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Candle Range Theory

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Price-Action Liquidity Sweep Reversal	H4 or D1 (reads only the chart timeframe, so it can run on other timeframes)	www.algobot.live

> ⚠ **Important Disclaimer** This document is for educational and informational purposes only. It does not constitute financial or investment advice. Trading forex, CFDs, and other leveraged instruments involves substantial risk of loss and is not suitable for all investors. Past backtest performance does not guarantee future results. Never trade with capital you cannot afford to lose.

Overview

Candle Range Theory is an educational Expert Advisor that studies a three-candle price-action pattern. It uses no indicators. The first candle defines a range with its High and Low. The second candle trades beyond only one end of that range and then closes back inside it. The EA reads this as a failed breakout and looks for movement toward the opposite end of the range on the third candle.

The idea behind the pattern is that price often moves just past an obvious high or low, where many pending orders tend to sit, and then returns into the prior range. The EA measures how far the second candle extended beyond the range edge and only accepts moves within a defined band: too shallow is treated as noise, and too deep is treated as a genuine breakout rather than a brief sweep.

The pattern is designed for higher timeframes such as H4 and D1, where each candle carries more information. It may suit readers who want to learn how a rule-based price-action pattern can be described step by step in code and tested. It is provided for education only. Trading involves risk, and losses occur.

How It Works

Entry Logic

- The EA evaluates once per newly closed candle on the chart timeframe. Candle 1 (the range candle) is two bars back, and candle 2 (the sweep candle) is the last closed bar.
- **Sell setup:** the sweep candle's High is above the range High, its Low stays at or above the range Low (one side only), and its Close is back below the range High and above the range Low.
- **Buy setup:** the sweep candle's Low is below the range Low, its High stays at or below the range High (one side only), and its Close is back above the range Low and below the range High.
- The sweep depth beyond the edge must be at least `MinSweepFraction` and at most `MaxSweepFraction` of the range height. A candle that extends beyond both ends is ignored because it has no clear direction.
- If the setup is valid, the EA enters at the market price as the third candle opens. The entry is only taken if the potential reward is at least `MinRewardRisk` times the risk and both distances respect the broker's minimum stop distance.
- Only one position per Magic number is open at a time, and no new setup is evaluated while a trade is open.

Exit Logic

- The position closes when its stop-loss or take-profit level is reached.
- If the trade has not resolved after `MaxHoldBars` closed bars, the EA closes it at market. The pattern expects movement within a candle or two. Setting `MaxHoldBars` to 0 disables the time exit.
- The bar counter resets each time the EA is flat or a new position is opened.

