

ETF Portfolio Trader

User Guide

Expert Advisor for MetaTrader 5. It builds and runs an ETF portfolio: up to 10 ETFs with your slot weights, or automatically the best performers of your watch lists (equity, bond and other ETFs, up to 10 per list) — across all classes or separately for equities and bonds — with or without trend signals, and keeps the weights on target with as few trades as possible.

Version 1.0 · Document date: 3 November 2026 · Seller on mql5.com: investingtrek

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1. What the EA Does

ETF Portfolio Trader manages a portfolio of up to **10 ETFs** (or other exchange-traded instruments) entered in the **slots**. Two independent decisions define how it works:

- **Which ETFs and with what weights** (section **Portfolio building strategy**): the weights from your **slots**, or one of the **(Auto) Top** strategies — the EA itself picks the ETFs with the highest price change over the last 1–6 months from your **watch lists**: from all lists (**Top Performers**), only from the equity list (**Top Equity**), only from the bond list (**Top Bonds**) or both at once with set parts (**Top Equity & Top Bonds**, e.g. 60% equities / 40% bonds).
- **Whether to follow trends** (section **Trade on trend signals**): when on, an ETF is held only while it is in an uptrend and sold when the trend ends (capital to cash or a defensive ETF). When off, the ETFs are bought and held regardless of the trend (Buy & Hold).

On top of that the EA **rebalances** the portfolio (weekly, monthly, every 3 months or when a weight drifts away; with Top Performers: a new selection every 1–12 months). A rebalance trades **only the difference in lots**, never the whole position.

- **Long only.** The EA never opens short positions.
- **Any account currency and any MT5 broker**, exchange (stock) accounts and CFD accounts.
- **Two panels** on the chart: **STRATEGY** (status, settings, trend monitor with 1M / 3M / 6M change, ADX and trend of every ETF) and **PORTFOLIO** (buttons, account, results, equity curve, positions).
- **Three watch lists** — equity, bond and other ETFs, up to 10 per list: the candidates of the Top strategies, otherwise shown in the trend monitor without trading; in the trend monitor each list is a separate section.
- **Trading ON / OFF** button with a confirmation window: on a live account the EA starts with trading off and buys the portfolio only after you confirm.
- **Information window at start** describing what the EA will do with the current inputs.
- **Four languages** of panels, windows and messages: English, German, Spanish, Polish.

> **What the EA is for**
>
> Research on 2016–2026 data (section 6) shows that no setting earns more than buy and hold of a diversified equity portfolio. What the EA does well: it automates a portfolio (buying, weights, rebalancing, restart safety) and — with trend signals — cuts the maximum drawdown roughly in half at the cost of about half of the return.

2. Requirements and Installation

2.1 Requirements

- MetaTrader 5, any account type (netting, hedging, exchange).
- ETFs available at your broker. Symbol names must be typed exactly as in Market Watch, e.g. SXR8.ETF.
- Price history of every ETF: about one year of D1 bars for a 250-bar average; for Top Performers D1 history covering the evaluation window (up to 6 months). If a symbol has no history yet, the EA starts anyway, shows n/a and asks you to download the history (section 9).
- Any chart for the EA. Recommended: a chart of one of the traded ETFs (its session hours are used to check whether the market is open).

2.2 Installation

1. Copy the .ex5 file to the MQL5\Experts folder (File → Open Data Folder), or install it from the MQL5 Market.
2. Open a chart of one of your ETFs and drag the EA from the Navigator onto the chart.
3. On the Inputs tab load a preset (**Load** button, section 9) or set: **EA language**, the **Strategy**, **Trade on trend signals**, the **Rebalance** settings and your ETFs in the **SLOT** sections (symbol, weight, Trade this slot = true) — or, for a Top strategy, your ETFs in the three **Watch list** inputs (equity / bond / other).
4. Turn on Algo Trading in the terminal and allow algorithmic trading for the EA (Common tab).
5. After about one second an **information window** describes what the EA will do (portfolio, signals, rebalancing, capital, watch list, missing data). The same text is written to the Experts journal.
6. On a live account the EA starts with **Trading OFF**. Check the panels, then press **Trading OFF** in the PORTFOLIO panel: a window lists the purchases per slot — **OK** switches trading on and buys the portfolio, **Cancel** keeps trading off.

