WS_CorrelationMatrix

Correlation Matrix — User Guide

How closely a group of futures markets move together
November 2026

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1. What This Tool Does

`WS_CorrelationMatrix` is a free, standalone TradeStation TradingApp that shows how closely a group of futures markets actually move together — real diversification versus markets that only duplicate each other's risk. Enter a list of markets; it returns a colour-coded grid with the correlation of every pair, based on their real daily price history.

A list of markets → a colour-coded correlation matrix, based on daily returns

This is correlation **between markets** — not between strategies, and not based on any trades. Each market's day-to-day price change is compared with every other market's.

1.1 Who Is This For

Anyone who wants a quick, honest read on whether the markets being traded (or considered) really diversify each other.

No programming is needed; everything is point-and-click. The only prerequisite is TradeStation, with data access for the markets to be compared.

1.2 How It Fits Into the TradeStation Workflow

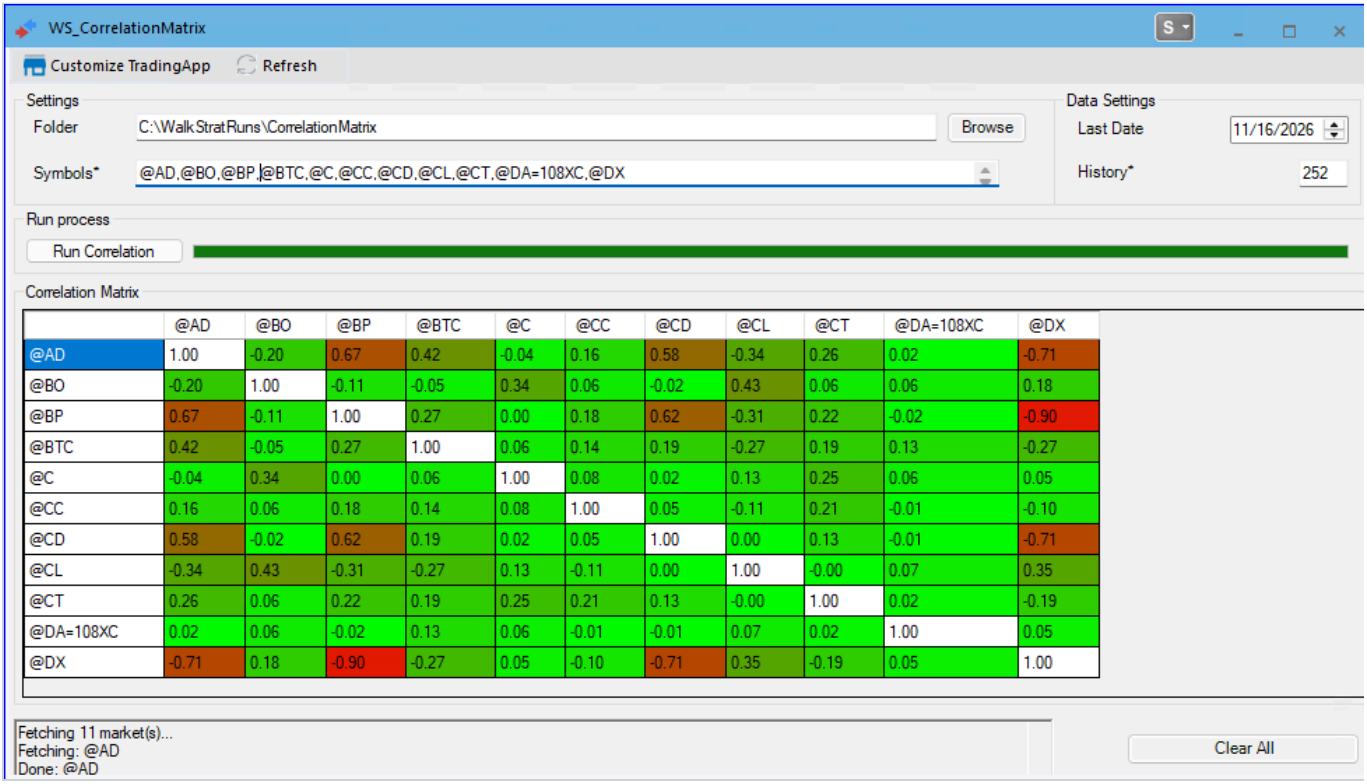
`WS_CorrelationMatrix` is a stand-alone TradingApp: no chart is required, and it does not depend on the WalkStrat application. It opens from TradeStation Apps like any other TradingApp and stays available for the session.

2. Installation

1. Import (double-click) `WS_CorrelationMatrix.eld`. The import also adds the `WS_PriceRecorder` strategy the tool uses to collect daily prices; it needs no setup.
2. In any Workspace, go to the TradeStation Apps and click on `WS_CorrelationMatrix`.

There is no separate installer and nothing to configure before first use.

