Impulse System Color Shift

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Trend + Momentum Confluence	M15 – H1	www.algobot.live

Overview

Impulse System Color Shift is a trend-plus-momentum confluence Expert Advisor inspired by Dr. Alexander Elder's Impulse System. Most trend timers fire on a single read — a moving-average slope, or a MACD-histogram tick. Elder's insight is stricter: demand that *two independent forces* point the same way before committing. Only when the market's **direction** (a trend EMA) and its **acceleration** (the MACD histogram) agree does a bar earn a “color”.

Each closed bar is classified as **GREEN** (bullish impulse — trend up and momentum up), **RED** (bearish impulse — trend down and momentum down), or **BLUE** (neutral — the two forces disagree, so stand aside). The EA does not trade the color itself; it trades the **color shift** — the exact moment a bar first turns green or first turns red. That transition is the instant direction and acceleration lock into alignment: the cleanest ignition of a fresh leg.

The EA runs as a **stop-and-reverse** engine, so the account is always positioned with the prevailing impulse. Protective exits are ATR-scaled, and a spread filter keeps fills realistic. Its natural home is a liquid FX major, metal, or index on the M15–H1 timeframes, where trend legs are long enough for the dual filter to pay.

Why two forces? A single indicator can be fooled by noise: an EMA can drift up while momentum quietly fades, or a histogram can twitch up inside a downtrend. Requiring both direction *and* acceleration to agree filters out those low-conviction bars and reserves entries for moments of genuine alignment.

How It Works

The Two Votes

On every newly-closed primary-timeframe bar, the EA reads two independent slopes:

- **Direction (trend EMA slope).** An EMA of period `EmaPeriod` is compared to its value on the prior closed bar. Rising = trend up; falling = trend down.
- **Acceleration (MACD histogram slope).** The MACD histogram is `(EMAfast − EMAslow) − signal`, built from `MacdFast`, `MacdSlow` and `MacdSignal`. A rising histogram = momentum building up; a falling histogram = momentum building down.

Coloring the Bar

The two votes are combined into an impulse color:

```
GREEN (+1)  :  EMA slope > 0  AND  histogram slope > 0     (bullish impulse)
RED   (-1)  :  EMA slope < 0  AND  histogram slope < 0     (bearish impulse)
BLUE  ( 0)  :  the two forces disagree  →  no conviction
```

Entry — The Color Shift

The trade trigger is the transition, not the color:

- **Bull shift** — the first bar to turn GREEN after being red or blue. Close any short, then open a **long**.
- **Bear shift** — the first bar to turn RED after being green or blue. Close any long, then open a **short**.

Because the system is stop-and-reverse, a fresh shift both exits the old side and arms the new one, so the book is never fighting the current impulse. A new entry is only opened if there is no existing position on that side, the spread filter passes, and ATR is valid.

Exit — ATR-Scaled Stop & Target

Both protective exits self-scale to current volatility using the Average True Range:

- **Stop loss** is placed `AtrStopMult × ATR` beyond the entry price (below for longs, above for shorts).
- **Take profit** is placed at `RewardRisk × stop distance` in the profit direction.

A long is also flattened by an opposite (bear) shift before its stop or target is reached, and vice-versa — the reverse signal is itself an exit.

Worked example (long)

Suppose a bar turns green while price is 1.10000 (Ask), ATR is 0.00250, `AtrStopMult` = 2.0 and `RewardRisk` = 2.0. Stop distance = 2.0 × 0.00250 = 0.00500. Stop loss = 1.10000 − 0.00500 =

1.09500

; take profit = 1.10000 + 2.0 × 0.00500 =

1.11000

. Risk 50 pips to make 100.

