

Instructions	
Product:	TLs
Description:	TrendLines and TextLabels.
Date:	December 11, 2020
Contact Information:	!QCL Solutions, LLC
Document Notes:	<i>(Tips & Tricks are italicized and in parentheses)</i>
Disclaimer:	This software should not be construed as providing trading or investment recommendations. Any decisions you make using this software are done solely at your own risk. The risk of loss in trading can be substantial. Leveraged trading such as through options, futures, and forex exposes traders to heightened risk. Furthermore, traders may sustain losses greater than their investments, regardless of which asset classes are traded. Before trading, carefully consider the inherent risks in light of your financial condition.

Prerequisite Installation

1. TradeStation 9.1 (Update 29) or later required.
2. TradeStation data subscriptions.

Overview

TLs provides TrendLine and TextLabel functions for you to easily incorporate advanced Object Oriented EasyLanguage methods for creating and managing DrawingObjects in your own chart indicators and strategies. These functions are supported with a BarNumber function for DrawingObjects, which accounts for missing bars and lookback periods unlike TradeStation's EasyLanguage CurrentBar keyword and built-in BarNumber function.

These advanced functions are demonstrated in a TLauto indicator which improves upon TradeStation's EasyLanguage built-in "Trendlines Automatic" indicator. And this indicator is provided through a TLauto function for you to use in your own indicators and strategies. Further, with TLauto, a right-side chart margin up-down labeling function is used and provided for use in your own indicators.

Functions, an indicator and a strategy are as listed below.

The Toolbox

Type	Name	Description
Indicator	qcTLauto	An indicator like TradeStation's built-in "Trendlines Automatic" which is built using qcTLauto, qcBarNumberWEBsimple and qcChartMarginLabelUpDown functions below.
Function	qcBarNumberWEBsimple	A function like TradeStation's BarNumber, with adjustments to work with DrawingObjects. The return value is equivalent to BarNumber + MaxBarsBack -1 + EmptyBars. Note that the first bar on the chart is bar 0, thus the -1 above.
Function	qcBars	A function for referencing any bar by offset from the current bar for the forward(+) or backward(-) offset bar's DrawingObject BarNumber, BarDateTime, and custom dictionary record stored with the bar.
Function	qcBarsForwardDTEX	A function for calculating an offset bar's BarDateTime given a base BarDateTime and number of BarsForward.
Function	qcChartMarginLabelUpDown	A function used in the qcTLauto indicator to create an up/down arrow on the right side of the chart.
Function	qcSessionNumEX	A function for finding the nearest session number with session start and end times, given a DateTime. The position of that DateTime relative to the nearest session is also returned.
Function	qcTextLabel	A function to create and manage TextLabel DrawingObjects.
Function	qcTLauto	A function to create and manage TrendLines like TradeStation's built-in "Trendlines Automatic" indicator. It offers advanced functionality including a History input to automatically remove older TrendLines.
Function	qcTLsManage	A function to manage TextLabels and TrendLines (TLs) added to a chart manually or with any Analysis Technique. It can delete old TLs that exceed input maximum counts.
Function	qcTrendLine	A function to create and manage TrendLine DrawingObjects.
Strategy	qcTLsManager	A strategy that uses the qcTLsManage function to manage the TextLabels and TrendLines (TLs), deleting old objects that exceed input maximum counts. <i>(The function is used in a strategy since strategies are processed like a single application, where you control the order of the strategies. And strategies run before indicators in the same chart. Thus TLs added by indicators can be monitored historically and in real-time via events.)</i>

Additional information

- Latest [Instructions](#)
- Video [Overview of qcTLsManager](#)
- Visit us at QCLsolutions.com