses (offense still elemental).

- **Stumble / Fall** — Weakness hit bonus (+25% & pushback). Two same-round → Fall.
 - **CH1 / CH2** — Channeling tags; resolve in 1 or 2 turn starts.
 - **Overcast** — Cast with insufficient MP by paying HP ($\text{ceil}(1.5 \times \text{MP})$ cost).
 - **Reverse Blades** — Weapon flag; physical KOs become non-lethal (damage penalty).
 - **Pacify** — Reduce to 0 non-lethally via Pacify Sigil or Reverse Blades.
 - **Bind** — Capture item; tiers Weak→Omega.
 - **GGT** — Generic Get-Together; fail-forward meeting that grants +2 EP next time.
 - **EP** — Event Points within a hangout (Loved/Okay/Miss).
 - **Pass** — EP threshold by layer (4/5/6/6; Hard +1, Easy -1).
 - **Burst (T1/T2/T3)** — Gauge actions: Singles / Duel / Omega Psyokin.
 - **VR** — Simulation of cleared content; LXP only; ends the day.
 - **UXB** — Universal eXperience Boost (LXP packs; consume a phase).
 - **Attendance** — $\geq 75\%$ Morning classes → +10 SXP/month (+6 FCS/+4 MND).
 - **Track** — Art / Medical / Science (+10% TrackMod on matching spots).
 - **World Spot** — Any non-class SXP source (dojo, bowling, jobs, etc.).
 - **Weekly fatigue** — First 7 actions per stat at 100%; beyond that 50% until Monday.
 - **Δ ladder** — Level difference multiplier for LXP (full list Ch. 2.1).
 - **Env tags** — Regular / Miniboss / Boss.
 - **EP budget** — Encounter Points budget (Ch. 10.5).
 - **Cap** — Clamp of a value (e.g., hit/eva, loot chance).
 - **AT0/1/2/3** — Affinity: Acquainted / Synchronized / Partnered / Resonant.
-

B.1 Initiative & Round Skeleton (Ch. 3.4 · 4.0–4.2)

- **Start of Round**
 - Roll initiative for every unit using TPO dice tiers (keep highest): 1–3→1d20, 4–6→2d20(H), 7–9→3d20(H), 10→4d20(H).
 - Add **Speed** (gear/effects).
 - Break ties by TPO → Speed → coinflip.
 - **Start-of-Round Timing**
 - Tick DoT/HoT (e.g., 5% MaxHP), decrement durations, resolve CH1/CH2 completions, expire zeros.
 - **Turn Loop (per unit in order)**
 - If **Fall** is present: skip this turn and clear Fall.
 - Choose one: **Attack / Skill / Item / Defend / Capture / Run / Burst**.
 - Consume MP (or Overcast HP if allowed) at action start.
 - Resolve target checks → apply effects → end-of-turn flags.
 - **Round End**
 - Ends when all units are acted/fallen/channeling/Bound/KO'd/fled; then re-roll initiative for the next round.
-

B.2 Hit → Crit/Stumble → Damage with Floor (Ch. 3.5–3.6 · 4.3–4.4a)

- **Accuracy vs Evasion (clamp all finals to [5, 95])**
 - **Physical:** Hit = WeaponBaseACC + 0.25·TPO + mods; Eva = FootwearBaseEVA + 0.25·VTL + mods; Final = clamp(Hit – Eva).
 - **Skill:** Hit = SkillBaseACC + WeaponSkillBoost + 0.25·TPO + mods; Eva = FootwearBaseEVA + 0.25·FCS + mods; Final = clamp(Hit – Eva).
 - Roll d100 per target (or per-hit if the move is flagged that way).

