



**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
<b>Ultra low-latency execution</b>	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.
<b>Superior flexibility</b>	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.
<b>Rapid development</b>	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.
<b>Seamless integration with the TT platform</b>	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

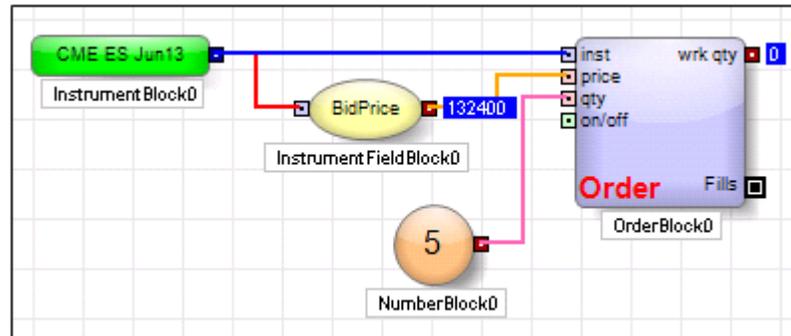
Profile Base Price	Market
Throttle Quotes (ms)	0
Throttle Fills (ms)	0
Enable Cover Orders	<input checked="" type="checkbox"/>
Cover Order Color	
Manual Requote	<input type="checkbox"/>
Bid Offset	
Bid Quantity	5

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 'FORMULA' column contains 'fA' and '5'. Below the table is a 'Profile Setup Page' window. The 'Profile Setup Page' shows a list of profiles with 'DEMO' selected. The 'Bid Quantity' field is set to '=fA', 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	

Profile Setup Page

Profiles

- DEMO

Name DEMO

Account <Default>

Profile Base Price Market

Throttle Quotes (ms) 0

Throttle Fills (ms) 0

Enable Cover Orders

Cover Order Color

Manual Requote

Profile Parameters

Bid Offset

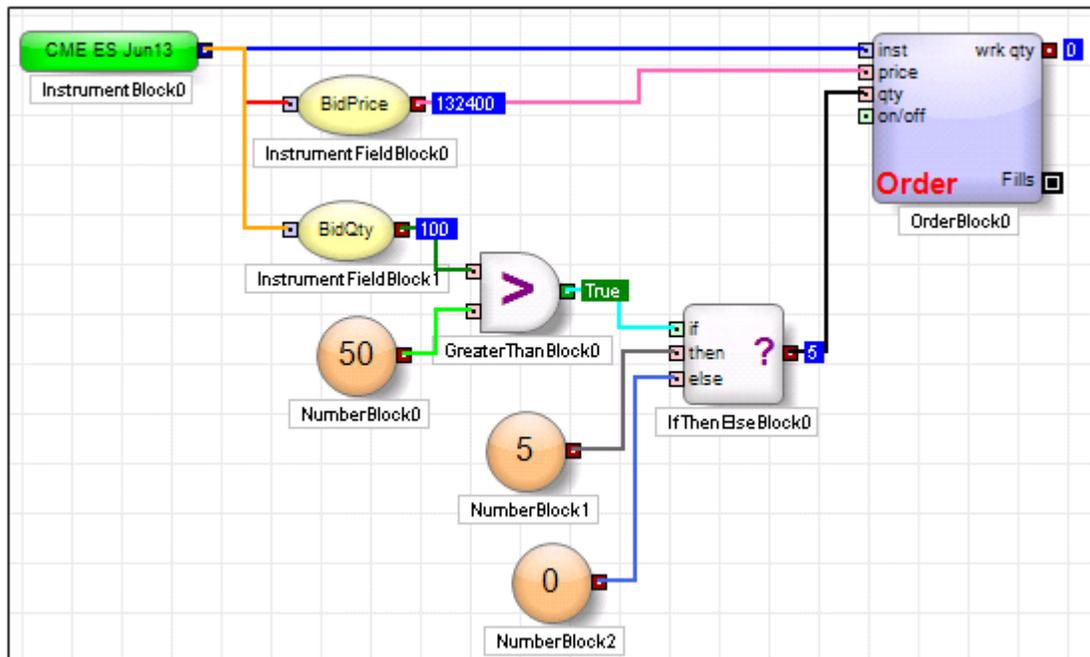
Bid Quantity =fA

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.

