I-Ching RND Plugin - User Manual

This plugin is a generative musical tool that combines randomization, hexagram-based sequencing, quantized pitch output, and selectable noise generation. It is designed for use on the Expert Sleepers disting NT platform and is highly configurable through a set of parameters.

This plugin is highly versatile and can be used for algorithmic melody generation, evolving pitch patterns, and noise-based modulation or percussion. Combine outputs for complex musical behavior or modulate parameters with CV for generative results.

Below is a detailed explanation of each parameter:

1. Clock In

- **Range:** 1 – 28
- **Default:** 1
- **Description:** Input channel for the master clock. This drives the hexagram sequence, clock divider, and synchronized outputs.

2. IntSeqTrigIn

- **Range:** 1 – 28
- **Default:** 2
- **Description:** Input trigger for advancing the integer sequence. It is separate from the main clock.

3. CV Out

- **Range:** 1 – 28
- **Default:** 13
- **Description:** Outputs a voltage-per-octave value derived directly from the current hexagram index (before quantization).

4. Quant Out

- **Range:** 1 – 28
- **Default:** 14
- **Description:** Outputs a quantized pitch value based on the hexagram index, processed through the selected scale, root, and transpose.

5. IntSeq Out

- **Range:** 1 – 28
- **Default:** 15
- **Description:** Outputs the pitch of the selected integer sequence, quantized to the active scale.

6. Noise Out

- **Range:** 1 – 28
- **Default:** 16
- **Description:** Outputs the selected type of noise (White, Pink, Brown, or Blue).

7. Clock Thru Out

- **Range:** 1 – 28
- **Default:** 17
- **Description:** Passes through the raw incoming clock signal.

8. Clock Div Out

- **Range:** 1 – 28
- **Default:** 18
- **Description:** Outputs a clock pulse every N clocks, where N is set by the Clock Div parameter.

9. Scale

- **Range:** 0 – 133 (scale names shown)
- **Default:** 0
- **Description:** Selects the musical scale used for quantization (e.g. Major, Minor, Pentatonic, etc.).

10. Root

- **Range:** 0 – 11
- **Default:** 0
- **Description:** Sets the root note (C=0, C#=1, ..., B=11) for the selected scale.

11. Transpose

- **Range:** -24 – 24 (semitones)
- **Default:** 0
- **Description:** Transposes the output pitch up or down by the specified number of semitones.

  QuantOut and IntSeqOut are influenced by this, IntSeqOut can behave weird.

12. MaskRot (Mask Rotate)

- **Range:** 0 – 15
- **Default:** 0
- **Description:** Rotates the internal mask used in quantization to create alternative pitch patterns.

13. IntSeq

- **Range:** 0 – 10 (Sequence name will be shown)
- **Default:** 0
- **Description:** Selects the integer sequence (e.g. PI, vanEck,ssdn,dress) used for the IntSeq Out.

14. IntSeqMod

- **Range:** 1 – 32
- **Default:** 1
- **Description:** Applies modulo to the integer sequence output, limiting its range. A value of 1 disables the modulo.

15. IntSeqStart

- **Range:** 0 – 126
- **Default:** 0
- **Description:** Index into the selected sequence from which playback starts.

16. IntSeqLen

- **Range:** 1 – 128
- **Default:** 16
- **Description:** Number of steps played from the starting index before the sequence loops.

17. IntSeqDir (Direction)

- **Range:** 0 (Forward), 1 (Ping-Pong)
- **Default:** 0
- **Description:** Sequence direction: forward through steps or ping-pong (back and forth).

18. IntSeqStride

- **Range:** 1 – 16
- **Default:** 1
- **Description:** Stride determines the number of indices skipped per step. Higher values create sparser or non-linear patterns.

19. Noise Type

- **Range:** 0 – 3
- **Default:** 0
- **Options:** White, Pink, Brown, Blue
- **Description:** Selects the type of noise output:
    - **White:** Flat spectrum
    - **Pink:** Warmer, 1/f filtered
    - **Brown:** Deep, integrated noise
    - **Blue:** High-passed, sharp noise

20. Clock Div

- **Range:** 2 – 512
- **Default:** 2
- **Description:** Number of incoming clock pulses before one pulse is sent out via Clock Div Out. Useful for creating slower rhythms.

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I-Ching_RND.cpp is a random value generator for the Disting NT module.
It generates random values based on the I Ching hexagrams and their associated values.
There is a quantized output for the generated values, which can be used in various musical applications and quantized with a variety of scales.
It has a built-in integer sequence generator that can be used to generate sequences of random values.
It has a noise output that can be used to generate random values based on noise. The noise type can be selected from a variety of options.
Every 64 clocks, you will have seen every hexagram exactly once, in a random order.
No repeats until all have been used.
After all 64, the order is reshuffled and the process repeats.