> **Before live trading**
> Test your settings in the MT5 Strategy Tester and run the EA with Dry run = true first. In the tester trading is on from the start and the windows are not shown.

3. Building the Portfolio

3.1 Strategy: Fixed Portfolio

Every slot with **Trade this slot = true** and a weight above 0 is part of the portfolio. **Target value = EA capital × slot weight.** Slots with Trade this slot = false are only observed (visible in the trend monitor). With no symbol in any slot the EA trades the chart symbol (quick start, 100%, SuperTrend).

3.2 Top strategies: ETFs from the watch lists

Four options of **Strategy** select the ETFs automatically from three **watch lists** — **Watch list - equity ETFs**, **Watch list - bond ETFs** and **Watch list - other ETFs** (commodities, real estate, money market …), up to 10 symbols per list (30 in total). **You decide the class of an ETF by the list you put it on**; the EA does not guess it. With these strategies the slots 1–10 are ignored.

Strategy (option)	What the EA selects
(Auto) Top Performers (all classes) from Watch list, equal weight	The Top Performers (all classes): number of best ETFs to buy (1–10) best ETFs of all three lists, each with (100% − cash buffer) / number selected.
(Auto) Top Equity from Watch list, part weights	The Top Equity: number of best equity ETFs to buy best ETFs of the equity list. Together they get the equity part (by default 100% of the EA capital), split equally; the rest stays in cash.
(Auto) Top Bonds from Watch list, part weights	The Top Bonds: number of best bond ETFs to buy best ETFs of the bond list. Together they get the bond part (by default 40%), split equally; the rest stays in cash.
(Auto) Top Equity & Top Bonds from Watch list, part weights	Two separate rankings at once: the best ETFs of the equity list share the equity part, the best of the bond list share the bond part (e.g. 3 equities × 20% + 2 bonds × 20%).

- **Ranking** by the price change over **Top Performers: evaluation window** (1–6 months, D1 bars). An ETF without history covering the whole window is left out until its history is long enough (e.g. a newly listed ETF). If a list has fewer candidates than requested, all of them are bought.
- **Parts:** inputs **Top strategies: equity part** and **bond part** (% of the EA capital). If the parts used plus the cash buffer exceed 100%, they are scaled down proportionally (warning in the journal). A part without any selected ETF stays in cash. Top Performers (all classes) does not use the parts.
- **New selection** on the first new bar of every period of **Top Performers: rebalance frequency** (every 1–12 months, calendar-aligned: every 3 = quarters, every 12 = years) and with the **Rebalance** button. ETFs that drop out of the top are sold, the others are brought to their weights.
- With **Trade on trend signals = true** a selected ETF out of trend is not held (its share goes to cash or the defensive ETF).
- The selection is stored in terminal global variables: after a restart in the same period (with the same strategy and numbers of ETFs) the portfolio is not reshuffled. If the period has passed while the EA was off, a new selection is made.
- If D1 history of some candidates is missing, the EA waits up to 10 minutes after start, then selects from the candidates that have full history and writes the skipped ones to the journal.
- When you switch from Fixed Portfolio to a Top strategy, EA positions in ETFs that are not on the watch lists are closed like any position outside the configuration.

> **Equity curve comparison**
> With the Top strategies the Buy and Hold line of the equity curve is the portfolio of **all candidates** with equal weights, bought at the start of the range and held (label “B&H all candidates”). It answers the question whether the rotation earns more than holding all of them.

Default setting

Out of the box the EA uses **Top Equity**: the 3 strongest of 8 equity ETFs (one per market: S&P 500, Nasdaq-100, Russell 2000, STOXX Europe 600, DAX, Japan, emerging markets, Pacific ex Japan) by the 6-month price change, a new selection every 6 months, 100% of the EA capital, trend signals off. In the 2016–2026 simulation: 11.6% a year with a 28.5% maximum drawdown (the 7 ETFs with full history bought in equal parts and held: 12.2% / 32.9%). With Top Equity & Top Bonds set both parts yourself, e.g. 60 / 40.

3.3 The three watch lists

- Symbols are separated by commas, e.g. EUNL.ETF, SXR8.ETF. Equity ETFs go on the equity list, bond ETFs (government, corporate, aggregate …) on the bond list, everything else (gold, commodities, real estate, money market) on the other list.
- A symbol on two lists counts once, on the first list (order: equity, bond, other); the journal shows a warning.
- If a Top strategy needs a list that is empty (e.g. Top Bonds with no bond ETFs), the journal shows a warning and that part stays in cash.
- With Fixed Portfolio the lists are only observed in the trend monitor, below the slots — handy for watching candidates without trading them.

