

## NeuroShell Trader

John Ehlers' Band Pass Filter and Empirical Mode Decomposition indicators may be easily implemented with a few of NeuroShell Trader's over 800 indicators and the NeuroShell Trader's ability to encode indicators in standard programming languages.

The Band Pass Filter indicator can be created in a standard programming language such as C, C++, Power Basic or Delphi. Convert the Easy Language programming code given in the article to the standard programming language of your choice and then insert the compiled result into your chart.

To create the Empirical Mode Decomposition trend and threshold indicators from the Band Pass Filter, select '**New Indicator ...**' from the '**Insert**' menu and use the Indicator Wizard to create the following indicators:

BP:

```
BandPassFilter( Avg2( High, Low), 20, 0.5 )
```

Trend:

```
MovAvg ( BP, 40 )
```

Upper Threshold:

```
Multiply2 ( 0.25 , MovAvg ( SelectiveLag ( Lag(BP,1) , And2( A>B( Lag(BP,1), BP ) , A>B( Lag(BP,1), Lag(BP,2) ) ) , 1 ) , 50 ) )
```

Lower Threshold:

```
Multiply2 ( 0.25 , MovAvg ( SelectiveLag ( Lag(BP,1) , And2( A<B( Lag(BP,1), BP ) , A<B( Lag(BP,1), Lag(BP,2) ) ) , 1 ) , 50 ) )
```

Dynamic trading systems can be easily created in NeuroShell Trader by combining the Empirical Mode Decomposition trend and threshold indicators with NeuroShell Trader's genetic algorithm optimizer to find optimal periods and fractions. Similar cycle based strategies may also be created using indicators found in John Ehlers' Cybernetic and MESA8 NeuroShell Trader Add-ons. Users of NeuroShell Trader can go to the STOCKS & COMMODITIES section of the NeuroShell Trader free technical support Website to download a copy of any of the traders' tips.

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Figure 1: A NeuroShell Trader Chart that shows the Band Pass Filter, Trend and Empirical Mode Decomposition trend and threshold indicators.

