



**TRADING
TECHNOLOGIES**

Migrating Autotrader™ Strategies to ADL™ Setup Guide

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Introduction

TT's new ADL (Algo Design Lab) is a visual programming platform that represents a major breakthrough in algorithmic trading. Using drag-and-drop building blocks, traders and programmers alike can rapidly design, test and deploy automated futures and options trading programs without writing a single line of code. With ADL, you can generate executable strategies in hours to seize and act on fleeting market opportunities in timeframes that were previously thought to be impossible.

This document is intended for Trading Technologies (TT) customers who currently use Autotrader and are interested in taking their automated trading to the next level with ADL.

Benefits of ADL

Converting Autotrader strategies to ADL strategies is easy and allows users to take advantage of the noteworthy benefits of ADL, such as...

Benefit	Description
Ultra low-latency execution	ADL strategies are deployed to proximity-based Algo Strategy Engine (Algo SE) servers to achieve exceptional performance. This means that you can run multiple ADL strategies without relying on your desktop machine for execution.
Superior flexibility	Instead of forcing you to design logic within a pre-defined framework, ADL allows you to create free-form algos by using its event-driven mechanic. For example, you can design logic to wait for a particular number of entry-side fills, hedge in multiple markets, and then trigger a new set of downstream events to perpetuate the logic.
Rapid development	As you drag and drop blocks in ADL, the blocks are automatically converted into well-tested and optimized code, allowing for rapid development, testing, and deployment. This approach allows you to focus on the logic of the strategy rather than minute programming details, ultimately reducing the time required to bring trade ideas to the market.
Seamless integration with the TT platform	By declaring user-defined variables with an algo, you can interact with a running algo using X_TRADER. In addition, you can design algos to drive existing Autospreaders, launch algos directly from MD Trader, or use Excel links to import external data into algos.

Converting Existing Autotrader Strategies to ADL

An Autotrader strategy consists of two main components:

- Entry order price /quantity derivation
- Hedge order submission following an entry-side fill (optional)

For any given Autotrader strategy, an ADL counterpart can be easily designed for each of these two main components. In this section, we will explore how to convert these components to an ADL strategy.

Entry order price/quantity derivation

An Autotrader strategy can use market data, custom formulas, or Excel links to derive the price and the quantity of the entry order.

Example: Market Data

If market data is used in an Autotrader strategy to derive the price or quantity of the entry order, you can use the ADL **Instrument Field** block to convert the Autotrader strategy.

In the example shown below, the Autotrader strategy is designed to join the best bid price of CME ES Jun13 with a five-lot order.

CONTROL		POSITION		MARKET									
St	A	Contract	Ma	Aut	Profile	Account	NetP	Open	mBidQt	mBidP	mAskP	mAskQ	wBidQ
<input checked="" type="checkbox"/>		CME ES Jun13		<input type="radio"/>	DEMO	<Default			100	132400	132425	100	

Profile Setup Page

Profiles

- DEMO

Name DEMO

Profile Parameters

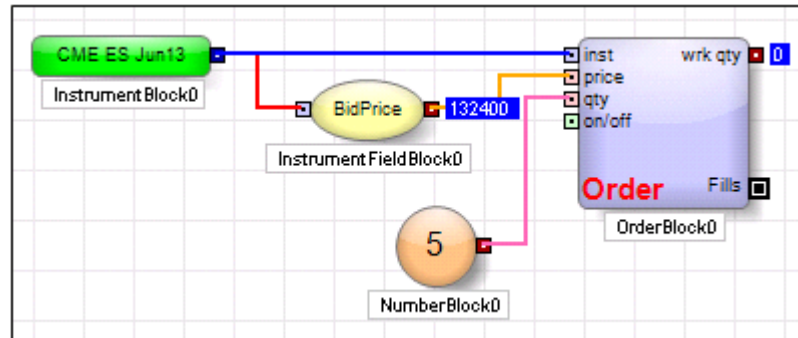
Account	Default
Profile Base Price	Market
Throttle Quotes (ms)	0
Throttle Fills (ms)	0
Enable Cover Orders	<input checked="" type="checkbox"/>
Cover Order Color	
Manual Requote	<input type="checkbox"/>
Bid Offset	
Bid Quantity	5

Autotrader Strategy using market data

Converting Existing Autotrader Strategies to ADL (continued)

Example: Market Data - continued

Below is the converted Autotrader strategy to ADL. The **Order** block is instructed to join the best bid price of CME ES Jun13 with a five-lot order.