4. Trend Signals

With **Trade on trend signals = true** every ETF has one of three states: **TREND** (hold), **OUT** (do not hold) or **n/a** (no data yet — nothing happens). Decisions use the last **closed** bar of the timeframe, never the bar that is still forming. A trend change of an ETF in the portfolio triggers a rebalance. With **false** the ETFs are bought and held regardless of the trend (Buy & Hold); the trend monitor then shows no Trend and Dist columns.

4.1 Signal methods

Signal method (input)	How the trend is detected
Price (close) x EMA slow	The close is compared with the slow moving average (by default 250 bars). It checks a level, not a crossover, so the EA knows the state from the first bar.
EMA fast x EMA slow	As above, but with a fast EMA (by default 5) instead of the close: a calmer signal, a little later.
SuperTrend (ATR)	A line at a distance of ATR × multiplier from the price. Up = TREND, down = OUT.
Dual SuperTrend (fast entry / slow exit)	Two SuperTrends: a sensitive one to enter (by default ATR 7 × 1.5) and a slower one to exit (ATR 20 × 4). After an exit the EA waits until the sensitive line has turned down once. Tested default for the W1 timeframe.

4.2 Slow EMA models

The methods “Price x EMA slow” and “EMA fast x EMA slow” use one of two models (input **EMA slow model**):

- **EMA High / Low hysteresis** — entry above the average of highs, exit below the average of lows. Between the two lines the state does not change; a new state must hold for **Confirmation bars** bars. In the portfolio tests **Confirmation bars = 3** was better than 1 for every average period.
- **EMA Zone Break (threshold + closes)** — one average; entry after N closes above the average + **Up threshold %**, exit after N closes below the average. An optional **emergency gap** exits at once when the price falls the set % below the average.

EMA slow method chooses the type of average (Exponential, Simple, Smoothed, Linear weighted). The panel STRATEGY shows only the parameters of the selected method.

4.3 Market hours and deferred orders

Outside the trading session the EA sends no orders: the rebalance is **deferred** and runs on the first tick in the session (the timer checks every minute). If a rebalance waits for more than 3 days, the journal shows a warning.

5. Rebalancing

A rebalance brings the portfolio to its targets. ETFs out of trend (with trend signals on) have target 0; their weight goes to the defensive ETF or stays as cash.

5.1 When the EA rebalances

Setting	When
Use rebalance = false	No weight rebalancing. New positions are opened at the target weight, positions out of trend are closed, existing positions are never resized (except the defensive ETF and the Rebalance button). Top Performers: selection only at start and with the button.
Use rebalance = true, Fixed Portfolio: Rebalance mode = Weekly / Monthly / Every 3 months	On the first new bar of every week / month / calendar quarter (January, April, July, October) every position is brought to its target.
Use rebalance = true, Fixed Portfolio: Rebalance mode = Weight deviation	When a position drifts from its target weight by more than Deviation mode: max weight deviation percentage points (e.g. 5: target 20%, rebalance at 25% or 15%).
Use rebalance = true, Top strategies	New selection and rebalance every Top Performers: rebalance frequency months (or never with “No rebalance”).
Trade on trend signals = true	Additionally when an ETF of the portfolio changes its trend state (with tolerance).
Start (Trading ON) and the Rebalance button	At once, on demand (with Trading ON).

The STRATEGY panel shows the selected mode and, with rebalancing on, **Next rebalance**: in how many days and on which date the next automatic rebalance falls (deviation mode: threshold and the current largest deviation).

5.2 How a rebalance trades

- **Only the difference** in lots is traded: surplus lots are sold, missing lots are bought. A position is closed completely only when its ETF leaves the trend or the Top Performers selection.
- **Sells first, then buys**, so the cash from the sales pays for the purchases.
- On a trend-change rebalance a position is left alone if it is within the **tolerance** (by default 10% of its target). Periodic, deviation, Top Performers and button rebalances bring every position to its target; only orders below the **Min. order value** are skipped.
- Order comments: `ETF PT M<magic>` for positions opened by a signal, `ETF PT M<magic> Rebalance +` / `Rebalance -` for rebalance purchases and sales.
- **Hedging accounts:** a surplus is reduced by partially closing the EA's own positions, never by opening a short position.
- **Exchange (stock) accounts:** the account value is cash plus the market value of the positions, so targets and weights stay correct although the purchase cost is taken from the balance.

