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## ninZaRenko Trader Manual

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### 1. Installation

ninZaRenko can be installed with the standard procedure:

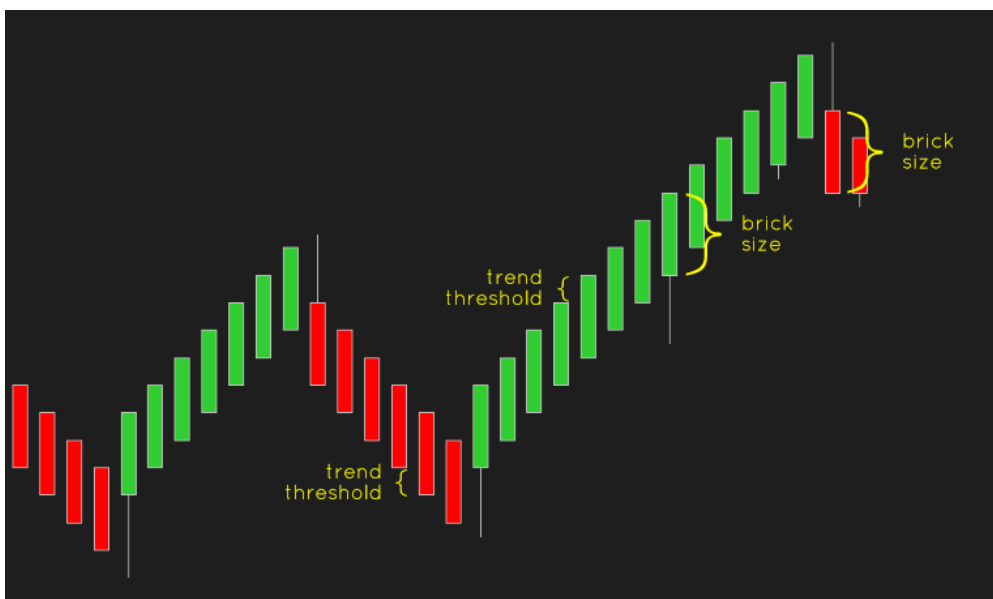
- Step 1: Download ninZaRenko (ZIP file) to your computer.
- Step 2: Go to “Tools > Import > NinjaScript” at Control Center of NinjaTrader 8.
- Step 3: Browse to and select the ZIP file you have downloaded previously.

### 2. Configurations

ninZaRenko comes with 2 parameters for you to configure:

- **Brick Size:** This is the height (in ticks) of bar bodies. Up bars and down bars all have the same brick sizes. [*possible values: positive integers*]
- **Trend Threshold:** This is the distance from the previous bar’s close (in ticks) that the current price must exceed for the current bar to close in the SAME direction as the previous bar (i.e. the prevailing trend continues). [*possible values: positive integers*]

Please look at the picture below for visual explanation.



Parameters are displayed as a pair. For example, the 8/4 configuration means *Brick Size* equals 8 and *Trend Threshold* equals 4.

Best practices for parameter configuration:

- *Brick Size* should be greater than *Trend Threshold*.
- *Brick Size* should be a multiple of *Trend Threshold* (e.g. 8/4, 8/2, 15/5, 12/4, 20/5, 30/10...).

### 3. Understandings

Based on the 2 parameters you set, ninZaRenko automatically computes the following:

- **Artificial Open:** As a renko nature, all opens are artificial. This not only serves the aesthetic purpose, but also maximizes the ease and comfort of visualizing trends. A bar's open is automatically offset from the previous bar's close by this distance:

$$\text{Open Offset} = \text{Brick Size} - \text{Trend Threshold}$$

- **Reversal Threshold:** This is the distance (in ticks) from the previous bar's close that the current price must exceed for the current bar to close in the OPPOSITE direction to the previous bar (i.e. the prevailing trend reverses). The value is automatically calculated so that the brick sizes of up bars and down bars are equal.

### 4. Charting

Now that you have understood the formation of ninZaRenko, please watch the following video to see how you can use ninZaRenko for charting (and enjoy Mozart's classic):

<https://www.youtube.com/watch?v=zRMrSyjmljo>.

### 5. NinjaScript Use

ninZaRenko's ID is **12345**. It's very easy to remember :)

To use ninZaRenko in your indicators or strategies, please include the statement highlighted below in the "Configure" state of "OnStateChange".

