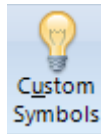


Custom Symbols



Click the Setup | Custom Symbols button to view the Custom Symbols screen. The Custom Symbols screen is used to create your own custom symbols. For example, the custom symbol screen can be used to create and update spread symbols, crush symbols, crack symbols, ratios, butterflies, baskets, and composite symbols. The custom symbols will update in real-time as market prices are received from your live data feed source. Several different custom symbols can be programmed.

```
1 //parameters:      symbol, field, vendor
2 price := 100*Get('EUR/USD', eLast, eFXCM);
3
4 // symbol, value, volume, scale, vendor
5 Put('EURO',price,      1,      2, eFXCM);
6
7 //-----//
8
9 Feed := eFXCM;
10 price := 100*Get('EUR/USD') - Get('EUR/JPY');
11 //writeln(price);
12 Put('EUROspread',price);
13
```

Watch name	Value
<input checked="" type="checkbox"/> price	(process not accessible)

Custom symbols are implemented using the ESPL programming language. The Get statement and the Put statement are the core ESPL statements for implementing custom symbols.

- **Get** – The Get statement has 3 parameters (2 of which are optional). The 1st parameter is the symbol to retrieve data from. The 2nd parameter is the data field to read (the default is eLast). The 3rd parameter is the data feed vendor source. The vendor can optionally be set in advance by assigning the 'Feed' variable. If omitted, the vendor will be looked up.
- **Put** – This statement has 6 parameters, 4 of which are optional. The 1st parameter is the new custom symbol to update. The 2nd parameter is the price of the new tick. The 3rd parameter is the new tick volume, and the default is 0. The 4th parameter is the price scale format, and the default is 2 decimals. The 5th parameter is the vendor feed, which can be set by assigning the 'Feed' variable. The 6th parameter is the timestamp for the tick in Eastern time zone.

In the example, line 9 assigns the Feed variable with the constant for the eFXCM data feed. Line Line 10 gets the last prices for 2 symbols, and evaluates an expression. Line 12 updates the custom symbol named 'EUROspread'. All ESPL statements and resources are available for programming custom symbols. The example in this section shows the basics of getting prices from existing symbols and updating a calculated value for a new symbol. Note: All custom symbols should be in the same script.

The symbols are updated via a timer that executes once per second when the **Disable** check box is unchecked.

Toolbar Controls

Disable	<input checked="" type="checkbox"/> Disable	Check this box to disable calculations while editing is being done. Uncheck the box when the design is complete and ready to go on-line.
3 x Sec	<input type="checkbox"/> 3 x Sec	Check this box to have the Custom Symbols update 3 times a second instead of once per second. This triples the CPU calculation burden.
Run		Click this button to save, compile and execute the script. Break points can be set, and debugging can be done by single stepping through the code and viewing variable values in the watch window. The script file is C:\Ensign10\Espl\CustomSymbols.psc The file is an ASCII file that can be viewed and edited with Notepad.
Print		Click the Print button to print the script.

Pop-up Menu

	Run	F9
	Trace Into	F7
	Step Over	F8
	Run to Cursor	F4
	Toggle Break Point	F5
	Add Watch	Ctrl+W
	Open Output Window	Ctrl+P

See the ESPL manual for information on using the debugging tools.

Vendor Constants

The following constants can be used to specify which data feed source to Get or Put the symbol data.

Constant	Data Vendor
eFXCM	FXCM forex
eIB	Interactive Brokers
eSignal	eSignal
eTransAct	TransAct Futures
eIQFeed	IQFeed
eTraderBytes	Trader Bytes
eBarChart	Bar Chart
eNinja	Ninja Trader
eEnsign	Ensign Internet

Data Field Constants

If available, the following constants can be used to Get price information from symbols.

eAsk	eDebt	eLast	eTickCount
eAskSize	eDelay	eLiability	eTickTime
eAssets	eDividend	eLow	eTickVolume
eAveVol	eDown		eTotal
		eNet	
eBeta	eEarnings		eUnchanged
eBid	eEPS	eOpen	eUp
eBidSize	eEstEPS	eOpenRange1	eVolatility
		eOpenRange2	eVolume
eCapital	eFormT		
eClose		ePERatio	eYearlyHigh
eCloseRange1	eHigh		eYearlyHighDate
eCloseRange2		eScaleFactor	eYearlyLow
	eInstitution	eSettledPrice	eYearlyLowDate
	eInterest	eSharesOut	eYesterday
			eYield