Programming Tips

Name – Use a descriptive Study Name because this name shows on the chart objects list.

Variables – Use variable names to make the script more readable and help document the logic. In the example which follows, the logic of Row A is self documented:

[BuyFlag] := ([Ave>] AND [Smi>]) AND [RSI>60]

Note that [RSI>60] is a variable name which self documents that it is a test for the RSI being above 60.
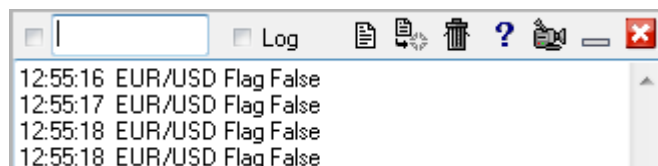
Variables Quote Page - The custom quote page named Variables shows the current values for all 1000 variables. Variables with names show their names in the quote page cells.

Custom Quote Page	Custom	Variables	▼	Add Symbol					🕐 📭 ➡ □
Variable	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
0	True	Rule1a=False	Rule1b=False	Rule2=False	Rule3=False	DeMarker=Fals	Swing=False	Rising=False
10	False	False	AveFlag=True	SmiFlag=True	RSI>60=Fals	RSI<40=False	BuyFlag=False	SellFlag=False
20	Stochastic	False	False	LowDelta=Fals	SumHigh=Fal	SumLow=False	False	False

Trace – Use the Action | if # then Output(Message) statement to post variable values to the Output Windows. This statement can be an effective debugging aid to trace the flow of execution through DYOs. Example:

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset	Show	Marker	Color
Action ▼	0	▼ = if # then Output(Message) ▼	▼	True	▼	0 ⬍	□	▼
⬌ ⬌ ⬌	▼ (	▼	▼		▼	0 ⬍)	[$S] Flag [BuyFlag]

|							
A	Expression	[BuyFlag] := ([Ave>] AND [SMI>]) AND [RSI>60]	☐				
B	Expression	[SellFlag] := [RSI<40] AND Not ([Ave>] OR [SMI>])	☐				
C	Action	if ([BuyFlag]) then marker size 2 in column 4	☑	🟢 🟩	25% Grid	BUY	
D	Action	if ([SellFlag]) then marker size 2 in column 4	☑	🔴 🟥	25% Grid	SELL	
E	Action	if Not ([BuyFlag] OR [SellFlag]) then marker size 2 in column 4	☑	🟡 🟦	25% Grid	Wait	
F			☐				
G	Action	if True then Output('[$S] Flag [BuyFlag]')	☐			[$S] Flag [BuyFlag]	

Every time this DYO executes, Row G will print in the Output Window the chart's symbol, the text 'Flag', and the value of the [BuyFlag] variable.

☐		☐ Log	📄 📑 🗑 ? 📷 ━ ❌
12:55:16 EUR/USD Flag False			
12:55:17 EUR/USD Flag False			
12:55:18 EUR/USD Flag False			
12:55:18 EUR/USD Flag False			

This is the Output Window display for this example. [BuyFlag] is a Boolean variable and a True is a value of 1.0. A Boolean False is a value of 0.0.

The (Message) part of the Output statement prints the contents of the Row's label. If the label is blank, then the content will switch to the DYO's Message Text line.

Debugger – A Variable can be entered as the keyword in the Output Window. This will trace the changes to the variable.
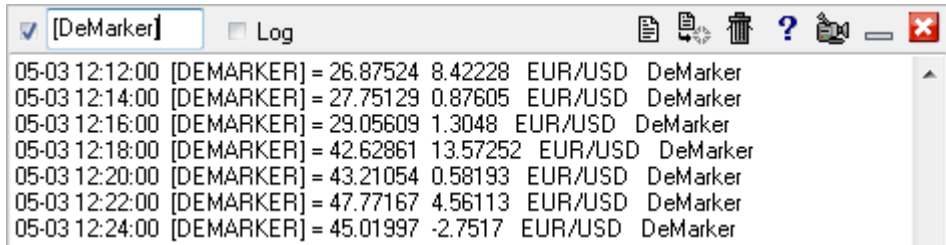
This example traces the contents of the [DeMarker] variable. The trace shows a time stamp, the variable name, its value, the change from its prior value, chart symbol, and the name of the study which changed the variable.   This is a quick and easy way to trace a variable without making changes to a DYO to add the Action | if # then Output(Message) statement.   Note that one or more Action statements can be use simultaneously with the Debugger variable, and all messages will be interleaved in the Output Window.

Uncheck the first check box to stop Debugger entries from being posted.   Execution continues, however.

Section – The Section windows can be used to display multiple variables.
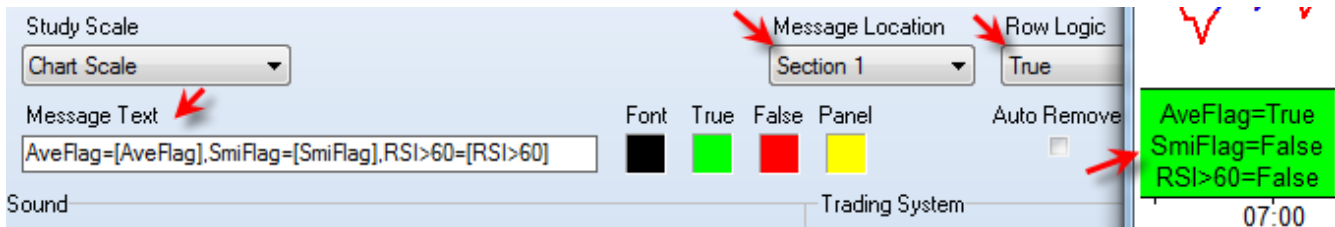

Markers – Use markers which show on the top or bottom row locations of the chart to show the state of Boolean expressions.   The display of the markers to show when a Boolean flag is True can be temporary during development, and then removed by unchecking the Show box when the design is complete.