- **On Hit: Crit & Stumble**
 - Apply **Crit** (global $\times 2$ damage; initiative pushback). **Defend** blocks crit.
 - Apply **Stumble** on weakness (+25% damage; pushback 1). Two weakness hits in the same round cause **Fall** (skip next turn). Defend blocks stumble.
 - **Pre-Mitigation Power (define PreMit for floors later)**
 - **Physical Pre:** $(\text{BaseWATK} + \text{BRW} \times \text{Scale_BRW}) \times \text{POT\%} \times \text{TYPE} \times (\text{Crit?}) \times (1 + \text{buffs} - \text{debuffs})$.
 - **Skill Pre:** $(\text{SIG} + \text{MND} \times \text{S_MND}) \times \text{POT\%} \times \text{TYPE} \times (\text{Crit?}) \times (1 + \text{buffs} - \text{debuffs})$.
 - **Flat Soak (per hit); multi-hit scaling uses $\div \sqrt{H}$**
 - **PDEF = ArmorFlat $\times (\text{BASELINE} + 0.25 \times \text{VTL})$** for physical.
 - **MDEF = WardFlat $\times (\text{BASELINE} + 0.25 \times \text{FCS})$** for skills.
 - Raw = $\max(\text{Pre} - \text{DEF_perHit}, 0)$.
 - **Post-Soak Multipliers**
 - Apply **Defend $\times 0.7$** , **Shield Orb $\times 0.8$** , and other post-soak defensive multipliers multiplicatively.
 - **Defensive Floor (Mitigation Clamp)**
 - FinalDamage = $\max(\text{post-soak damage}, \text{ceil}(\text{PreMit} \times \text{DMG_FLOOR_effective}))$.
 - Defaults: **Enemy→Player = 0.15**, **Player→Enemy = 0.20** (global mode optional).
 - For multi-hit moves, compute the floor **once on the summed move** (PreMit from the total).
 - Exceptions: miss/reflect, Immune/Invulnerable flags, pure DoT/fixed-damage.
 - **Clamps & Notes**
 - Hit/Eva clamp to [5, 95].
 - DoT/fixed damage ignore PDEF/MDEF.
 - TYPE covers weapon triangle & Mind wheel (Ch. 8).
-

B.3 Burst Gauge Build/Spend + OMEGA Lighting + Aura/Adjacency

Pick (Ch. 4.7 · 4.7a · 4.7b · 11.3)

- **Gauge Gains (per unit, per round; cap +25)**
 - Basic hit +10; Skill hit +12; Take damage +6; **Exploit weakness (Stumble) +8** (once per target per round); **Crit +6; KO (kill/pacify) +8; Inflict Fall +6.**
 - Clamp per-unit contribution to **+25 per round**; cap gauge at **0..100**; overflow lost.
- **Spend Tiers**
 - **25** → one Single; **55** → two Singles or a Duel; **90** → three Singles, or Duel+Single, or **OMEGA**.
 - Burst consumes the MC's action; no MP; cannot Overcast.
 - **Duel requires AT2** on that specific pair; **MC must be active**.
- **OMEGA Readiness (lights immediately)**
 - **MC active; exactly two allies active; both MC↔Ally pairs at AT3**; allies need **not** be AT3 with each other.
 - Recompute on party edits, KO/revive, tag swaps, Sundays (tier change), and any Affinity tier change.
 - Disabled text: “Need MC active”; “Need two AT3 allies active (MC↔Ally pairs)”; “OMEGA not available in this encounter.”
- **Runtime Aura vs Dorm Adjacency (apply one source, never stack)**
 - Inputs: current **partner** (sortie-locked), **pair tier** (AT0–AT3), weekly **adjacency snapshot** (Bestie/Rival/None; Sunday 00:00), active allies.
 - **Rival override (low tier):** if Rival is adjacent & active **and** that Rival pair $< \text{AT2}$, apply **Rival penalty** to the actor; cannot be offset.
 - Otherwise compare **Partner Aura vs Bestie Adjacency**; apply the **single better** effect for that actor (never both; never multiple Besties).
 - If Rival pair $\geq \text{AT2}$, compare Rival penalty vs Partner Aura; apply the **strictly better** (usually the aura).
 - Numbers: **Bestie +5% Hit/+5% Eva; Rival -5% Hit/-5% Eva/-1 Speed.**
 - Auras: **AT1 +5/+5, AT2 +7/+7/+1 Spd, AT3 +9/+9/+2 Spd.**
 - Re-evaluate on swaps/KO/revive.