6. Research: What the EA Can and Cannot Do

The strategies were tested in simulations on daily data from 2016-03 to 2026-10 on 17 ETFs listed in Europe (full period and two halves, commission 0.1%, whole units, cash without interest). Results must be confirmed in the MT5 Strategy Tester.

6.1 Portfolio of five markets (one ETF per market, Nasdaq-100 excluded)

SXR8 (USA / world large caps), EUN2 (euro area), XRS2, SXRW and EUNN (separate equity markets), 5 × 20%:

Strategy	CAGR	Max. drawdown
Buy and hold 5 × 20%	10.7%	34.8%
With rebalancing (any mode)	10.6–10.8%	34.8%
Fixed 45% equities + 55% cash	5.0%	17.2%
Trend signals: SMA 250 D1, High/Low, confirmation 3, cash (preset, section 9)	5.7%	15.7%
Top Performers: Top 2, window 6M, rotation every 12M	10.6%	28.9%

- **Return:** no setting earns reliably more than buy and hold. Rebalancing modes hardly change anything when the markets rise similarly.
- **Risk:** trend signals cut the drawdown roughly in half for about half of the return. The best settings beat a fixed equities-plus-cash mix with the same drawdown by about 0.5–1 percentage point a year; the median setting does not.
- **High/Low with confirmation 3** gave 4.3–5.7% a year with 12–19% drawdown for every average period tested — the most consistent signal setting. SuperTrend and the EMA Zone Break model were weaker on this portfolio.
- **Defensive capital:** cash was better than a bond ETF (bonds lost money in the period, 2022 crash).
- **Top Performers** showed no stable advantage: results depend strongly on the window and frequency. The only consistent area: window 6 months with a rotation every 6–12 months.
- The period had no long bear market (like 2000–2003 or 2008), the conditions in which trend filters usually help most.

6.2 Single ETFs (earlier research, Dual SuperTrend W1, cash when out)

ETF	Buy and hold: CAGR / max. drawdown	Dual SuperTrend W1: CAGR / max. drawdown
MSCI World (EUNL)	12.8% / 33.6%	11.1% / 16.3%
S&P 500 (SXR8)	14.8% / 33.8%	13.9% / 18.4%
Nasdaq 100 (EQQQ)	20.0% / 31.3%	17.0% / 24.8%
MSCI World (H4ZJ)	12.7% / 33.6%	11.9% / 16.6%

About the results

The results come from simulations on historical data, not from a live account, and the settings were selected on the same period, so they are optimistic. Past results do not guarantee future results.

7. All Inputs

7.1 Language

Input (MT5 window)	Default	What it does and how to set it
EA language (panels, journal, messages)	English	Language of the panels, windows, journal and messages: English, Deutsch, Espanol, Polski. Input labels stay in English.

7.2 General

Input (MT5 window)	Default	What it does and how to set it
Magic number (EA signature)	20250505	Every order gets this number; the EA counts only positions and trades with it. Use different numbers for several copies of the EA on one account.
% of account capital for this EA	100	Part of the account value the EA manages (1–100). Targets = EA capital × weight.
Min. order value (account currency)	100	Orders below this value are skipped (minimum commission).
Max. order value (account currency)	290000	Upper limit of one order — protection against a typo in a weight.
Timeframe (all slots)	D1	Timeframe of the signals, of the decisions and of the ADX. For the Dual SuperTrend defaults use W1.

7.3 Portfolio building strategy

Input (MT5 window)	Default	What it does and how to set it
Strategy	(Auto) Top Equity from Watch list, part weights	Fixed Portfolio (section 3.1) or one of the Top strategies from the watch list (section 3.2): Top Performers (all classes), Top Equity, Top Bonds, Top Equity & Top Bonds.