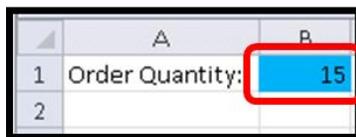
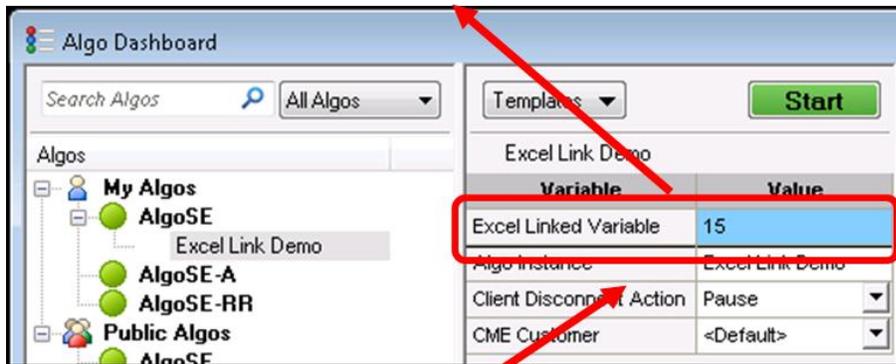
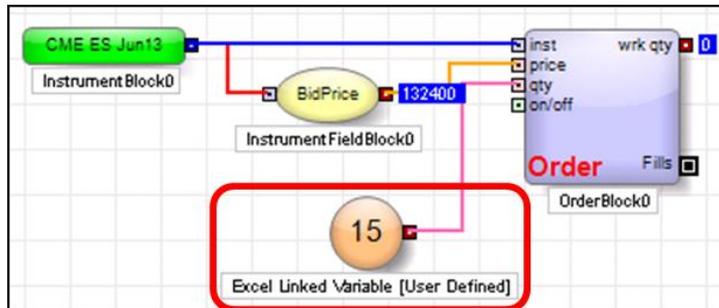
The screenshot displays the Autotrader interface in SIMULATION mode. At the top, there are control buttons: ON (grey), OFF (red), Reset (0), Reset Open Position, Selected Orders (checkbox), Delete Orders, and Update Orders. Below these is a table with columns A through X. The table is organized into sections: CONTROL (St, Contract, Ma, Aut, Profile, Account), POSITION (NetP, Open), MARKET (mBidQt, mBidP, mAskP, mAskQt), and FORMULA (fA, fB). The first row of data shows 'CME ES Jun13' with a quantity of 100, a bid price of 132400, and an ask price of 132425. The formula column contains 'fA' and '15'. A red box highlights the '15' value. A red arrow points from this box to a separate window titled 'Profile Setup Page'. This window shows a list of profiles with 'DEMO' selected. Below the list are various parameters: Account (<Default>), Profile Base Price (Market), Throttle Quotes (ms) (0), Throttle Fills (ms) (0), Enable Cover Orders (checked), Cover Order Color (orange), Manual Requote (unchecked), Profile Parameters (Bid Offset, Bid Quantity =fA). A separate window shows an Excel spreadsheet with the formula '=fA' in cell B1, which displays the value '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 displays the Autotrader software interface. At the top, there is a control panel with buttons for 'ON', 'OFF', 'Reset', 'Delete Orders', and 'Update Orders'. Below this is a data table with columns for 'CONTROL', 'POSITION', 'MARKET', and 'FORMULA'. The table contains one row for 'CME ES Jun13' with a quantity of 5. An inset window titled 'Profile Setup Page' is open, showing a list of profiles with 'DEMO' selected. The 'Profile Parameters' section of the dialog is visible, and the 'Cover Order Offset' field is highlighted with a red box, showing a value of 1.

CONTROL	POSITION	MARKET	FORMULA
Contract: CME ES Jun13 Ma: <input type="radio"/> Aut: <input checked="" type="radio"/> Profile: DEMO Account: <Default>	Net: 5 Open: 100	mBidQt: 132400 mBidP: 132425 mAskP: 100 mAskQ: 5	fA: 5 fB:

Profile Parameters	
Bid Offset	
Bid Quantity	=fA
Ask Offset	
Ask Quantity	
Cover Order Offset	1