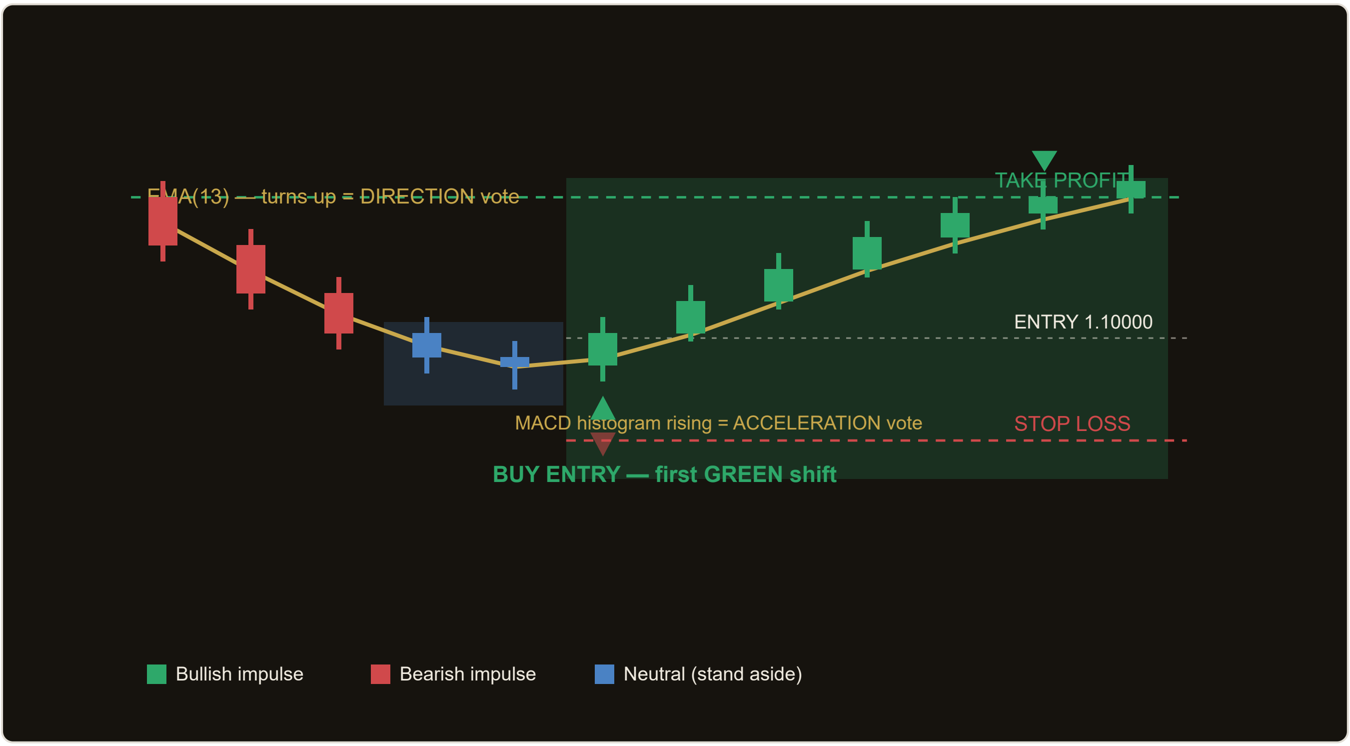
Spread Filter

Before any new order, the current spread (in points) is compared to `MaxSpreadPoints`. If the spread is wider than the limit, the entry is skipped so the EA does not chase fills during illiquid or news-driven conditions. Setting `MaxSpreadPoints` to `0` disables the filter entirely.

> **Bar-close logic.** All reads and decisions happen once per newly-closed bar (shift 1); the still-forming bar (shift 0) is never traded. This avoids intrabar flip-flopping and makes backtests reproducible.

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
EmaPeriod	`13`	Trend EMA whose bar-to-bar slope supplies the DIRECTION vote. Range 5–50, step 1.
MacdFast	`12`	Fast EMA of the MACD. Range 5–20, step 1.
MacdSlow	`26`	Slow EMA of the MACD. Range 15–60, step 1.
MacdSignal	`9`	Signal EMA of the MACD; the histogram slope supplies the ACCELERATION vote. Range 3–20, step 1.
AtrPeriod	`14`	ATR lookback used to size the protective stop. Range 5–30, step 1.
AtrStopMult	`2.0`	Stop distance as a multiple of ATR, placed beyond the entry. Range 0.5–5.0, step 0.1.
RewardRisk	`2.0`	Take-profit as a reward:risk multiple of the ATR stop distance. Range 0.5–5.0, step 0.1.
MaxSpreadPoints	`60`	Skip new entries when the current spread (points) exceeds this value. 0 disables the filter. Range 0–300, step 5.
Lots	`0.10`	Trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	`5382`	EA magic number used to identify and manage this strategy's positions. Range 0–9,999,999, step 1.

Recommended Settings

The defaults are tuned as a balanced starting point. Adjust to your instrument's character and your risk tolerance:

- **Instruments:** a liquid FX major (e.g. EUR/USD, GBP/USD), a metal (XAU/USD), or a major index — markets that produce sustained trend legs.
- **Timeframe:** M15 to H1. The EA reads only the chart's own timeframe, so it runs on whatever you attach it to.
- **Trend / momentum:** keep `EmaPeriod`, `MacdFast` / `MacdSlow` / `MacdSignal` near defaults (13 / 12 / 26 / 9) — shortening them increases signals but also noise.

- **Risk:** `AtrStopMult` 2.0 with `RewardRisk` 2.0 gives a symmetric 1:2 profile. Widen the stop on choppier symbols; lower the reward multiple for a higher hit rate.
- **Spread:** set `MaxSpreadPoints` to a value comfortably above your broker's typical spread for the symbol, so normal conditions pass but abnormal ones are filtered.
- **Volume:** size `Lots` so that the ATR stop risks only a small, fixed fraction of account equity per trade.

> **Tip:** Before going live, run the MT5 Strategy Tester across several months of history on your target symbol and timeframe, then optimise `AtrStopMult` and `RewardRisk` together — they jointly define the trade's risk profile.

How to Install on MetaTrader 5

1. Copy `ImpulseSystemColorShift.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

> **Note:** This EA is a stop-and-reverse system and normally holds at most one position per side at a time. Run a single instance per symbol, and keep its `Magic` number unique so it does not interfere with other EAs on the same account.

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.