ADL Strategy using market data

Converting Existing Autotrader Strategies to ADL (continued)

Example: Autotrader Strategy Using Custom Formulas

If custom formulas are used in an Autotrader strategy to derive the price or quantity of the entry order, you can use ADL arithmetic and Boolean blocks in combination to convert the Autotrader strategy to ADL.

In this example, the Autotrader strategy is designed to join the best bid price of CME ES Jun13 with a five-lot order if the best bid quantity is greater than 50. If the best bid quantity is less than 50, the strategy will not work an order.

The screenshot displays the Autotrader software interface. At the top, there is a 'SIMULATION' header. Below it, a control panel includes an 'ON' button (highlighted in red) and an 'OFF' button (highlighted in red). A text box contains the formula `=IF(mBidQty>50,5,0)`, also highlighted in red. Below the control panel is a data table with columns for 'CONTROL', 'POSITION', 'MARKET', and 'FORMULA'. The table contains one row for 'CME ES Jun13' with a 'FORMULA' value of '5', which is highlighted in red. Below the table is a 'Profile Setup Page' window. The 'Profile' list shows 'DEMO' selected. The 'Profile Parameters' section includes a 'Bid Quantity' field with the value '=fA', which is highlighted in red.

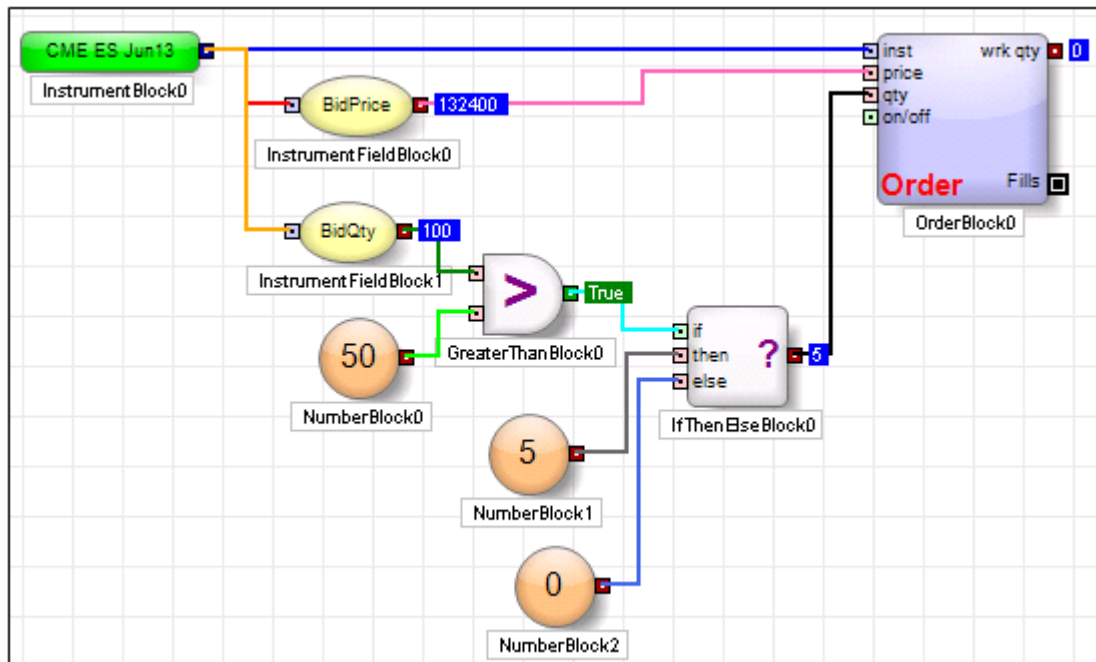
St	Contract	Ma	Aut	Profile	Account	NetP	Open	mBidQt	mBidP	mAskP	mAskQ	fA	fB
✓	CME ES Jun13		○	DEMO	<Default>			100	132400	132425	100	5	

Autotrader Strategy using a custom formula

Converting Existing Autotrader Strategies to ADL (continued)

Example: Autotrader Strategy Using Custom Formulas - continued

In the converted strategy, the **Order** block is instructed to join the best bid price of CME ES Jun13 with a five-lot order if the best bid quantity is greater than 50. If the best bid quantity is less than 50, the **Order** block will not work the order.