B.4 Capture, Non-Lethal & Escape (Ch. 4.8 · 2.1 · 4.9 · 7.6)

- **Capture Eligibility & Attempt**
 - Valid target; not story-locked; window open for bosses if authored.
 - **Catch% = clamp(Base + ItemMod – EnemyResist – 0.4·HP% + StateBonus, 0, 100);** floor to int; roll.
 - **StateBonus:** +15 if Sleep/Freeze/Bound; +10 if Stunned/Fallen.
 - **Bind Ladder (ItemMod):** Weak +10 / Standard +25 / Strong +40 / Elite +60 / Omega = 100%.
- **Non-Lethal Outcomes**
 - Pacify/Capture still grants LXP but at **×0.30**; **credits ×1.5** and **drop odds ×1.5** (cap to 100%; table rules respected).
 - **Reverse Blades** flag physical as non-lethal (with a –30–50% lethal damage penalty by line).
- **Run Attempt**
 - **Run% = clamp(50 + 5·(HeroTPO – EnemyAvgTPO) – (%EnemyHP – %HeroHP), 10, 95).**
 - No attempt if any party member is **Bound** (surface a tip instead).
 - **Smoke Grenade** = auto-escape from non-locked battles.

B.5 Social & Weekly Systems: EP→Pass→CBXP, SXP Fatigue, Sunday

Rituals (Ch. 5.2 · 12.0 · 11.2 · 11.4 · 9.3)

- **Bond Event Resolution (each hangout = 3 beats)**
 - Tally EP: **Loved +2 / Okay +1 / Miss +0**; apply **Hard +1** or **Easy –1** to **Pass** threshold by layer (**Outer 4 / Middle 5 / Inner 6 / Core 6**).
 - End-of-event adders (once each): **Gift** (Disliked +0 / Neutral +2 / Liked +4) and optional **Synergy +1**.

- **Cap:** Gift + Synergy cannot push beyond **Pass + 1**.
 - On **Pass:** award CBXP (**Love +1 / Others +2**), tick layer.
 - On **Fail:** queue **GGT** next time (auto +2 EP, no gift); if that clears the prior Pass, award CBXP and advance.
 - **SXP Weekly Fatigue (per stat)**
 - First **7 actions/stat/week** pay **100%**; the **8th+** action to that same stat pays **50%** until **Monday reset**.
 - **Secret Training (Evening)** is **+6** to a chosen stat; if that stat was trained earlier that day (any phase/item), add **+4 synergy** (once/day).
 - **Sunday Conversion & Dorm (Affinity/BAXP)**
 - **Weekly BAXP sum per pair:** co-presence + synergy + dates/cameos + dorm adjacency → **floor to zero** → **cap at 30** → add to lifetime → update tier thresholds (**AT1 20 / AT2 60 / AT3 120**). Reset weekly tallies.
 - **Adjacency snapshot:** use the layout as of **Sunday 00:00** for the entire next week.
 - **Dorm weekly adders:** **Bestie +5, Rival -4** (before floor/cap).
 - **Room changes:** Sundays only; moves made on Sunday apply starting **week W+1**.
 - **Room-move penalty:** each moved ally gets **-1 BRW** and **-1 MND (effective)** for **7 days (Mon-Sun)**; stacks to **-2**, cannot drop an effective stat below **1**.
 - **Calendar Reminders**
 - **VR (Afternoon) ends the day** (no Evening hangout).
 - **Live Missions do not end the day** (Evening remains).
 - Monthly **Attendance:** if $\geq 75\%$ Morning classes, award **+10 SXP (+6 FCS / +4 MND)**; fatigue-immune; no phase cost).
-

B.6 Item Timing & Buff Stacking Quick-ref (Ch. 7.0–7.2)