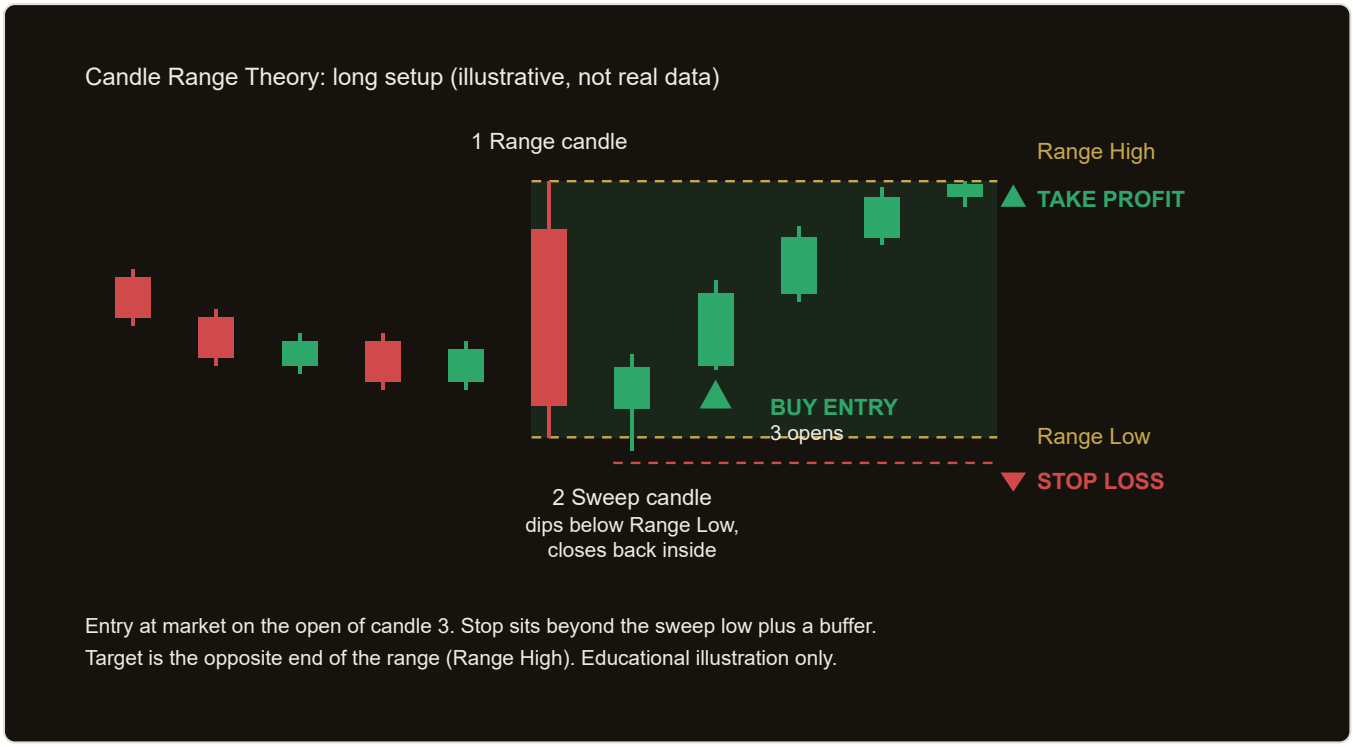
Stop-Loss and Take-Profit

- **Stop-loss:** placed beyond the sweep candle's extreme (above the High for sells, below the Low for buys), padded by `StopBufferFraction` of the range height.
- **Take-profit:** set at the opposite end of the range candle (the range Low for sells, the range High for buys).
- The trade is skipped if the entry price has already moved past the stop or target, for example after a gap at the open.

> **Tip:** Because the EA reads only price candles, the visual review is simple: on a chart, mark the range candle's High and Low and check whether the next candle swept one side and closed back inside. Comparing these marked setups with the EA's log messages is a practical way to learn the rules.

Strategy in Action

The illustration below shows an example of how the strategy identifies a setup and triggers its entry and exit. This is a simplified, illustrative example for educational purposes — not real market data.



Illustrative example only. Actual market behaviour varies.

Example: Buy Setup

Suppose the range candle has a High of 1.1000 and a Low of 1.0900, so the range height is 0.0100. The next candle trades down to 1.0895, which is 0.0005 (5% of the range) below the range Low, and then closes at 1.0930, back inside the range. The sweep depth is within the allowed band and the High stays below 1.1000, so a buy setup is recognised. With `StopBufferFraction` at 0.05, the stop-loss is placed at 1.0890 (0.0005 below the sweep Low). If the third candle opens near 1.0930, the target is the range High at 1.1000. The risk is 0.0040 and the reward is 0.0070, about 1.75R, which meets `MinRewardRisk`, so the order is sent. If neither level is reached within `MaxHoldBars` bars, the EA closes the trade. This is an illustration of the rules only, not a prediction, and the trade could equally end at the stop-loss.

Parameters

Parameter	Default	Description
MinSweepFraction	`0.03`	Minimum sweep depth beyond the range edge, as a fraction of the range height (range 0.0 to 0.30). Shallower sweeps are treated as noise.
MaxSweepFraction	`0.60`	Maximum sweep depth beyond the range edge, as a fraction of the range height (range 0.10 to 1.50). Deeper moves are treated as genuine breakouts and ignored.
StopBufferFraction	`0.05`	Padding added beyond the sweep candle's extreme for the stop-loss, as a fraction of the range height (range 0.0 to 0.30).
MinRewardRisk	`1.5`	Minimum ratio of reward (distance to the target) to risk (distance to the stop) required to take the setup (range 1.0 to 3.0).
MaxHoldBars	`3`	Closes an unresolved trade after this many closed bars. 0 disables the time exit (range 0 to 10).
Lots	`0.10`	Fixed order volume per trade (range 0.01 to 1.0). It is adjusted to the symbol's volume step and limits.

Recommended Settings

- **Symbol:** liquid instruments with clean candle structure, such as major currency pairs or gold, can be used for study. Results differ between symbols.
- **Timeframe:** H4 or D1, as the pattern is designed around larger candles. Other timeframes can be tested but may behave differently.
- **Position size:** keep `Lots` small relative to account size so that a single stop-loss represents a limited portion of the balance. Losses are a normal part of trading.
- **Testing:** run the Strategy Tester over a long period and several market conditions, and review the results before any other use.
- **Demo first:** observe the EA on a demo account to confirm that the logs and orders match the rules described here. Use a distinct `Magic` number if other EAs run on the same account.
- **Broker conditions:** spreads, stop-level limits and gaps at the open can change whether a setup is accepted.

How to Install on MetaTrader 5

1. Copy `CandleRangeTheory.ex5` to your MT5 `MQL5\Experts\` folder
2. Restart MetaTrader 5 and refresh the Navigator panel
3. Drag the EA onto a chart matching the recommended symbol and timeframe
4. Configure the input parameters and click **OK**
5. Enable **Algo Trading** in the MT5 toolbar

Risk Warning

> Trading foreign exchange, CFDs, and other leveraged financial instruments involves substantial risk of loss and is not suitable for all investors. The strategies and tools described in this document are provided for **educational purposes only** and do not constitute financial advice, investment recommendations, or solicitation to trade. Always consult a qualified financial adviser before making trading decisions. Past backtest performance is not indicative of future results.