7.4 Top strategies: ETFs from the watch lists

Input (MT5 window)	Default	What it does and how to set it
Watch list - equity ETFs (comma-separated, max 10)	8 equity ETFs (one per market)	Equity ETFs: candidates of Top Equity, Top Equity & Top Bonds and Top Performers (all classes). Fixed Portfolio: observed only.
Watch list - bond ETFs (comma-separated, max 10)	8 bond ETFs	Bond ETFs: candidates of Top Bonds, Top Equity & Top Bonds and Top Performers (all classes).
Watch list - other ETFs (comma-separated, max 10)	(empty)	Other ETFs (commodities, real estate, money market …): candidates of Top Performers (all classes) only. Each list: up to 10 symbols; more are ignored with a warning in the journal.
Watch lists: separate sections in trend monitor (sorting within section)	true	Trend monitor: each list in its own section (Equities / Bonds / Other), sorting within the section; false = one list.
Top Performers: evaluation window	6 months	Price change period for the ranking: 1–6 months.

Input (MT5 window)	Default	What it does and how to set it
Top Performers (all classes): number of best ETFs to buy	3 ETFs	Top Performers (all classes): how many of the best candidates are bought: 1–10.
Top Equity: number of best equity ETFs to buy	3 ETFs	Top Equity and Top Equity & Top Bonds: how many of the best equity ETFs are bought.
Top Bonds: number of best bond ETFs to buy	2 ETFs	Top Bonds and Top Equity & Top Bonds: how many of the best bond ETFs are bought.
Top strategies: equity part (% of EA capital)	100	Share of the EA capital for the selected equity ETFs, split equally (Top Equity, Top Equity & Top Bonds).
Top strategies: bond part (% of EA capital)	40	Share of the EA capital for the selected bond ETFs, split equally (Top Bonds, Top Equity & Top Bonds).
Top Performers: rebalance frequency	Every 6 months	No rebalance (selection at start / button only) or every 1–12 months.

7.5 Fixed Portfolio: Direct ETFs Trade List (slots 1–10)

Input (MT5 window)	Default	What it does and how to set it
Symbol - slot N	(empty)	ETF symbol exactly as in Market Watch. Empty = slot unused. With no symbol at all the EA trades the chart symbol (quick start).
Weight - slot N (%)	0	Share of the EA capital for this ETF. Weights + cash buffer should not exceed 100%.
Trade this slot - slot N	false	true = the slot is traded; false = observe only. The Top strategies do not use the slots.

7.6 Trade on trend signals

Input (MT5 window)	Default	What it does and how to set it
Trade on trend signals (false = Buy & Hold)	false	true = buy in an uptrend, sell when the trend ends (both strategies); false = buy and hold regardless of the trend.
Signal method (all slots)	Price (close) x EMA slow	Trend detection (section 4.1).

7.7 Rebalance

Input (MT5 window)	Default	What it does and how to set it
Use rebalance	true	false = no weight rebalancing (section 5.1).
Deviation tolerance from target (0.10 = 10%)	0.10	On a trend-change rebalance a position within this tolerance is not adjusted.
Rebalance mode	Monthly	Fixed Portfolio: Weekly / Monthly / Every 3 months / Weight deviation.
Deviation mode: max weight deviation (percentage points)	5.0	Weight deviation mode: rebalance when a weight differs from its target by more than this many points.

7.8 Defensive / cash

Input (MT5 window)	Default	What it does and how to set it
Defensive ETF symbol	(empty)	ETF for the capital of funds out of trend, e.g. a money-market ETF.
Idle-capital destination	Keep idle capital as cash	Move idle capital to defensive ETF / Keep idle capital as cash.
Permanent cash buffer (%)	0	Part of the capital always kept in cash (commissions, rounding).

7.9 Trade signals parameters

Fast EMA inputs

Input (MT5 window)	Default	What it does and how to set it
EMA fast (close)	5	Period of the fast EMA (method “EMA fast x EMA slow”).