- **Action & Duration**
 - Items consume your turn in battle; study items & UXBs consume a phase out of combat.
 - On use: pay cost → apply effect → set duration (short buffs **3r**; long/Reflect/regen often **5r** unless authored).
 - **Stacking**
 - Same-named buffs/debuffs **do not stack**; take the stronger and **refresh** duration.
 - Different buffs multiply in this order: **TYPE** → **Tier/Upgrade** → **Crit** → **(1 + buffs – debuffs)**.
 - **Shield Orb** –**20%** stacks multiplicatively with **Defend ×0.7** (→ ×**0.56**), both applied **after** flat PDEF/MDEF.
-

B.7 — Ally Codex

What this is:

A complete ledger of all 29 recruitable/social allies in Psyokin, with their Romance status, Bestie/Rival ties, Likes/Dislikes, and a short bio. This acts as a **player-facing compendium** and a **design reference** for content authors.

Codex Fields (per ally):

- **Bodytype / Pronouns / Orientation**
- **Bond Type** (Romance-Capable or Friend-Only)
- **Bestie/Rival Ties**
- **Likes/Dislikes** (for gift math & flavor)
- **Bio**

Example Entries (excerpt):

Main Party (Romance-Capable unless noted)

- **Secret Girl** — Feminine • She • Pansexual. Bestie: Best Friend • Rival: Red Girl. Likes Tech Toys, dislikes Perfume. Bio: Brilliant and elusive; knows more than she lets on.
- **Best Friend** — Masculine • He • Straight. Bestie: Blue Girl • Rival: Scientist. Likes Earrings, dislikes Flowers. Bond Type: Romance-Locked (Friend route only).
- **Blue Girl** — Feminine • She • Straight. Bestie: Best Friend • Rival: Red Girl. Likes Rings, dislikes Tech Toys. Honors student with a perfectionist streak.

World Connections (Romance-Capable)

- **Therapist** — Feminine • She • Lesbian. Loves Necklaces, dislikes Action Figures. Links: App Gamer, Host Manager. Campus counselor who sees through bravado.
- **Kpopper** — Masculine • He • Gay. Loves Scientist, likes Chocolate, dislikes Tech Toys. Dance club wunderkind.
- **App Gamer** — Feminine • She • Lesbian. Likes Action Figures, dislikes Rings. Links: Therapist, Red Girl. Mobile esports gremlin.

Work Connections (Friends-Only)

- **Old Grouchy Professor Lady** — Likes Antique Pens, dislikes Loud Music. Grants Exam Mastery.
- **White Knight** — Likes Polished Metals, dislikes Pranks. Grants Guardian's Ward.
- **Dog** — Likes Treats, dislikes Thunder. Grants Lucky Paw perk.

(...full roster of 29 continues, each in this consistent format)

ally_profiles.csv (bio & identity basics)

- PK: ally_id

ally_id,display_name,bodytype,pronouns,orientation,bond_type(basic),bio_short,schema_version

secret_girl,Secret Girl,Feminine,She,Pansexual,RomanceCapable,"Brilliant and elusive;
knows more about the Facility than she lets on.",1

ally_links.csv (Bestie/Rival ties)

- PK: ally_id

- Notes: lists can be empty; multiple besties/rivals allowed via ; separation.

ally_id,besties,rivals,schema_version

secret_girl,best_friend,red_girl,1

red_girl,secret_girl,blue_girl,1

ally_gifts.csv (likes/dislikes mapping)

- PK: ally_id,gift_id

ally_id,gift_id,reaction(Disliked/Neutral/Liked/Loves),ep_mod,schema_version

red_girl,action_figure,Liked,4,1

blue_girl,rings,Liked,4,1

secret_girl,perfume,Disliked,0,1

ally_romance_flags.csv (capability & links)

- PK: ally_id

• Notes: romance_capable 0/1; poly_flags free text for special cases; love_connection_ids →
love_connections.csv:row_id (;

ally_id,romance_capable,poly_flags,love_connection_ids,schema_version

secret_girl,1,"poly_with=ai_friend;red_girl","lc_secretgirl_redgirl;poly_secretgirl_aifriend",1

best_friend,0,, ,1

Designer Knobs (one-glance)

