S-Trader

DMI | Directional Movement Index

Contents

Description

The Average Directional Index (ADX), Minus Directional Indicator (-DI) and Plus Directional Indicator (+DI) represent a group of directional movement indicators that form a trading system developed by Welles Wilder. Wilder designed ADX with commodities and daily prices in mind, but these indicators can also be applied to stocks, currencies and any other class in any time frame. The Average Directional Index (ADX) measures trend strength without regard to trend direction. The other two indicators, Plus Directional Indicator (+DI) and Minus Directional Indicator (-DI), complement ADX by defining trend direction. Used together, chartists can determine both the direction and the strength of the prevailing trend.

Wilder featured the Directional Movement indicators in his 1978 book, New Concepts in Technical Trading Systems. This book also includes details on Average True Range (ATR), the Parabolic SAR system and the RSI. Despite being developed before the computer age, Wilder's indicators are incredibly detailed in their calculation and have stood the test of time.

Formula

Step 1: PDM = High – Previous High ; MDM = Previous Low – Low ; TR = Max(High-Low, High – Previous Close, Previous Close – Low)
Step 2: If PDM<0 or PDM<MDM, PDM is reset to 0 for the period. Otherwise the value for the period is PDM;
Step 3: If MDM<0 or MDM<PDM, MDM is reset to 0 for the period. Otherwise the value for the period is MDM;
Step 4: SPDM = EMA (PDM, n Periods) , SMDM = EMA(MDM, n Periods) , STR = EMA(TR, n Periods);
Step 5: DIP = SPDM / STR , DIN = SNDM / STR;
Step 6: DX = 100 * Absolute(DIP – DIN)/(DIP + DIN);
Step 7: ADX = EMA(DX, n Periods);
Step 8: ADXR = (ADX + ADX n periods ago) / 2

Parameters

Periods	Any number of periods

Output value(s)

There are five output values resulting from the formula, the Directional Index Plus, Directional Index Minus , Directional Index , Average Directional Index and Average Directional Index Rating.

Plot

The plot is in a separate panel at the bottom.