Slow EMA inputs

Input (MT5 window)	Default	What it does and how to set it
EMA slow model	EMA High / Low hysteresis	EMA High / Low hysteresis or EMA Zone Break (threshold + closes), section 4.2.
EMA slow timeframe (Current = slot timeframe)	Current	Own timeframe of the slow average, e.g. W1 while the slots run on D1.
EMA slow period	250	Period of the slow average (250 D1 bars ≈ one year).
EMA slow method	Exponential	Exponential / Simple / Smoothed / Linear weighted.
EMA slow price (EMA Zone Break model)	Close	Price of the average in the EMA Zone Break model.
Up threshold: % above EMA (EMA Zone Break model)	2.0	Entry level = average + this %.
Closes below EMA -> downtrend (0=1) (EMA Zone Break model)	0	Number of closes below the average that end the trend.
Closes above thr. -> uptrend (0=1) (EMA Zone Break model)	1	Number of closes above the entry level that start the trend.
Gap % below EMA -> downtrend (0=off) (EMA Zone Break model)	1.5	Emergency exit at once when the price is this % below the average.
Draw the EMA slow line on the chart?	true	Line of the slow average of the chart symbol.
EMA slow line colour	Gold	Colour of that line.

SuperTrend inputs

Input (MT5 window)	Default	What it does and how to set it
SuperTrend: ATR period	10	ATR period of the SuperTrend method.
SuperTrend: ATR multiplier	3.5	Distance of the line in ATR.
Dual SuperTrend: entry (fast) ATR period / multiplier	7 / 1.5	Sensitive SuperTrend that opens positions.

Input (MT5 window)	Default	What it does and how to set it
Dual SuperTrend: exit (slow) ATR period / multiplier	20 / 4.0	Slower SuperTrend that closes positions.
Confirmation bars (EMA High/Low model, SuperTrend)	1	How many bars a new state must hold before it is accepted (1 = at once).

7.10 Panels

Input (MT5 window)	Default	What it does and how to set it
Show panels on chart	true	Turns both panels on or off.
Panel refresh interval (s, 0 = every tick)	30	How often the panels are redrawn.
STRATEGY / PORTFOLIO panel: X, Y position, width, fit width, expanded	10 / 30 …	Start position and size of each panel; with auto-width the width fits the content.
Gap, font size, font	14 / 8 / Consolas	Layout of the panel text (a monospaced font keeps the columns aligned).
Trend monitor: show symbol description / description length (chars)	true / 28	Column with the broker's description of every symbol (e.g. the index name).
Trend monitor: ADX period	14	Period of the ADX column (trend strength) in the trend monitor.
Panel colours (background, title bar, border, labels, values, sections, profit, loss, warning)	brand colours	Colours of the panels.
Panel background behind the chart	false	true = the price chart is drawn over the panel background.
Remember panel position and state	true	Position, collapse state, equity-curve range and sorting are kept after a restart.
Equity curve in PORTFOLIO panel / height (px)	true / 200	Equity curve of the EA.
Equity curve: EA capital line color	green	Colour of the EA line.
Equity curve: Buy and Hold portfolio line (traded slots)	true	Comparison line: traded slots with their weights (Top Performers: all candidates equally), bought at the start of the range and held.
Equity curve: Buy and Hold portfolio line color	orange	Colour of the comparison line.
Start capital for P/L % (0 = balance at first EA start)	0	Base of the profit %. 0 = balance at the first start of the EA (remembered per magic number).

7.11 System

Input (MT5 window)	Default	What it does and how to set it
Verbose logging in Experts tab	true	More details in the journal (trend changes).
Dry run (no real orders)	false	The EA logs what it would do but sends no orders.

Input (MT5 window)	Default	What it does and how to set it
Write EA messages to the journal?	true	false = only errors and warnings in the Experts tab.
Also save the journal to a file?	false	Copy of the journal in daily files MQL5\Files\ ETFPortfolioTrader.
Delete log files after N days (0 = never)	30	Old log files are deleted at start and once a day.
Startup volume diagnostics	true	At start the EA checks whether every slot gives at least one lot.

8. Panels, Buttons and Windows

8.1 STRATEGY

- **STATUS** — mode (LIVE / DRY RUN / TRADING OFF), rebalance status (OK / deferred / waiting), number and time of the last rebalance.
- **STRATEGY** — ETFs monitored / traded, EA capital, portfolio strategy, rebalance mode, **Next rebalance** (days and date), Top Performers selection date, weights, idle capital, trade on trend signals and the parameters of the selected signal method only.
- **TREND MONITOR** — Fixed Portfolio: slots first, then the watch lists; Top strategies: the watch lists only. Each list is a **separate section** (e.g. "- watch list: Equities (12) -", "Bonds (3)", "Other (2)"). Columns: symbol, **Description** (from the broker), weight (* = traded, obs = observed), **1M / 3M / 6M** price change, **ADX**, and with trend signals on **Trend** (Up / Down) and **Dist** (% distance to the reversal level).
- The **1M / 3M / 6M** column headers are **sort buttons**: 1st click descending, 2nd ascending, 3rd back to the list order. Sorting works within every group — the slots and each watch-list section separately — so you see the best equities and the best bonds at a glance.
- Below the monitor the EA lists symbols **not found** on the platform (check the spelling) and symbols with **no or too short price history** (open their D1 chart, section 9). A long list is split over several lines, so it does not widen the panel.