- **Hit/Eva per stat:** $\pm 0.25\%$ per TPO/VTL/FCS; clamp [5, 95].
 - **Crit ×2, Stumble +25%** (+1 push), two in round → **Fall**.
 - **PDEF/MDEF:** BASELINE **0.50**, per-hit soak $\div \sqrt{H}$ (**0.5 exp**).
 - **DMG_FLOOR:** Enemy→Player **0.15**, Player→Enemy **0.20** (global option).
 - **Burst:** gains (10/12/6/8/6/8), **cap +25 per unit per round**, costs **25/55/90**.
 - **Capture k vs HP%:** **0.4**; **StateBonus +15** (Sleep/Freeze/Bound), **+10** (Stun/Fall).
 - **Non-lethal:** LXP $\times 0.30$, creds $\times 1.5$, drops $\times 1.5$.
 - **SXP fatigue:** **7 actions/stat @100%**, then **50%**; reset Monday.
 - **Affinity tiers:** **20 / 60 / 120**; weekly cap **30**; Bestie **+5** / Rival **-4**.
 - **Room-move:** **-1 BRW, -1 MND, 7 days**, stacks to **-2**; min effective stat **1**.
-

Appendix C — Tuning Knobs Cheat Sheet

What this appendix is:

All sliders, one page. The fastest way to run a tuning pass across systems without digging through prose.

Covered systems:

- **Progression:** LXP deltas, SXP fatigue, BPP totals, Sigil Tier/Upgrades.
- **Combat:** Hit/Eva clamps, clamp floors, Burst gains/caps.
- **Affinity/Dorms:** BAXP caps, thresholds, adjacency values.
- **Economy:** Price multipliers, job pay, scarcity, VR creds bonus.
- **Morality:** α , daily cap, tier thresholds, boss swings.
- **Pacing:** Mission cadence, VR boosts, attendance splits.

How to read it:

Change one family at a time; validate with **Ch. 16.9** telemetry dashboards.

Global Combat

- Crit $\times 2 \cdot$ Stumble +25% dmg & 1-slot pushback \cdot Defend $\times 0.70$ (blocks Crit/Stumble)
- Hit/Eva clamp [5,95] \cdot DoT ticks 5% MaxHP/round (Poison/Burn)
- Run%: clamp(50 + 5(TPO_you – TPO_enemy_avg) – (EnemyHP% – HeroHP%), 10, 95)

Mitigation & Scaling

- K_VTL = 3, K_FCS = 3 (damage denominator divisors) \cdot S_MND = 12 (MND scaler)

TYPE

- Weakness ×1.25 · Resist ×0.75 · Neutral ×1.00
- Posture: last Sigil cast · Omega: neutral defensive TYPE

Burst Gauge

- Gains: Basic +10, Skill +12, Take dmg +6 (cap +12/round), Stumble +8, Crit +6, KO +8, Fall +6
- Costs: **T1 25, T2 55, T3 90** · Cap 100

Capture / Non-Lethal

- Catch% = clamp(Base + ItemMod – Resist – 0.4*HP% + StateBonus, 0, 100)
StateBonus: +15 Sleep/Freeze/Bound; +10 Stun/Fall
- Pacify/Capture LXP ×0.30 · Non-lethal rewards: ×1.5 credits & ×1.5 drop odds
(cap applies)

LXP (Per Character)

- BaseLXP: 25 + 6*EnemyLv
- Δ ladder: $\Delta \geq 0 \rightarrow \times 1.00$; $-1 \rightarrow \times 0.90$; ... ; $\Delta \leq -10 \rightarrow \times 0.05$
- Environment: Regular ×0.90, Miniboss ×1.20, Boss ×1.50
- Party size: Solo ×1.30, Duo ×1.15, Trio+ ×1.00
- Participation: Standing ×1.00, KO ×0.50, Benched ×0.20

SXP

- Morning class +6 (TrackMod ×1.10 if matched) · Morning skip +8
- Afternoon +8 · Evening +8 · Secret Training +6 (+4 same-stat synergy same day)
- Weekly fatigue per stat: first 7 ×1.0, then ×0.5 until Monday

Study Items

- Study Guide +15 any; Workbook +12 TPO/FCS; Field Manual +20 BRW/VTL; Tutor +12 any (1/wk). All consume a phase.