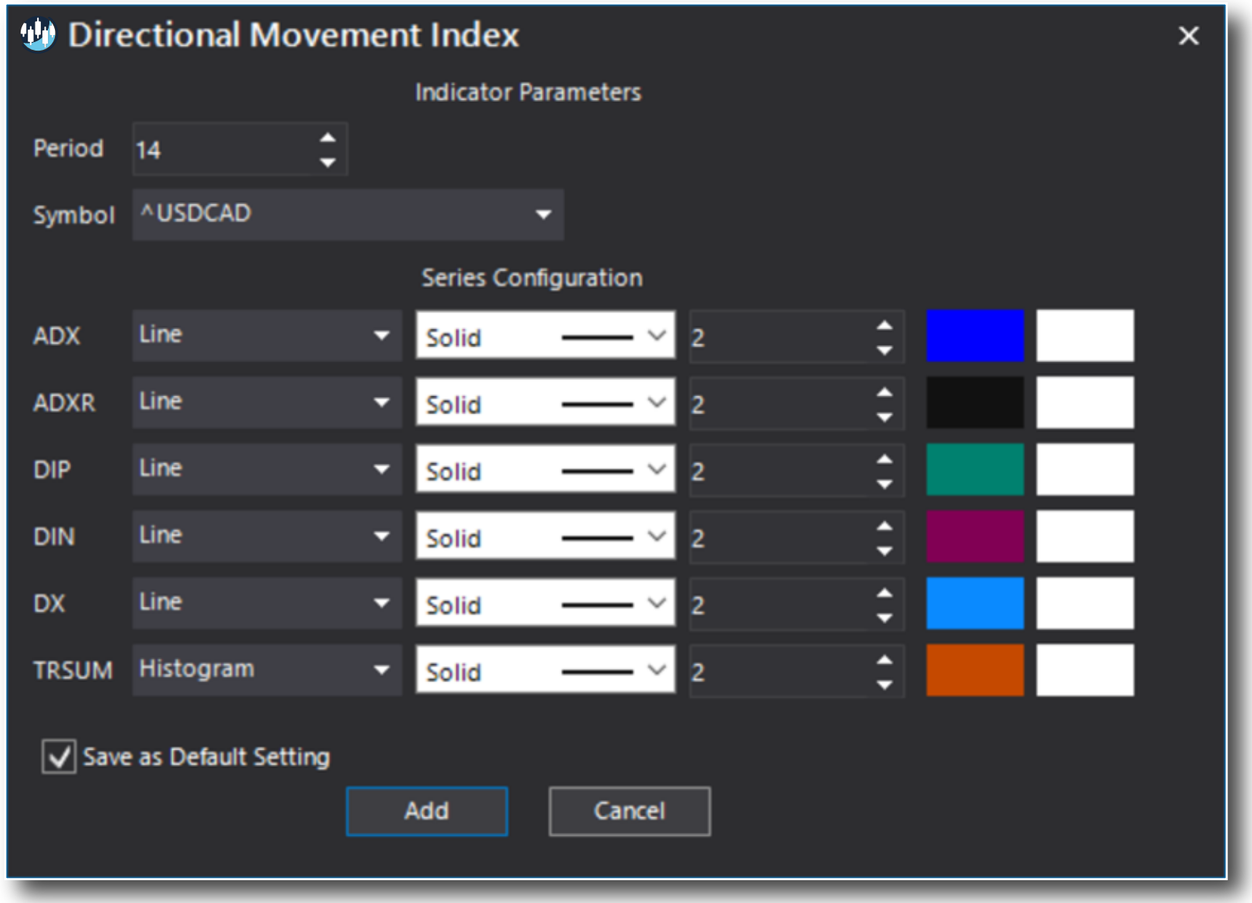
Trade Script Syntax

Short Form	***ADX*** (Periods)
	ADXR (Periods)
	DIP (Periods)
	DIN (Periods)

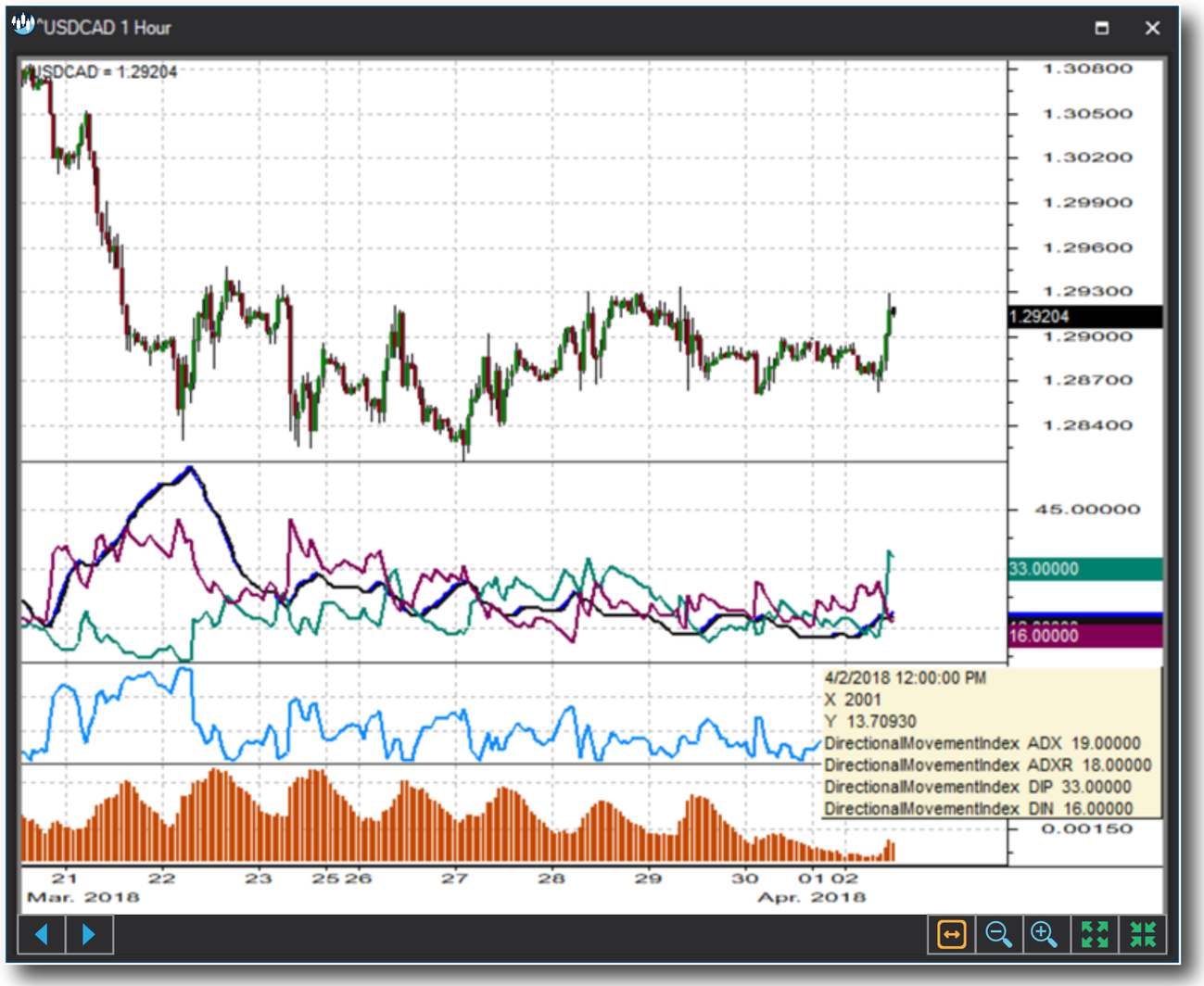
	DX (Periods)
	STR (Periods)
	SPDM (Periods)
	SNDM (Periods)
Long Form	***AverageDirectionalIndex*** (Periods)
	AverageDirectionalIndexRating (Periods)
	DirectionalIndexPositive (Periods)
	DirectionalIndexNegative (Periods)
	DirectionalIndex (Periods)
	SmoothedTrueRange (Periods)
	SmoothedPositiveDM (Periods)
	SmoothedNegativeDM (Periods)

