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Maximize Your Profits

Point Figure Column Breakout

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Breakout / Trend-Following	H1 – H4 (adaptive)	www.algobot.live

Overview

Point Figure Column Breakout is an Expert Advisor that rebuilds a faithful **Point & Figure (P&F)** chart directly from ordinary single-timeframe OHLC bars and trades the two textbook P&F breakout signals. Point & Figure is a classic, time-independent charting method that deliberately discards time and small price wiggles: price is quantised into fixed-size *boxes*, and as long as price keeps pushing in one direction the current column simply extends (X = up, O = down). A brand-new column only begins when price reverses by at least a configurable number of boxes.

This distillation turns noisy price action into clean, alternating up/down columns, which makes the two canonical signals unambiguous:

- **Double-Top Buy** — the current X (up) column climbs one box *above* the top of the previous X column. Rising highs on the P&F grid → go long.
- **Double-Bottom Sell** — the current O (down) column drops one box *below* the bottom of the previous O column. Falling lows on the P&F grid → go short.

The box size is **adaptive**: `box = ATR × BoxAtrFactor`, so the grid auto-scales to each instrument and to the prevailing volatility regime. An EMA trend filter keeps entries aligned with the prevailing drift, and all risk is sized from ATR. The strategy is genuinely single-timeframe — every calculation uses the chart's own timeframe, so it runs on whatever period you attach it to.

> **Why it can work:** the box-plus-reversal filter suppresses the intrabar chop that triggers false breakouts on a normal candlestick chart. A P&F double-top or double-bottom therefore marks a break of a level that has already been tested and held — a higher-quality breakout than a raw price poke through resistance.

How It Works

1. Building the Point & Figure Grid

On each newly-completed bar the EA feeds the bar's **High** and **Low** into a persistent P&F engine. The engine tracks the current column direction (`+1` = X/up, `-1` = O/down), the furthest price reached by the current column (`colExtreme`), and the reference extremes of the previous X and O columns.

- **Box size:** `box = ATR(AtrPeriod) × BoxAtrFactor`. A smaller factor produces a finer grid and more signals; a larger factor produces a coarser grid and fewer, higher-conviction signals.
- **Continuation:** while the column is X, any new High that clears `colExtreme + box` extends the column upward by the appropriate whole number of boxes. While the column is O, any new Low below `colExtreme − box` extends it downward.
- **Reversal:** a new column only begins when price moves against the current column by `ReversalBoxes × box`. When an X column reverses, its top is stored as the double-top reference and a fresh O column begins (and vice-versa).

2. Entry Logic

Signals are evaluated as the grid advances:

- **Double-Top Buy** fires when the extending (or newly reversed-up) X column pushes its top *above* the previous X column's top (`colExtreme > lastXTop`).
- **Double-Bottom Sell** fires when the extending (or newly reversed-down) O column pushes its bottom *below* the previous O column's bottom (`colExtreme < lastOBottom`).
- A `signaled` flag ensures at most one breakout fires per column, preventing repeated re-entries while a single column keeps extending.

Each raw signal must then pass the **EMA trend filter** before an order is sent:

- **Long** only when the completed bar's Close is *above* the `TrendEmaPeriod` EMA.
- **Short** only when the completed bar's Close is *below* the EMA.

Only **one position per magic number** is held at a time — if a position is already open, new signals are ignored until it closes.

Worked example (long)

Suppose ATR = 20 pips and `BoxAtrFactor = 0.50`, so each box is 10 pips and (with `ReversalBoxes = 3`) a reversal needs 30 pips. Price rallies, pulls back 30+ pips into an O column, then rallies again into a new X column. The moment that new X column prints a box *above* the prior X column's top — and price is trading above the 50-period EMA — the EA opens a long at the Ask.

3. Exit Logic — Stop Loss & Take Profit

Every position is protected by fixed, volatility-scaled brackets set at entry from the same ATR reading:

- **Stop Loss** = entry − (`ATR × AtrSlMult`) for longs, entry + (`ATR × AtrSlMult`) for shorts.
- **Take Profit** = entry + (`ATR × AtrTpMult`) for longs, entry − (`ATR × AtrTpMult`) for shorts.