BPP

- Costs per tier: 1 / 2 / 2 / 3 / 3
- Gain: +1 at creation, +1 every 3 levels (Lv 3/6/9/...); **+22 hidden** (target 55 total)

BAXP

- Co-presence: +2 (KO at win +1); **cap +6/day/pair**
- Synergy (per battle, cap +3): weakness chain +1; Duel +2; Omega +1; interrupt +1
- Bonus Date +6..+8; Bestie +5; Rival -4; **Weekly cap 30**
- Tier thresholds: 20 / 60 / 120 (AT1/AT2/AT3)

Bonds (CBXP)

- Pass ladder by layer: 4 / 5 / 6 / 6 (Hard +1, Easy -1)
- Gift EP: Disliked +0, Neutral +2, Liked +4 ($\text{Gift} + \text{Synergy} \leq \text{Pass} + 1$)
- On Pass: Love +1 CBXP; Others +2 CBXP · Fail → GGT (+2 EP next time)

VR

- $\text{EnemyLv_VR} = \max(\text{OriginalLv}, \text{floor}(\text{AvgPartyLv}) + \text{Boost})$; Boost presets +2/+5/+8/+12
- Ends day; LXP only

Attendance

- $\geq 75\%$ Morning class → **+10 SXP** monthly (+6 FCS / +4 MND)

Economy (defaults)

- Weapon price tiers: 600–1200 / 1800–3200 / 5000–9000; late craft fees 10k–20k
 - UWT: $\times 1.12 / \times 1.24 / \times 1.36$; UAT: +8,+6 / +16, +12 / +24, +18
-

Appendix D — Test Plans & QA Checklists

What this appendix is:

Hands-on validation steps and assertions for every major system to prevent math regressions and UX drift.

Covered systems:

- **Combat parity:** Hit/Eva, Δ-ladder, mitigation floors.
- **Progression:** SXP weekly counters, BAXP Sunday conversion, BPP totals.
- **Content loops:** Missions persistence, VR end-day, deadlines.
- **Morality:** Diminish math, daily caps, tier effects.
- **Economy:** Price factor order, caps, restocks.
- **Accessibility & UI:** Color modes, fonts, toasts, tooltips, saves.
- **Telemetry:** Event schema, field ranges, ID validity.

How to read it:

Run per-build smoke tests and milestone gates; log failures with references back to the chapter and CSV source.

Each block lists **Data Validation**, **Simulation/Logic**, **Edge Cases**, and **Automation**. Treat them as CI gates.

D.1 Calendar & Actions (Ch. 1)

Validation

- ≤ 3 actions/day; ends_day=1 for VR blocks Evening.
- Attendance increments only on Morning Class/Elective.
- Study items & UXBs: consumes_phase=1.

Sim/Logic

- 30-day sim: weekly fatigue resets Mondays; Secret Training synergy only if same-stat earlier **that day**.
- Attendance $\geq 75\%$ grants +10 SXP at month end.

Edge

- Two VRs same day (should be impossible).
- Mission in Afternoon + Evening hangout allowed; VR in Afternoon blocks Evening.

Automation

- Unit: planner rejects 4th action; VR auto-sleep.
 - Property: $\text{sum}(\text{actions_per_day}) = 3$ across month except storylocks.
-

D.2 Progression Tracks (Ch. 2)

Validation

- Δ ladder clamps at 5% minimum.
- Non-lethal $\times 0.30$ applied **after** multipliers.
- BPP tier costs sum correctly; world BPP ≤ 22 .

Sim/Logic

- XP_NEXT curve: $120 + 30L + 6L^2$.
- Under-leveled ally gains more via per-character Δ .

Edge

- Solo party env modifier applies; KO halves LXP; Benched $\times 0.20$.

Automation

- Golden tests for sample LXP (kill vs capture).
- Fuzzer: random party levels vs enemies → monotonicity.

D.3 Combat Engine (Ch. 3–4)

Validation

- Hit/Eva clamp [5,95]; Burst cap 100; Overcast HP ceil($1.5 \times \text{MP}$).