ADL Strategy using custom formulas

Converting Existing Autotrader Strategies to ADL (continued)

Example: Autotrader Strategy Using Excel Links

If Excel links are used in an Autotrader strategy to derive the price or quantity of the entry order, you may use ADL user-defined variable functionality to convert the Autotrader strategy to ADL.

In the example shown below, the Autotrader strategy is designed to join the best bid price of CME ES Jun13 with an order quantity determined in an Excel worksheet.

The screenshot displays the Autotrader interface with a 'SIMULATION' mode. The main window shows a table with columns for CONTROL, POSITION, MARKET, and FORMULA. The 'FORMULA' column for the selected strategy 'CME ES Jun13' contains the formula '=fA'. A red box highlights this cell, and a red arrow points to a zoomed-in view of the profile setup window. In the profile setup window, the 'Bid Quantity' field is set to '=fA', and a red box highlights the value '15' in the 'Order Quantity' field of a data table below.

CONTROL	POSITION	MARKET	FORMULA
Contract: CME ES Jun13	NetP: 100, Open: 132400	mBidP: 132425, mAskP: 100	fA

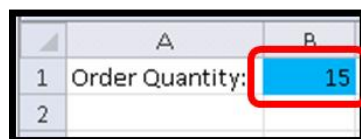
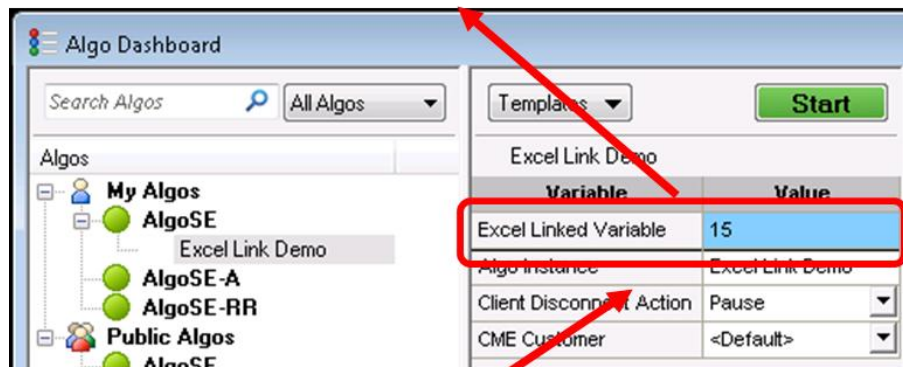
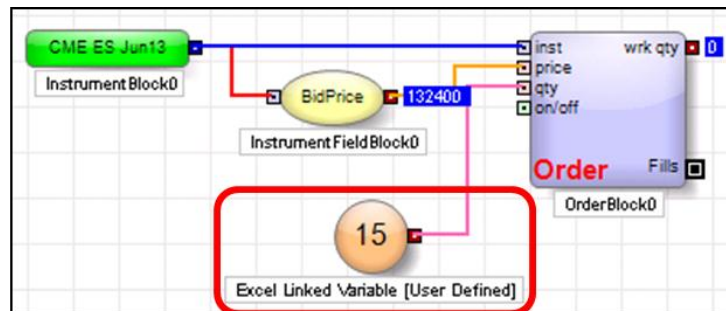
Order Quantity
15

Autotrader Strategy using Excel Links

Converting Existing Autotrader Strategies to ADL (continued)

Example: Autotrader Strategy Using Excel Links - continued

In the converted ADL strategy, the **Order** block is instructed to join the best bid price of CME ES Jun13 with an order quantity determined in the Excel worksheet. Note that the Excel link was established via the **Algo Dashboard** window available in X_TRADER.



ADL Strategy using Excel Links

Converting Existing Autotrader Strategies to ADL (continued)

Hedge Order Submission

Following an entry order fill, an Autotrader strategy can be designed to submit a hedge order at an offset price from the fill price. An ADL counterpart can be easily designed to convert such hedge order submission mechanism.

Example: Autotrader Strategy Designed to Submit a Hedge Order

In this example, the Autotrader strategy is designed to submit a hedge order one tick higher than the entry-side fill price.