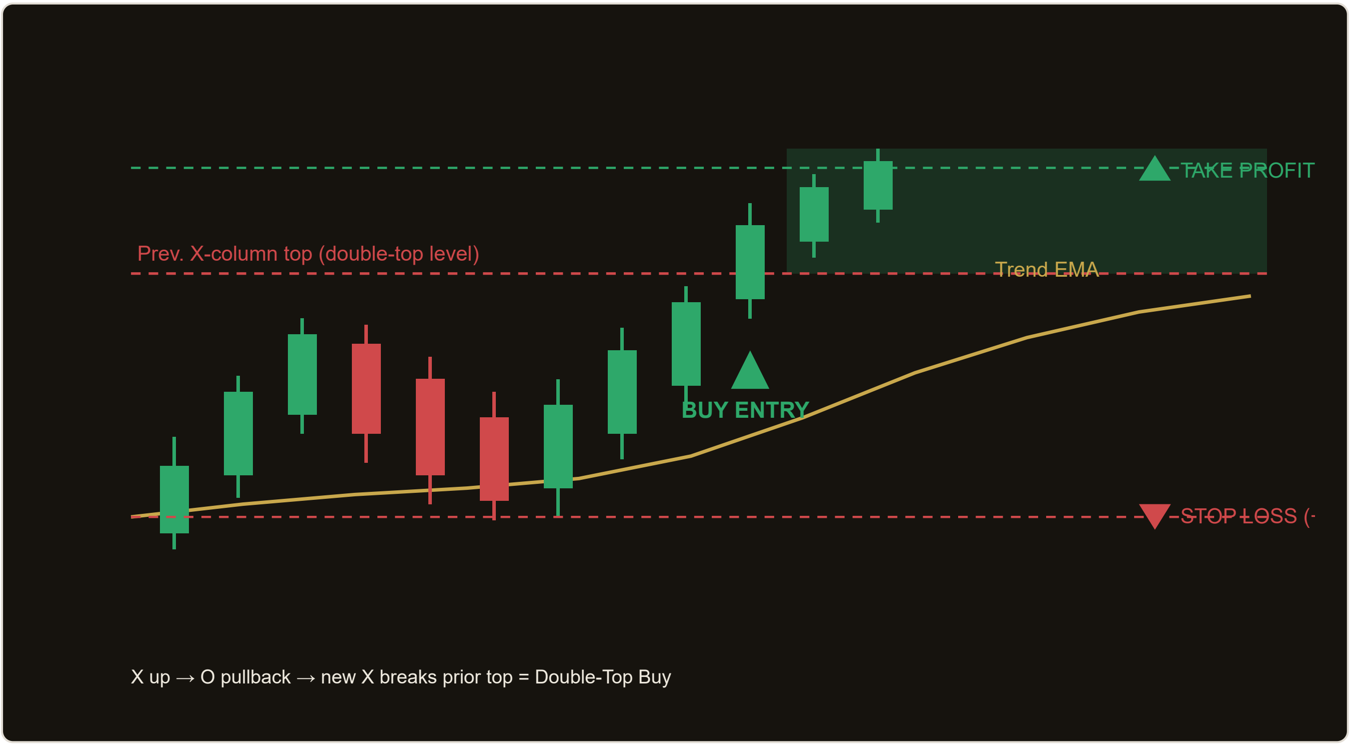
With the defaults (`AtrSlMult = 1.5`, `AtrTpMult = 3.0`) the reward-to-risk ratio is **2:1**. There is no trailing stop — each trade runs to its stop or target. Orders carry the comment `PnF-doubleTop` or `PnF-doubleBottom` for easy identification in the trade history.

4. Execution Cadence

The EA acts **once per completed bar**. It waits for a new bar to form, then processes the bar that just closed (shift 1), so signals are based only on finalised data and never repaint. Indicators (ATR and EMA) are read through that same completed bar, keeping the C# backtest engine and the live MQL5 build in exact agreement.

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.

Parameters

Parameter	Default	Description
BoxAtrFactor	`0.50`	Box size as a multiple of ATR (`box = ATR × factor`). Smaller = finer grid and more signals. Range 0.10–2.0, step 0.10.
ReversalBoxes	`3`	Number of boxes of counter-move required to start a new column. Larger = stronger noise filter, fewer reversals. Range 1–6, step 1.
AtrPeriod	`14`	ATR lookback used for the box size and the stop/target distances. Range 5–50, step 1.
TrendEmaPeriod	`50`	EMA trend filter period. Longs are taken only above the EMA, shorts only below it. Range 10–200, step 10.
AtrSlMult	`1.5`	Stop-loss distance in ATRs from entry. Range 0.5–5.0, step 0.5.
AtrTpMult	`3.0`	Take-profit distance in ATRs from entry. Range 0.5–8.0, step 0.5.
Lots	`0.10`	Order volume in lots. Range 0.01–1.0, step 0.05.
Magic	`3141`	Magic number identifying this EA's positions. Only one position per magic is held at a time.

Recommended Settings

Point & Figure breakouts reward patience and clean trends, so the strategy tends to shine on higher timeframes and liquid instruments. The defaults are a balanced starting point; tune the box and reversal settings to control signal frequency.

- **Timeframe:** H1 to H4 works well. The grid is ATR-adaptive, so it self-scales, but coarser timeframes filter more noise.
- **Symbols:** major FX pairs (EURUSD, GBPUSD, USDJPY) and liquid indices with clear directional swings.
- **Signal frequency:** lower `BoxAtrFactor` (e.g. 0.30) or `ReversalBoxes` (e.g. 2) for more, smaller-grid signals; raise them (0.80 / 4–5) for fewer, higher-conviction breakouts.
- **Trend alignment:** a longer `TrendEmaPeriod` (100–200) keeps you strictly with the major drift; a shorter one (20–50) is more responsive to swing turns.
- **Risk:** keep the default 2:1 reward:risk (`AtrTpMult` / `AtrSlMult`) or widen the target in strongly trending conditions.

> **Tip:** Because both the box size and the SL/TP distances are derived from ATR, always run the optimiser or forward test on the exact symbol and timeframe you intend to trade — the same `BoxAtrFactor` can mean very different grid granularity across instruments.

> **Position sizing:** the `Lots` value is fixed and does not scale to account equity. Choose a lot size appropriate to your balance and risk tolerance, and validate on a demo account before trading live.

How to Install on MetaTrader 5

1. Copy `PointFigureColumnBreakout.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.