

MadeManifest

Engineering Implementation Specification

Astrology, Human Design, Gene Keys Engine

Audience: Software Engineers

Purpose: Direct implementation without additional explanation

Status: Final, authoritative document

1. Scope

This specification describes the deterministic calculation layer for:

- Astrology
- Human Design
- Gene Keys (derived from Human Design)

The engine:

- Calculates objective values only
 - Contains no interpretation or copy
 - Produces structured output for downstream processing
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2. Input Contract

Required input per person

- `birth_date`: YYYY-MM-DD
- `birth_time`: HH:MM (seconds not available)

- `birth_place`: name or latitude longitude
- `timezone`: IANA identifier (for example Europe Amsterdam)

Time policy

- Missing seconds are fixed at `00`
 - All internal calculations are performed with second-level precision
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3. Time and Astronomy

Timezone handling

- Use the IANA timezone database
- Include historical daylight saving time rules

Conversions

- Local time → UTC
 - UTC → Julian Day (UT)
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4. Ephemeris

Source

- Swiss Ephemeris

Zodiac

- Tropical

Objects (always calculate)

- Sun
- Moon
- Mercury
- Venus
- Mars
- Jupiter
- Saturn
- Uranus
- Neptune
- Pluto
- Chiron
- North Node (Mean and True)

Derived

- $\text{Earth} = \text{Sun} + 180^\circ \bmod 360$
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5. Astrology Module

Houses

- System: Placidus

Calculations

- Ascendant
- Midheaven
- House cusps

Node policy

- Mean Node

Output

- Planetary positions (degree and sign)
 - Houses
 - Ascendant and Midheaven
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6. Human Design Module

Snapshots

- Personality: moment of birth
- Design: derived timestamp

Node policy

- True Node

Design time calculation

1. Determine Sun longitude at birth
2. Target longitude = $\text{Sun} - 88^\circ \bmod 360$
3. Find the time before birth when the Sun equals the target longitude

Solver

- Bracket: birth minus 84 to 90 days
- Method: bisection

Stop criteria

- Absolute Sun difference $< 0.0001^\circ$
 - Or time interval < 1 second
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7. Mandala Mapping (Human Design and Gene Keys)

Constants

- **START** = 313.25° (Gate 1 Line 1)
- **GATE_WIDTH** = 5.625°
- **LINE_WIDTH** = 0.9375°

Interval rule

- Start inclusive
- End exclusive

Mapping logic

```
r = (longitude - START + 360) % 360
gate_index = floor(r / GATE_WIDTH)
line_index = floor((r % GATE_WIDTH) / LINE_WIDTH)
line = line_index + 1
gate = gate_sequence[gate_index]
```

Gate sequence

- Fixed array of 64 gates
- Non-numeric
- Not computed
- Hardcoded or configuration-driven

8. Human Design Output

Object order (mandatory)

1. Sun
2. Earth
3. North Node
4. South Node
5. Moon
6. Mercury
7. Venus
8. Mars
9. Jupiter
10. Saturn
11. Uranus
12. Neptune
13. Pluto

Output per snapshot

- Gate
- Line

Derived structures

- Type
- Authority

- Profile
- Incarnation Cross

Calculation allowed
Interpretation forbidden

9. Gene Keys Module

Calculation strategy

- No independent calculations
- Fully derived from Human Design output

Version 1 scope

Activation Sequence

- Life's Work = Personality Sun
- Evolution = Personality Earth
- Radiance = Design Sun
- Purpose = Design Earth

Output

- Key (gate)
- Line

No shadow, gift, or essence logic

10. Content Separation (Hard Rule)

Calculation layer

- Outputs only IDs and numeric values
- No text
- No meaning

Content layer

- Key dictionary (1–64)
- Line overrides (optional)
- Lookup by key ID and line

The calculation layer must never be aware of content.

11. Versioning Metadata (Mandatory)

Every output must include:

- `engine_version`
 - `node_policy_per_system`
 - `keys_dictionary_version`
 - `key_lines_dictionary_version`
 - `language`
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12. Testing

Golden test cases

- Fixed birth input
- Fixed expected output

JSON fixtures

- Input
- Astrology expected
- Human Design Personality expected
- Human Design Design expected
- Gene Keys expected

Any mismatch equals a test failure.

13. Non-goals

- No birth time rectification
 - No uncertainty modeling
 - No interpretation
 - No user interface
 - No coaching logic
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14. Change Policy

Changes to any of the following:

- Mandala
- Node policy
- Design time logic
- Gate mapping

Are breaking changes and require:

- An update of this specification
- Revalidation of all fixtures

Final Statement

If this specification is implemented correctly:

- Output is reproducible
- Profiles are comparable to existing platforms
- The system remains scalable and extensible

This document is authoritative.