The screenshot shows the Autotrader software interface. At the top, there is a 'SIMULATION' status bar. Below it, there are control buttons: 'ON' (green), 'OFF' (red), 'Reset' (5), 'Reset Open Position', 'Delete Orders', 'Update Orders', and a 'Selected Orders' checkbox. A table below these buttons shows the current strategy configuration:

St	A	C	E	F	G	H	J	K	P	Q	R	S	W	X
		Contract	Ma	Aut	Profile	Account	Net	Open	mBidQt	mBidP	mAskP	mAskQ	fA	fB
<input checked="" type="checkbox"/>		CME ES Jun13	<input type="radio"/>	<input checked="" type="radio"/>	DEMO	<Default>		5	100	132400	132425	100	5	

Below the table is a 'Profile Setup Page' for the 'DEMO' profile. It shows various parameters for the profile, including 'Account', 'Profile Base Price', 'Throttle Quotes (ms)', 'Throttle Fills (ms)', 'Enable Cover Orders', 'Cover Order Color', 'Manual Requote', and 'Profile Parameters'. The 'Cover Order Offset' field is highlighted in red and set to 1.

Autotrader Strategy Designed to Submit a Hedge Order

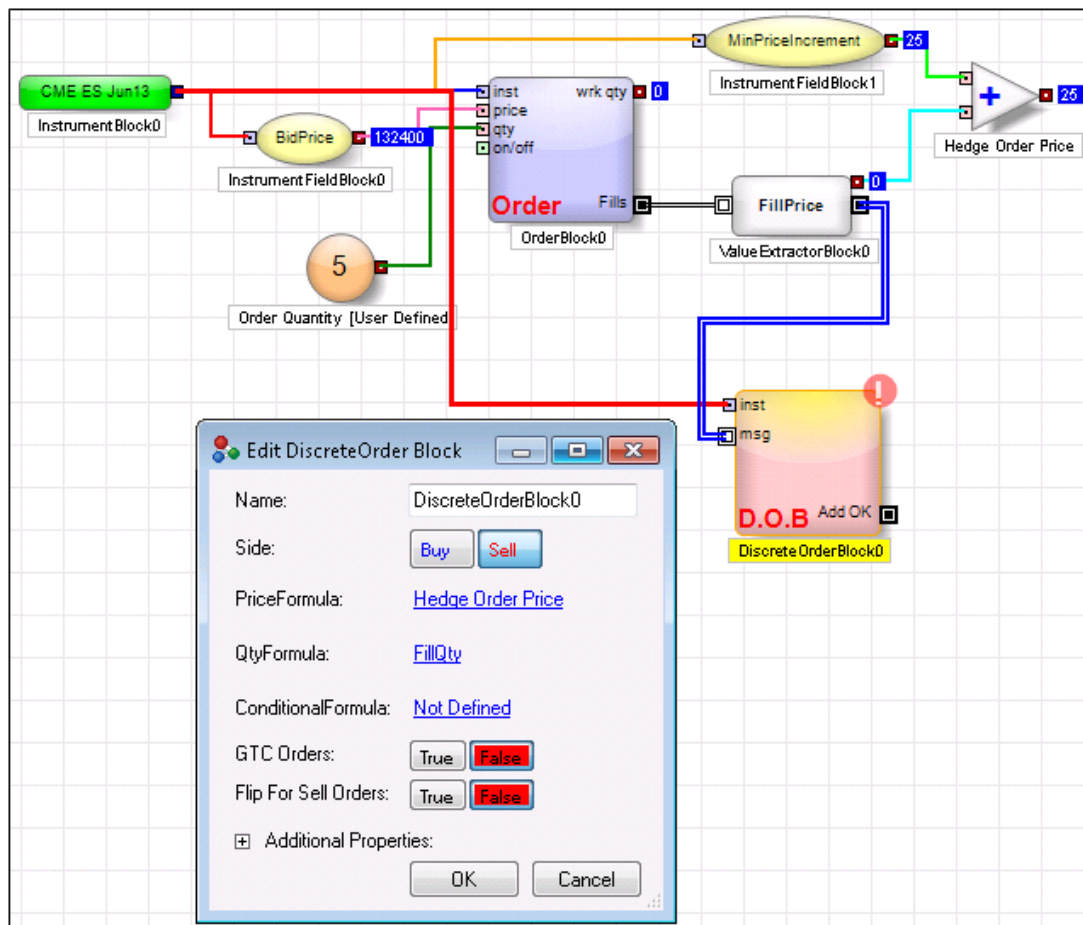
Converting Existing Autotrader Strategies to ADL (continued)

Example: Autotrader Strategy Designed to Submit a Hedge Order - continued

In the converted ADL strategy, few blocks have been placed “downstream” from the **Order** block (the blue colored block) which maintains the entry-side order.