Sim/Logic

- Crit+Stumble with Defend → both suppressed.
- Two weaknesses same round → Fall + channel interrupt.
- AOE uses per-target checks; default potency ~0.7 of single.

Edge

- Hybrid moves: both pipelines resolve and sum; either can Stumble.
- Mirror reflects when element matches, even if Omega neutralizes defense.

Automation

- Buff/debuff refresh semantics: stronger-wins/no duplicate stacking.
 - Deterministic seed replay for boss telegraphs.
-

D.4 Types & Posture (Ch. 8)

Validation

- Triangle/wheel tables present & non-cyclic; resist % within [0,100].

Sim/Logic

- Posture flips on Sigil cast; persists until next Sigil.
- Omega: neutral defensive TYPE; gear resist still applies.

Edge

- Multiple gear resists stack multiplicatively.
- AOE vs mixed postures yields mixed TYPE.

Automation

- Snapshot: Fire→Air with +15% Fire resist nets 1.0625×.
-

D.5 Bonds/CBXP (Ch. 5)

Validation

- Gift+Synergy \leq Pass+1.
- Phase masks honored.
- GGT toggles to grant +2 EP next meeting, then clears.

Sim/Logic

- Hard/Easy shifts Pass by ± 1 .
- Others: 1 event/layer; +2 CBXP on Pass.

Edge

- Bonus Date: awards BAXP and (if flagged) SXP; no CBXP.

Automation

- Event solver brute-force \rightarrow verify pass/fail & EP totals.
 - CSV linter: no missing locations IDs.
-

D.6 Affinity/BAXP & Dorms (Ch. 11)

Validation

- Day cap +6 co-presence; weekly cap 30.
- Bestie +5 / Rival -4 apply Sunday **before** conversion; floor at 0 then cap.

Sim/Logic

- Weekly conversion hits 20/60/120 thresholds.
- Only acting partner's aura applies when multiple ties active.

Edge

- KO at win → +1 not +2.
- Room-move penalty: -1 BRW/-1 MND for 7 days; stacking rules enforced.

Automation

- Weekly ledger roll-up; tier unlock & toast regressions.
-

D.7 Equipment, Items & Crafting (Ch. 6–7)

Validation

- UWT/UAT steps match allowed multipliers; no double-apply per step.
- Craft costs reference valid materials.

Sim/Logic

- Reverse Blades convert lethal → non-lethal with damage penalty.
- Buff refresh = stronger wins (magnitude or duration per rule).

Edge

- Bombs ignore weapon ACC; reflect beats posture.
- Study items & UXBs consume a phase.

Automation

- Table-driven item effect tests (heal, buff, cleanse, reflect).
 - Crafting DAG cycle detection.
-

D.8 Missions/VR & Pacing (Ch. 9, 13)

Validation

- VR ends_day=1; live missions not.
- Deadlines warn N days prior; miss → GameOver/AltRoute/None per data.

Sim/Logic

- VR enemy level uses $\max(\text{original}, \text{floor}(\text{avgParty}) + \text{Boost})$ with presets.
- Monthly targets: 3 Missions, 1–2 VR; hangouts ~176 seasonal budget.

Edge

- Live mission allows Evening; VR blocks Evening.
- VR at cap level still pays LXP via Δ ladder.

Automation

- Month sim with randomized choices; assert attendance, Sunday BAXP convert, Monday fatigue reset.
-

D.9 Enemies, Encounters & AI (Ch. 10)

Validation

- Archetype growth yields 1–10 stats within clamps; HP/MP multipliers applied.
- Encounter EP budgets within band; no formation overage.

Sim/Logic

- Boss windows open/close; BindResist/StumbleResist adjust per script.
- AI triggers fire (AfterCH2 → Vulnerability window).

Edge

- No-escape encounters ignore Smoke Grenade.
- Pacify-OK enemies: LXP ×0.30; loot/creds ×1.5.

