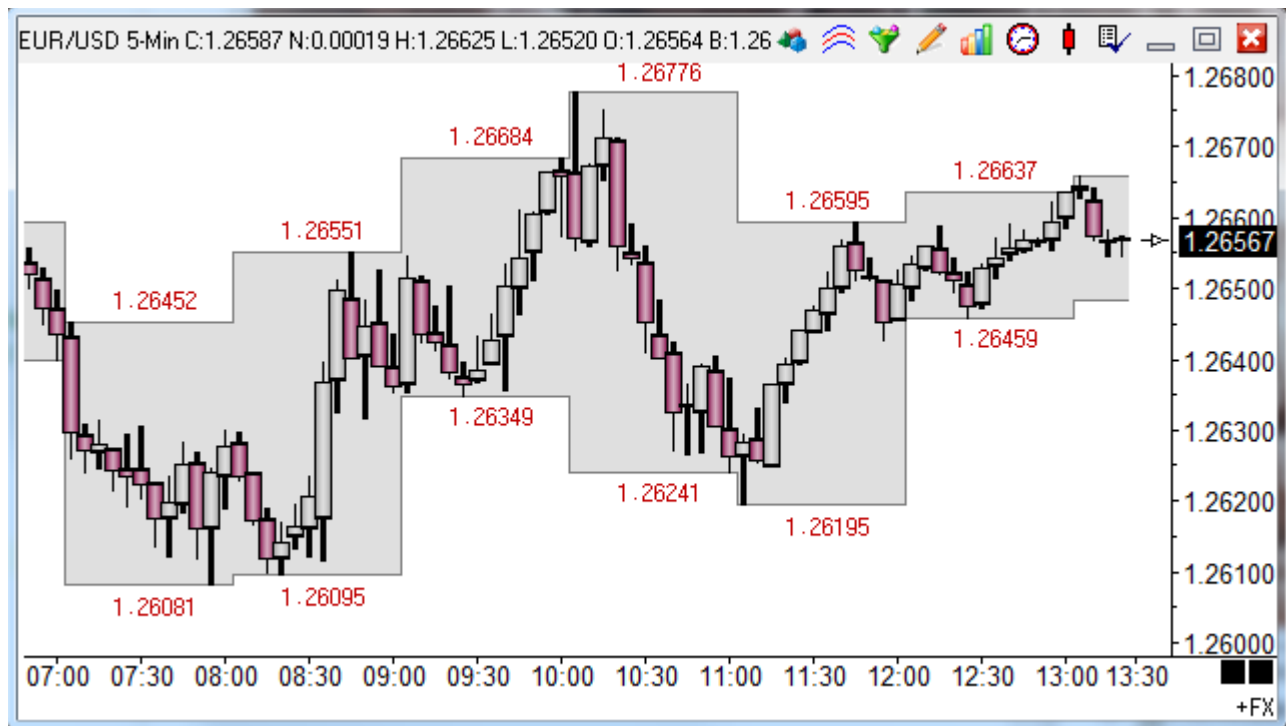# Hourly Bars

This example groups intra-day chart bars into hourly groups and labels the group with its 60-minute high and low.

Study Name: Hourly Bars
Study Location: Chart
Marker Location: Study Value
Label Location: None
Grid Tab: Default

☐ Use as Default
☑ Draw Behind Bars
☐ Privatize
☐ Close Only
☐ Show Values
☐ Email
☐ Auto Remove
☑ Auto Completion

Study Scale: Chart Scale
Variables File: -HourlyBars
Message Location: None

Message Text: [blank]
Font True False Panel

Sound
◉ Silent ○ Beep ○ Voice ○ WAV ☐ Sound once per bar
WAV file: [blank] [Browse]

Trading System
Price: Last
Quantity: 1
Commission: 0

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset	Show	Marker	Color
Chart Value	61 High	= #2 Minute High		60	0	☑	●	
		(			0	)		

A	Chart Value	[High] := 60 Minute High	☑	●		Study Value		
B	Chart Value	[Low] := 60 Minute Low	☑	⌐		Study Value		
C	Expression	[0] := [High]	☑	⌐		Study Value		
D	Expression	[Minutes] := (Minutes from Midnight / 60) - 0.55	☐					
E	Function	[0] := trunc([Minutes])	☐					
F	Flag	[TurnsUp] := [E] turns up	☐					
G	Branching	if Not [TurnsUp] then abort execution	☐					
H	Expression	[0] := [High] + 0.0003	☑	LBL		Study Value	[A]	
I	Expression	[0] := [Low] - 0.0003	☑	LBL		Study Value	[B]	

A - B – The high and low for a 60-minute period are returned. The spread fill marker colors the space between these 2 prices. The marker uses 2 values and these values come from the row with the marker and the next DYO row.