8.2 PORTFOLIO

- Buttons **Trading ON / OFF**, **Rebalance** and **Info** in the first row. Info opens a window with the explanation of the buttons.
- **ACCOUNT** — equity, balance, account value (exchange accounts), money in ETFs and in cash, number of positions.
- **REALIZED P/L** — today / month / year, closed trades with win rate, profit factor, average, best and worst trade, commissions, swaps.
- **OPEN P/L** — open result with swap, total EA result in % of the start capital.
- **EQUITY CURVE** — EA capital against the Buy and Hold line; ranges All / 2Y / 1Y / YTD / 6M, Hide / Show.
- **POSITIONS** (volume, open price, price, value, P/L, change %) and **P/L PER ETF**.

8.3 Windows

- **Information window** about one second after start (after changing the inputs, after recompilation and at the first start): what the EA will do — portfolio, signals, rebalancing with the next date, capital, watch list, missing data.
- **Trading ON confirmation**: the list of purchases (symbol, weight, approximate value, buy / not bought) and OK / Cancel.

Panels can be dragged by the title bar, collapsed with [-] and scrolled with the arrows when they are taller than the chart.

9. Presets and Practical Tips

9.1 Preset: five markets with a trend filter

File **ETF_Portfolio_Trader_v42_5RYNKOW_TREND.set** (Inputs → Load): slots SXR8, EUN2, XRS2, SXRW, EUNN at 20%, Strategy = Fixed Portfolio, Trade on trend signals = true, Price x EMA slow, EMA High / Low hysteresis, EMA slow period 250, method Simple, Confirmation bars = 3, Timeframe D1, idle capital as cash, Rebalance mode = Weight deviation 10 points. In the simulation (section 6.1): about 5.7% a year with a 15.7% maximum drawdown (buy and hold 10.7% / 34.8%). Check that the symbols exist at your broker.

9.2 Tips

- **Only automation, no trend filter:** Trade on trend signals = false, Rebalance mode = Weight deviation 5–10 points or Every 3 months — the EA buys and maintains a plain portfolio with very few trades.
- **One ETF per market:** several funds on the same index (e.g. three MSCI World ETFs or an S&P 500 and a World ETF) do not diversify the portfolio and give the Top Performers ranking nothing to choose from.
- **Top Equity & Top Bonds:** put equity ETFs on the equity list and bond ETFs on the bond list (one per market or bond segment) and set the parts, e.g. 60 / 40. A part whose list is empty stays in cash.
- **Missing history:** open a D1 chart of the symbol and scroll back about one year — the terminal downloads the history and the panel fills in automatically. The EA never waits for the server, so it starts at once.
- **Typos in the watch list or slots:** the symbol is skipped, the journal shows a warning and the panel shows “not found”.
- **Strategy Tester:** use “1 minute OHLC”, or “Open prices only” on an **H1** chart. A D1 bar of an ETF opens at 00:00, outside the session; on an H1 chart the rebalance runs on the first bar of the session. Load the history of all symbols before the test.
- **Expensive ETFs on a small account:** check the volume diagnostics at start — a slot that rounds to 0 lots will never be bought.
- **Several copies of the EA** on one account: give each a different Magic number and a share of the capital.
- **After a restart** the EA recognises its positions by the magic number and does not buy them again. On a live account switch trading on again with Trading OFF → OK.

10. Risk Warning

Trading ETFs and other financial instruments involves the risk of losing capital. The EA executes a systematic strategy; it does not guarantee profit and cannot prevent all losses. Trend filters reduce drawdowns at the cost of part of the return in strong bull markets, and a fast crash can be deeper than the drawdowns seen in the tests. The results in this guide come from simulations on historical data. Test any settings in the Strategy Tester and on a demo account before you use real money, and invest only money whose loss you can bear.