



MASTER CLASS

Technical Analysis

**Price Channel,
Keltner Channel,
and Bollinger Bands**

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Price Channel Calculation

- Upper Band is the highest High over a period of 20 bars.
- Lower Band is the lowest Low over a period of 20 Bars.
- Reduce the look-back for shorter term, and tighter channel. Increase the look-back for longer term, and wider channels.
- %P is only displayed in RadarScreen. Percentage is where the closing prices is within the channel, 0% = Lower Band, 100% = Upper Band
- Alert is generated when the last traded price breaks the bands.

Price Channel Signals

- A break above the upper band can be interpreted as market strength and may signal the start of an uptrend.
- A break below the lower band can be interpreted as market weakness and may signal the start of a downtrend.
- A move above the upper band indicates overbought conditions and may signal the price will pull back and move in the opposite direction.
- A move below the lower band indicates oversold conditions and may signal the price will bounce and move in the opposite direction.

Keltner Channel Calculation

- Introduced by Chester Keltner in the 1960s, and later modified by Linda Raschke in the 1980s.
- It combines Moving Average calculation with Average True Range (ATR).
- A shift is calculated by multiplying a user-defined Factor by the Average True Range.
- Shift amount is added to the moving average to plot the upper band.
- Shift amount is subtracted from the moving average to plot the lower band.

Keltner Channel Signals

- Breaks on the upper and lower bands, may indicate oversold and overbought levels. Price may continue in the same direction or reverse.
- Price rejection at the channel levels may indicate reversal.
- You may use multiple studies to confirm the trend direction, and possibly trade in the direction of the overall trend.
- Breakouts from a channel squeeze may present interesting trading possibilities. A squeeze occurs when Bands start getting closer to each other signaling a possible breakout.

Bollinger Bands Calculation

- Created by John Bollinger – Used to help identify overbought and oversold areas.
- Middle Line is a 20-bar Moving Average.
- Upper Band is 2 Standard Deviations above the Moving Average.
- Lower Band is 2 Standard Deviations below the Moving Average.
- Standard Deviation measures how far trading prices are from the average.

Bollinger Bands Signals

- Bullish – Price Breaks below the Lower Band and then breaks above it, returning inside the channel.
- Bearish – Price breaks above the Upper Band and then breaks below it, returning inside the channel.
- You may use other confirming studies to identify stronger signals.
- Bollinger Band squeeze may be a sign of low volatility and can indicate that price is due for a breakout.
- You may use pullbacks towards to 20-bar moving average to identify signals in direction of the overall trend.

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