C – This row is needed for the sake of drawing the line on the high value from row A. The marker on row A was used for the spread fill coloring.
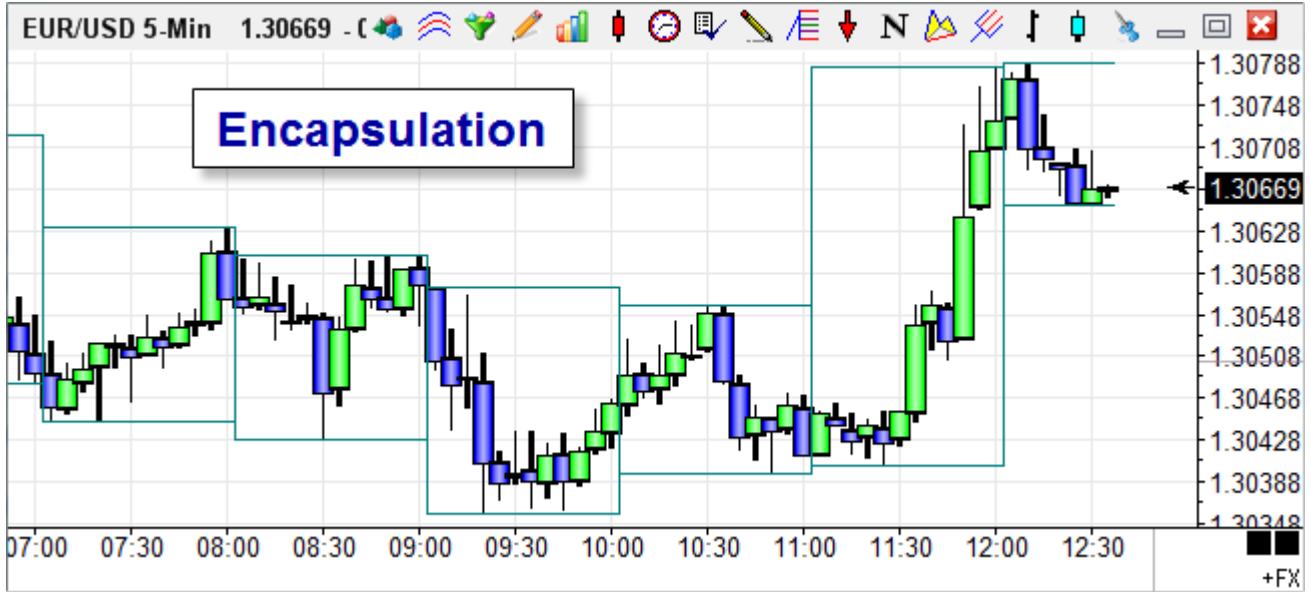
Row D, E, F and G accomplish limiting the values to show once per 60 min period instead of on every bar.

E – The value subtracted on row E shifts the position of the answer shown either to the right or to the left.

H - I – The values on rows H and I accomplish a vertical offset so the High and Low values are not printed on top of the row B and row C lines. The LBL label marker uses the text in the label field as the marker, which is a value read from row A or row B.

Encapsulation

An alternate way to encapsulate the bars is to use the Flute marker on the first row of a 2 row pair that find the Highs and Lows.   See the next example.

A - B – The high and low for a 60-minute period are returned. The Flute marker will draw horizontal lines at the price of this row and the price of the following row.   Vertical lines will be drawn whenever either of these prices change.   The resulting visual effect is a frame that encapsulates the time period.

The marker uses 2 values and these values come from the row with the marker and the next DYO row. Have the High be on the first row, and the Low on the next row, as shown in the example.

Note: While the last encapsulation frame is building, new highs or lows can extend the range.   This will trigger excess vertical lines to be drawn. Press the CTRL-ALT-R keys to force the DYO to recalculate, which will reset all bars in the last encapsulation to the new range.