When the entry-side order incurs a complete or partial fill, one tick is added to the fill price to derive the hedge order price. This is shown by the **Add** block labeled “Hedge Order Price” in the example shown below.

Then a block called the **Discrete Order** block (the red colored block) uses the derived hedge order price to submit a hedge order. The order quantity of the hedge order is simply the fill quantity of the entry-side order shown in the “QtyFormula” of the **Edit DiscreteOrder Block** window.



ADL Strategy Designed to Submit a Hedge Order

Viewing and Modifying Strategies

As with Autotrader, users can view and modify ADL strategies. You can launch ADL-generated algorithms, change user-defined variables, and monitor all running algorithms from several X_TRADER windows, including the **Algo Dashboard**, **Parent Order Book**, and **MD Trader**.

In the example shown below, the Autotrader strategies have been converted into automated trading strategies created with ADL, deployed to an Algo SE server and launched. All running algos can be monitored via the **Algo Dashboard**.

The image displays two overlapping software windows. The top window is the 'Autotrader' interface, featuring a control panel with 'ON' and 'OFF' buttons, a 'Reset' field, and 'Delete Orders' and 'Update Orders' buttons. Below this is a table with columns for 'CONTROL', 'POSITION', 'MARKET', and 'WORKING'. The bottom window is the 'Algo Dashboard', which includes a 'Start' button, a 'Cancel' button, and a 'Resume' button. It features a table with columns for 'SE Server', 'Algo Instance', 'TTStatus', 'Net Pos', '# Orders', 'P/L', 'MDT Price', and 'Time'. A 'Two Legged Spreader Mod...' variable configuration pane is visible on the left side of the Algo Dashboard, and a table of running algorithms is on the right.

Algo Variable Pane

Variable	Value
Buy/Sell	Buy
Leg1Multiple	5
Leg2Multiple	-3
Price	45
Leg2Instrument	CBOT ZN ...
Leg1Instrument	CBOT ZB ...
Leg1Qty	5
Leg2Qty	-3
Qty	50
Algo Instance	Two Legged ...
Client Disconnect Ac...	Pause
CBOT Customer	<Default>

Algo Orders Pane

SE Server	Algo Instance	TTStatus	Net Pos	# Orders	P/L	MDT Price	Time
AlgoSE	sBid_EXIT_RELOAD	Running	0	0	0.00		10:01:35
AlgoSE	HOCL b-s price bas	Running	0	1	0.00		09:54:17
AlgoSE	HOCL b-s price bas	Paused	0	0	0.00		09:54:11
AlgoSE	timer for hedge bid a	Running	22	0	560.00		09:51:35
AlgoSE	timer for hedge 1	Running	0	0	0.00		09:54:24
AlgoSE	timer for hedge 1	Running	0	0	0.00		09:47:58
AlgoSE	Two Legged Spread	Paused	0	0	0.00		09:47:15
AlgoSE	Two Legged Spread	Running	0	1	0.00		09:46:57
AlgoSE	sBid_EXIT_RELOAD	Running	0	1	0.00		09:45:15
AlgoSE	Autospreader Algo	Running	0	1	0.00		09:43:43
AlgoSE	Autospreader Algo	Running	0	1	0.00		09:43:36
AlgoSE	Autospreader Algo	Paused	0	0	0.00		09:43:03
AlgoSE	Bid Offset	Running	0	1	0.00	1325	09:34:15
AlgoSE	Bid Offset	Running	2	0	-25.00	1325	09:33:57
AlgoSE	basic.order (1)	Running	-2	0	50.00		09:32:04
AlgoSE	basic.order (1)	Running	2	0	-25.00		09:30:58

The **Algo Dashboard** allows you to manage, edit, and launch your library of algos created in ADL. Using the **Algo Variable Pane**, you can modify the parameters associated with the algo. The **Algo Orders Pane**, located on the right side of the **Algo Dashboard**, displays information about your launched algos and allows you to take action on one or more selected algos (i.e., cancel, pause and resume algos).

Getting Started with ADL

After converting your Autotrader strategies, you will be able to further refine your converted strategies using the rich assortment of tools and functionalities provided by ADL.



To learn how to use ADL beyond converting Autotrader strategies, please visit the [ADL Support Center](#) located on the Trading Technologies website. On the support center, you will find an abundance of training materials.