Dialogs

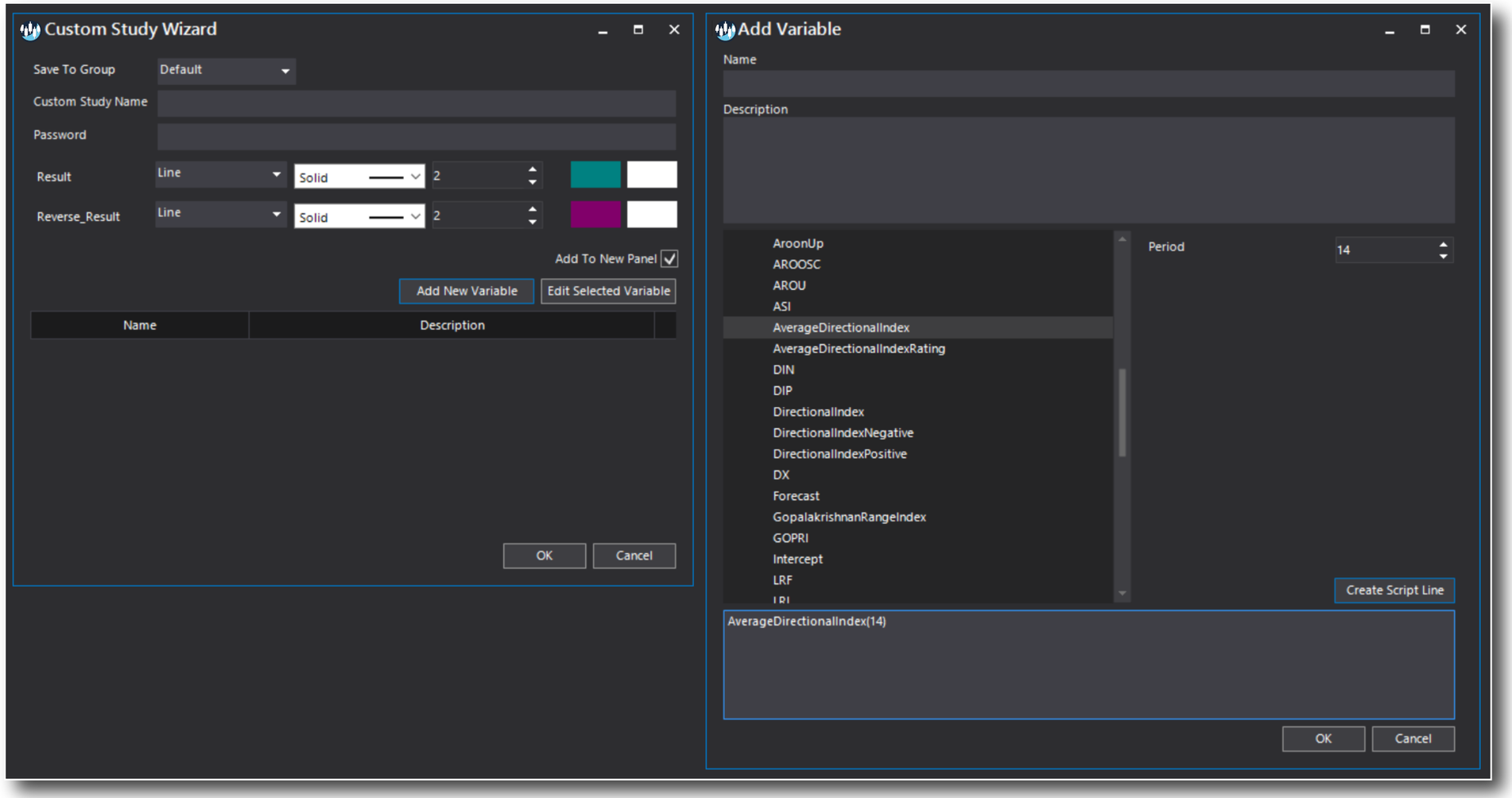
Chart Study Dialog



Sample Chart With Study



Quant Script™ Wizard Study Dialog



Quant Script™ Study Dialog