

Concepts

- Alerts
 - Introduction
 - Background
 - Which type of alert is best?
 - Script alerts
 - `alert()` function events
 - Order fill events
 - `alertcondition()` events
 - Using one condition
 - Using compound conditions
 - Placeholders
 - Avoiding repainting with alerts
- Backgrounds
- Bar coloring
- Bar plotting
 - Introduction
 - Plotting candles with `plotcandle()`
 - Plotting bars with `plotbar()`
- Bar states
 - Introduction
 - Bar state built-in variables
 - `barstate.isfirst`
 - `barstate.islast`
 - barstate.ishistory`
 - barstate.isrealtime`
 - `barstate.isnew`
 - barstate.isconfirmed`
 - barstate.islastconfirmedhistory`
 - Example
- Chart information
 - Introduction
 - Prices and volume
 - Symbol information
 - Chart timeframe
 - Session information
- Colors
 - Introduction
 - Transparency
 - Z-index
 - Constant colors
 - Conditional coloring
 - Calculated colors
 - color.new()
 - color.rgb()
 - color.from_gradient()
 - Mixing transparencies
 - Tips

- Designing usable colors schemes
- Plot crisp lines
- Customize gradients
- Color selection through script settings

• Fills

- Introduction
- o `plot()` and `hline()` fills
- Line fills

Inputs

- Introduction
- Input functions
- Input function parameters
- Input types
 - Simple input
 - Integer input
 - Float input
 - Boolean input
 - Color input
 - Timeframe input
 - Symbol input
 - Session input
 - Source input
 - Time input
- Other features affecting Inputs
- Tips

Levels

- `hline()` levels
- Fills between levels

Libraries

- Introduction
- Creating a library
 - Library functions
 - Argument form control
 - User-defined types and objects
- Publishing a library
 - House Rules
- Using a library
- · Lines and boxes
 - Introduction
 - Lines
 - Creating lines
 - Modifying lines
 - Line styles
 - Getting line properties
 - Cloning lines
 - Deleting lines
 - Boxes
 - Creating boxes
 - Modifying boxes
 - Box styles
 - Getting box properties
 - Cloning boxes
 - Deleting boxes
 - Realtime behavior

- Limitations
 - Total number of objects
 - