

# Study Consensus

This example shows how a Buy or Sell signal can be generated when three studies agree with each other. The purpose of the example is to show how consensus among studies can be determined, and no claim is being made that the signals are profitable.

The example will use input from three studies: Relative Strength Index (RSI), Stochastic Momentum (SM), and two Moving Averages (MA). The study signals are defined as:

- Buy when 3 period MA > 17 period MA, Sell when 3 period MA < 17 period MA.
- Buy when SM > Ave(SM), and Sell when SM < Ave(SM). Use 10 Bar, 25, 2, 7 averages.
- Buy when RSI > 60, and Sell when RSI < 40. Use a 7 period RSI parameter.



The 3 period moving average is plotted in Green on the chart when it is above the 17 period moving average plotted in Blue. The 3 period MA is plotted in Red when it is below the 17 period MA.

The first study panel shows the Stochastic Momentum study plotted in Green and Red, based upon whether the study is above or below a 7 period average of the SM plotted in Blue.

The bottom panel shows the Relative Strength Index. It is plotted in Green when it is above 60 and plotted in Red when it is below 40. Between 40 and 60 the RSI is plotted in Blue.

Markers indicate the state of each study. A green ball is shown when a study is in its Buy zone. A red ball is shown when a study is in its Sell zone. Since the RSI study has 3 states, a yellow ball is shown when the RSI is between its Buy zone and its Sell zone.

The Buy Signal is the consensus of all 3 studies being in their Buy zone. The Sell Signal is the consensus of all 3 studies being in their Sell zone.

Category	Variable	Selection #1 & #3	Op. [#]	Selection #2 & #4	Offset	Show	Marker	Color
Study	12 Ave>	= AVE 3,17 HH	d	1st line >= 2nd line	0	<input type="checkbox"/>		
<b>A</b>	Study	[Ave>] := AVE.1st line >= 2nd line				<input type="checkbox"/>		
<b>B</b>	Study	[SMI>] := SMI.SMI >= Average				<input type="checkbox"/>		
<b>C</b>	Study	[RSI>60] := ( RSI.RSI value ) > 60				<input type="checkbox"/>		
<b>D</b>	Study	[RSI<40] := ( RSI.RSI value ) < 40				<input type="checkbox"/>		
<b>E</b>	Action	if ( [Ave>] ) then marker size 2 in column 4				<input checked="" type="checkbox"/>		90% Grid
<b>F</b>	Action	if ( Not [Ave>] ) then marker size 2 in column 4				<input checked="" type="checkbox"/>		90% Grid
<b>G</b>	Action	if ( [SMI>] ) then marker size 2 in column 4				<input checked="" type="checkbox"/>		70% Grid
<b>H</b>	Action	if ( Not [SMI>] ) then marker size 2 in column 4				<input checked="" type="checkbox"/>		70% Grid
<b>I</b>	Action	if ( [RSI>60] ) then marker size 2 in column 4				<input checked="" type="checkbox"/>		50% Grid
<b>J</b>	Action	if ( Not [RSI<40] ) then marker size 2 in column 4				<input checked="" type="checkbox"/>		50% Grid
<b>K</b>	Action	if Not ( [RSI>60] OR [RSI<40] ) then marker size 2 in column 4				<input checked="" type="checkbox"/>		50% Grid

A - D – Variables are assigned the Boolean flag results of the study relationships.

E - F – Manage the color of the marker for the Average study on the 90% grid location.

G - H – Manage the color of the marker for the SMI study on the 70% grid location.

I - J – Manage the color of the marker for the RSI study on the 50% grid location.

A 2<sup>nd</sup> DYO tests for the consensus for the Buy and Sell signals.

Study Name Study Consensus 2	Study Location Chart	Marker Location 25% Grid	Label Location Column 7	Grid Tab Default	<input type="checkbox"/> Use as Default			
Study Scale Chart Scale			Variables File -Consensus	Message Location None	<input type="checkbox"/> Draw Behind Bars			
Message Text <input type="text"/>	Font True	False	Panel		<input type="checkbox"/> Privatize			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Close Only			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Show Values			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Email			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Auto Remove			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> Auto Completion			
Sound <input checked="" type="radio"/> Silent	<input type="radio"/> Beep	<input type="radio"/> Voice	<input type="radio"/> WAV	<input type="checkbox"/> Sound once per bar	Trading System			
WAV file <input type="text"/>	<input type="button" value="Browse"/>				Price Last			
					Quantity 1			
					Commission 0			
Category Action	Variable 0	Selection #1 & #3 = if ## then marker size Offse	Op. [#] 4	Selection #2 & #4 2	Offset 2	Show <input checked="" type="checkbox"/>	Marker 	Color 
		{ [BuyFlag]			0		BUY	
<b>A</b>	Expression	[BuyFlag] := ( [Ave>] AND [SMI>] ) AND [RSI>60]	<input type="checkbox"/>					
<b>B</b>	Expression	[SellFlag] := [RSI<40] AND Not ( [Ave>] OR [SMI>] )	<input type="checkbox"/>					
<b>C</b>	Action	if ( [BuyFlag] ) then marker size 2 in column 4	<input checked="" type="checkbox"/>			25% Grid	BUY	
<b>D</b>	Action	if ( [SellFlag] ) then marker size 2 in column 4	<input checked="" type="checkbox"/>			25% Grid	SELL	
<b>E</b>	Action	if Not ( [BuyFlag] OR [SellFlag] ) then marker size 2 in column 4	<input checked="" type="checkbox"/>			25% Grid	Wait	

A – The Buy signal is True when the 3 studies are in their Buy zones.

B – The Sell signal is True when the 3 studies are in their Sell zones.

C - E – Manage the color of the marker and the message for the Buy and Sell signals.

The markers use the large 32 pixel icons by setting the Offset field to a value of 2. The column location for the marker is entered in the Selection #2 field, while the location for the Label is obtained from the Label Location selection.

Though the example illustrates consensus for 3 studies, it could be expanded to evaluate more studies and show more markers.