Autotrader Strategy Designed to Submit a Hedge Order

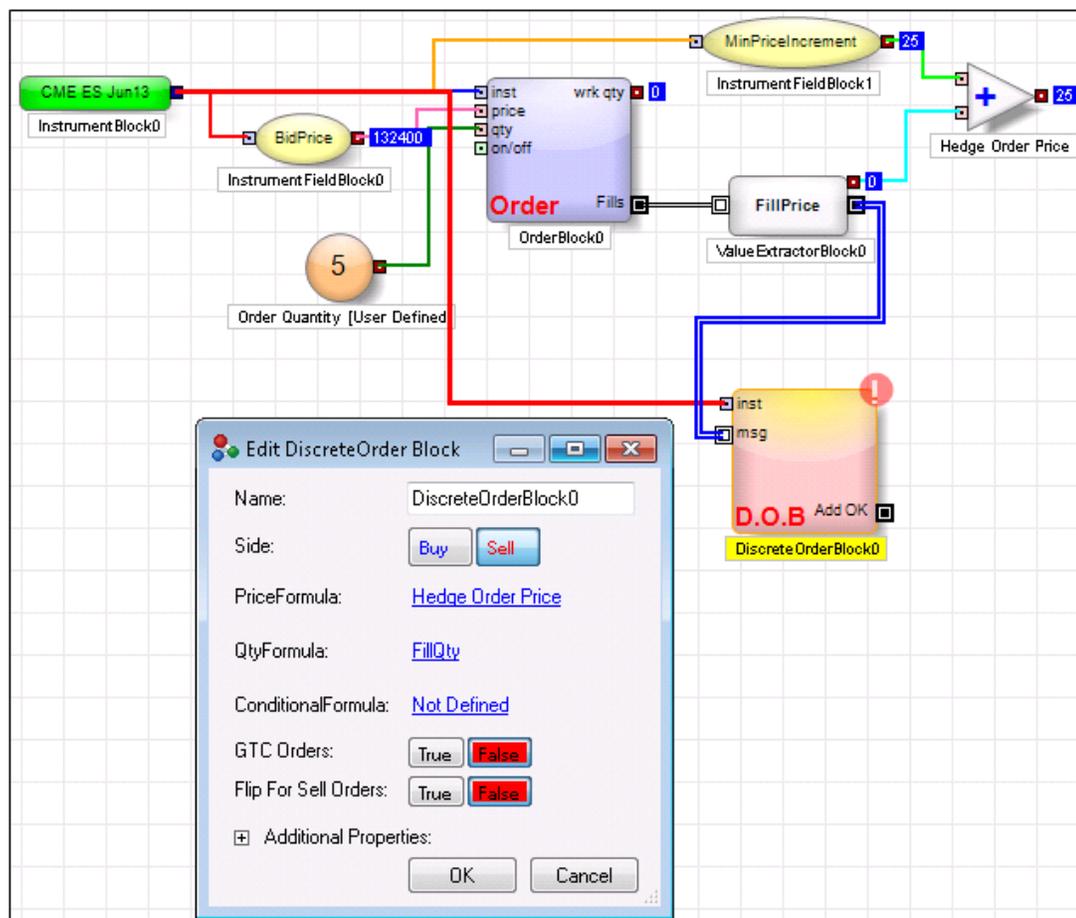
# Converting Existing Autotrader Strategies to ADL (continued)

## 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 'Two Legged Spreader Mod...' variable configuration pane on the left and a table of running algorithms on the right. Two callout boxes are present: one pointing to the 'Algo Variable Pane' and another pointing to the 'Algo Orders Pane'.

St	A	Contract	Man	Auto	Profile	NetP	Open	mBidQty	mBidPr	mAskPrc	mAskQty	wBidQt	wBidPr	wAskPrc	wAskQ
✓		CME ES Jun12		⊙	basic order	3	3	691	133150	133225	18	1	133125	133250	1
✓		CME ES Sep12		⊙	basic order			55	132550	132575	120	1	132525	132600	1
✓		CME ES Dec12		⊙	basic order			10	131850	131925	10	1	131825	131950	1
✓		CME ES Mar13		⊙	basic order			3	131650	131700	7	1	131625	131725	1
✓		Autospreader 1		⊙	Autospreader AT			3	1950	2050	3				
✓		Autospreader 1		⊙	Autospreader AT			3	1950	2050	3				
✓		Autospreader		⊙	Autospreader AT			3	1950	2050	3				
✓		CBOT ZN Jun12		⊙	Bid Offset			547	133105	133110	432				
✓		CBOT ZN Sep12		⊙	Bid Offset			6	132085	132105	44				
✓		CBOT ZN Dec12		⊙	Bid Offset										
✓		CBOT ZN Mar13		⊙	Bid Offset										
✓		HOGO Spread		⊙	sing theo			1	-122	-118	2	1	-121	-119	1
✓		Gas Oil crk Spd 1		⊙	sing theo			1	-122	-118	2			-119	1
✓		Gas Oil crk Spd 1		⊙	sing theo			1	-122	-118	2				
✓		CME Crack: 1xHO Ju		⊙	HOCL b-s price ba			7	4567	4606	14	1	4566	4607	1
✓		CME Crack: 1xHO Jul		⊙	HOCL b-s price ba			3	2880	2902	2	1	2879	2903	1

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.