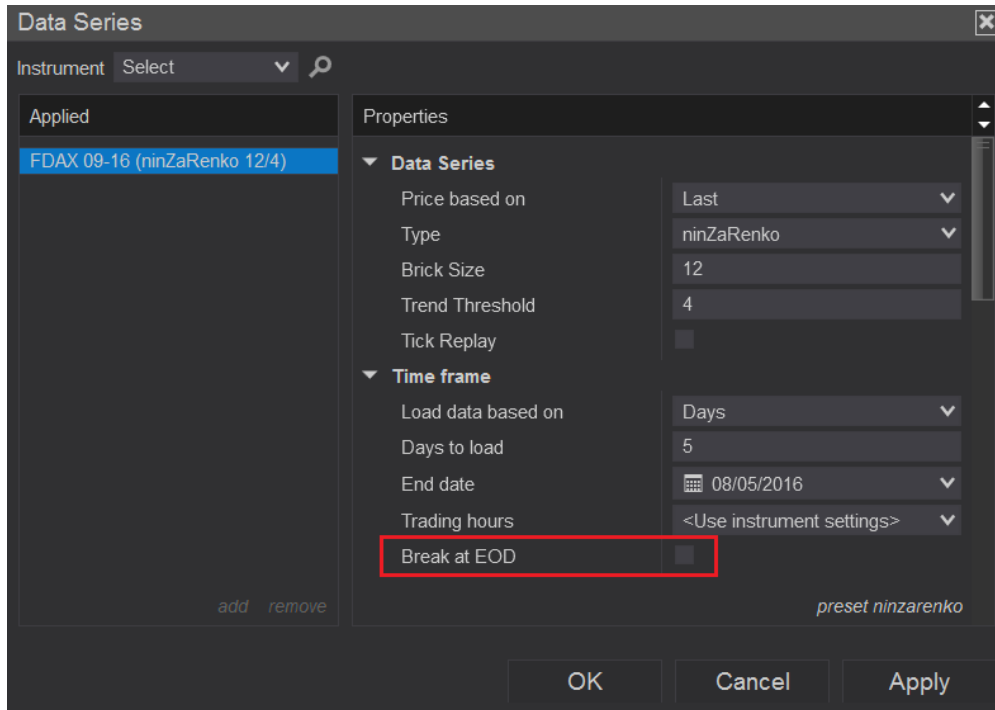
```
protected override void OnStateChange() {
    .....
    if (State == State.Configure) {
        .....
        AddDataSeries(new BarsPeriod() {
            BarsPeriodType = (BarsPeriodType)12345, // ninZaRenko's ID
            Value = 8, // Brick Size
            Value2 = 4 // Trend Threshold
        });
        .....
    }
    .....
}
```

## 6. EOD Option

We are referring to “Break at EOD” in Data Series window. To open this window, please double click ninZaRenko bar series, or alternatively right click your chart and select “Data Series (Ctrl + F)”.

By default, “Break at EOD” is enabled. This tells ninZaRenko to reset on new day start. This mode is recommended for intraday traders.

However, if you are not an intraday trader and want to use ninZaRenko as an equivalent for a big interval like H1, H4, or even D1, then in parallel with increasing *Brick Size* and *Trend Threshold*, you should disable “Break at EOD”. This tells ninZaRenko to calculate day after day continuously without resetting on new day start.



## 7. Advice

We highly recommend that you reload historical data for your chart at an appropriate frequency to avoid any missing of historical data, which may lead to inaccurate forming of bars. This should be done for any bar types, not only ninZaRenko but also minute, tick, range, day...

To use the feature, please right click your chart and select “Reload All Historical Data”.

You should do this:

- At the beginning of your trading day, just after you open the platform.
- When you observe any abnormal appearance of bars or abnormal gaps.

## 8. Disclaimer

ninZaRenko is a FREE bar type for NinjaTrader 8, developed by ninZa.co. Please use ninZaRenko entirely at your own risk, for which we (ninZa.co) will NOT be liable. We do NOT provide any warranty or guarantee as to the accuracy, performance, completeness, or suitability of ninZaRenko. We expressly EXCLUDE liability for any problems which may arise from your use of ninZaRenko.