Automation

- Behavior weight randomizer under seeds.
 - Loot clamping: 24% → 36% on non-lethal then cap to table limit.
-

D.10 Morality & Economy (Ch. 14–15)

Validation

- Daily morality change clamps to DailyAbsCap (no grind).
- Shop stock unlocks by story/date gates.

Sim/Logic

- Non-lethal economy generates mats/creds sufficient for intended UWT/UAT pace.
- Price curves scale vs wages; shortages respect scarcity premium.

Edge

- Boss pacify gives big swing toward Pacifist; ensure route gates respond (Ch. 17).
- Black-market rotation respects rarity bands.

Automation

- Economy harness: 10-hour sim of cred inflow/outflow; flag over/under sinks.
- Morality regression: scripted sequence lands P2/N/B2 as expected.

Note: Inter-day morality decay is **disabled by default** (not in Ch. 14); if you enable an optional decay, document it in `morality_rules.csv`.

D.11 UI/UX & Accessibility (Ch. 16)

Validation

- HUD reads live math (Hit/Eva clamp [5–95], POT after buffs, Burst 0–100 @ 25/55/90).
- Phone ledgers: Stats show weekly counts & Monday reset; Affinity shows 0–30 + ticks at 20/60/120.
- Shop/Tech Lab price cards: Region → Unlock → Scarcity → Morality → Sale, then floor().
- Morality meter + tier price badges reflect §15.6; accessibility prefs persist (font scale, palettes, motion).
- Localization keys/placeholders valid; fallback fonts render all glyphs.

Sim/Logic

- Toast aggregation avoids spam (BAXP, Burst, Morality); detail moves to Victory.
- VR shows “Ends the day” and blocks Evening; live missions do not.
- Burst menu lists locks with explicit reasons; tooltips can persist until dismissed.
- Controller/KB focus cycles all widgets; no traps.

Edge

- Planner forbids Evening after VR even if player backs out of post-VR screen.
- Long CJK names truncate w/ ellipsis; full text on hover; price panel shows floored value + raw factors.
- Colorblind + High-contrast meet WCAG ($\geq 4.5:1$ body, $\geq 3:1$ large); input spam guard prevents multi-buys.

Automation

- Telemetry breadcrumb for hit/damage/capture/price (see Ch. 16.9).
- Snapshot tests for price breakdown panels, Affinity projections, HUD/Victory/Tech Lab flows.

D.12 Data Integrity Gates (CI)

Validation

- FK sweeps: every `*_id` resolves to an existing PK (missions, enemies, shops, quests, rewards).
- Enum audits: values \in allowed sets (`node_type`, tier, phase, etc.).
- Range checks: Hit/Eva [0–100], resists [0–100], prices ≥ 0 , valid dates; Burst thresholds within (0,100].
- Dups: no duplicate PKs; IDs $^{\text{[a-z0-9_]+$}}$; `pair_id` matches a-b.

Consistency/Joins

- `enemy_loot_map` \leftrightarrow `loot_tables`; `quest_bindings` targets exist; `mission_objectives.reward_bundle_id` valid.
- Missions/VR flags: live `ends_day`=0; VR `ends_day`=1; boosts $\in \{+2,+5,+8,+12\}$.
- Economy/crafting: `recipes` reference real mats; stock caps ≥ 0 ; non-negative prices.
- System knobs: BAXP (cap 30 / day cap 6 / synergy cap 3), SXP (7-rule, post-mult ≤ 1.0), loot clamps to table caps.
- Upgrade/crafting DAG acyclic; steps strictly $+1 \rightarrow +2 \rightarrow +3$.

Edge

- Localization coverage 100% for referenced keys; placeholder counts match.
- Calendar sanity: ≤ 3 actions/day; Monday fatigue reset; Sunday BAXP conversion present.
- PII/authoring guard: reject rows with free-text PII or TODO/FIXME.
- `schema_version` mismatch aborts build with file list + expected version.

Automation

- CI report: red/green summary, per-file error tallies, first 10 offending rows.
- Query tests for critical joins; property tests for price formula order.
- Seeded economy/morality regression sims on data snapshots.
- Lint step validates ID regexes and weekday/date masks.

END