3. Quick Start



	@AD	@BO	@BP	@BTC	@C	@CC	@CD	@CL	@CT	@DA=108XC	@DX
@AD	1.00	-0.20	0.67	0.42	-0.04	0.16	0.58	-0.34	0.26	0.02	-0.71
@BO	-0.20	1.00	-0.11	-0.05	0.34	0.06	-0.02	0.43	0.06	0.06	0.18
@BP	0.67	-0.11	1.00	0.27	0.00	0.18	0.62	-0.31	0.22	-0.02	-0.90
@BTC	0.42	-0.05	0.27	1.00	0.06	0.14	0.19	-0.27	0.19	0.13	-0.27
@C	-0.04	0.34	0.00	0.06	1.00	0.08	0.02	0.13	0.25	0.06	0.05
@CC	0.16	0.06	0.18	0.14	0.08	1.00	0.05	-0.11	0.21	-0.01	-0.10
@CD	0.58	-0.02	0.62	0.19	0.02	0.05	1.00	0.00	0.13	-0.01	-0.71
@CL	-0.34	0.43	-0.31	-0.27	0.13	-0.11	0.00	1.00	-0.00	0.07	0.35
@CT	0.26	0.06	0.22	0.19	0.25	0.21	0.13	-0.00	1.00	0.02	-0.19
@DA=108XC	0.02	0.06	-0.02	0.13	0.06	-0.01	-0.01	0.07	0.02	1.00	0.05
@DX	-0.71	0.18	-0.90	-0.27	0.05	-0.10	-0.71	0.35	-0.19	0.05	1.00

Correlation Matrix — eleven futures: currencies, grains, softs, energy, dairy and Bitcoin

1. Set the **Folder** (§4.1) — each market's daily prices are saved there.
2. Enter **2 to 12 comma-separated markets** in **Symbols** (e.g. `@ES,@NQ,@RTY,@YM,@US`).
3. Set **Last Date** and **History** (§4.2).
4. Click **Run Correlation**.

The click returns immediately. The tool collects each market's daily prices in turn (the progress bar and **Messages** follow along) and, once at least two markets have come back, builds the matrix.

4. Field Reference

4.1 Settings

Field	What it does
Folder	Where each market's daily price file is saved. Required, and the folder must exist.
Browse	TradeStation offers no folder picker: navigate into the folder and open any file name there; only the folder is kept. Cancelling the dialog keeps the current folder.
Symbols	Comma-separated list of markets to compare: at least 2, at most 12. Continuous contracts (e.g. `@ES`) give the longest history.

4.2 Data Settings

Field	What it does
Last Date	End date of the price history, the same for every market.
History	How much history to load, in trading days (e.g. 504 ≈ two years). Required, and greater than 0.

Every market's daily closing price is used — the standard basis for market correlation; nothing to configure.

4.3 Run Process

Control	What it does
Run Correlation	Collects the prices and builds the matrix. Greyed out while a run is in progress.
Progress bar	Share of the markets already collected.
Clear All	Empties the boxes, the matrix and **Messages**, ready for a new list. Greyed out while a run is in progress.

5. Reading the Results

5.1 Correlation Matrix

One row and one column per market, with the correlation of every pair: a value from **-1.00** (they move in exactly opposite directions) to **+1.00** (they move in lockstep). Each market is compared only on the days both markets traded, using the day-to-day change of the closing price.

The diagonal (a market against itself) always reads **1.00** and is left white.

Colour shows strength, not direction:

- **Green** — the pair moves largely independently: good for diversification, the two markets do not duplicate each other's risk.
- **Red** — the pair is strongly coupled, whether the correlation is strongly positive *or* strongly negative. Either way the two markets largely tell the same story, which matters for diversification as much as a plain positive correlation does.
- **Grey, "n/a"** — no correlation can be measured: a market returned no price data (typically a symbol without data access on the account, or a mistyped symbol), or the two markets have fewer than 3 days in common. These correlations are unknown, so they are not shown as numbers, and a line in **Messages** explains the grey cells.

5.2 Messages

A running log: each market as it is collected, any market that failed to start (with TradeStation's reason) or returned no price data, and a summary line at the end: how many markets returned price data.

6. Tips & Troubleshooting

A failed market does not stop the run. When one market cannot be collected (bad symbol, no data), the tool logs it and carries on; the matrix is built from the markets that returned price data, as long as there are at least 2.

The price files are kept. Each run writes one daily price file per market into the Folder, named after the market and the time of the run (e.g. `@ES_20261116_093015.csv`). They are not deleted automatically and can be removed at any time.

Common issues:

- **"Folder is required"** / **"Folder does not exist"** — set an existing folder first.
- **"Enter at least 2 comma-separated markets to correlate"** — **Symbols** needs at least 2 entries.
- **"Please limit to 12 markets or fewer"** — shorten the **Symbols** list; the cap keeps the run fast and the matrix readable.
- **"History is required and must be greater than 0"** — fill in **History** (e.g. after **Clear All**).
- **A market shows "Failed to start" or "No price data" in Messages, or grey "n/a" in the matrix** — usually a mistyped symbol or a market without data access on the account.
- **"Fewer than 2 markets returned price data - no correlation matrix"** — check the symbols named in **Messages**, then run again.