Print – Click the ribbon Window | Print button to print an image of the DYO property form so you have a paper copy of your DYO design.

Variables Report – See the Users Guide manual for Variables Report and DYO Report.

Avoid Using [0] – All statements return a result which is assigned to the selected Variable, which by default is [0].   However, not all statements show this assignment in the script text that is displayed. The fact that a result of a Boolean test is probably being assigned to variable [0] is often overlooked.

The following example illustrates a reason to avoid using [0] as a variable for calculation results that will be needed later on in this DYO or in other DYOs.
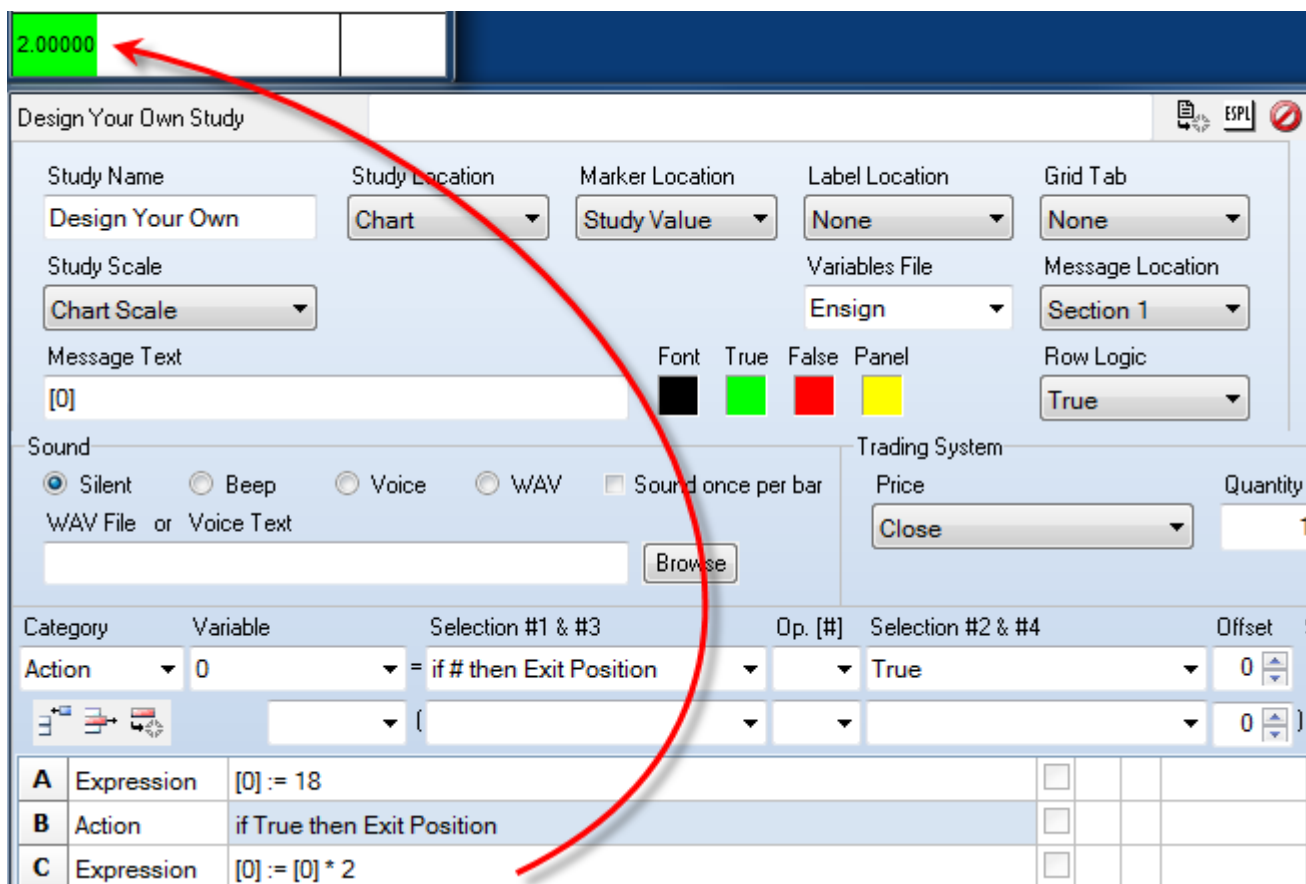
A – The expression assigns a value of 18 to variable [0].

B – This Action statement returns a Boolean result which is assigned to variable [0]. This assignment to [0] is not obvious because it is not shown in the script text on row B.   After row B executes, [0] will have a value of 1 for True.   A Boolean False result would assign a zero.

C – Variable [0] is used in a calculation.   The Message Text shows variable [0] in the Section 1 Message Location.   A value of 2 is shown when a value of 36 was expected. It is row B's Boolean result that replaced the contents of [0].

Tip: Do not use [0] to hold values that will be used elsewhere in the DYO' s design.   Row A made an assignment to [0], which was change by row B before it was read on row C.

Tip: Assign the name 'Junk' to variable [0] as a reminder it should not be used for calculations. Implementing this tip would have given the following reminder on row C.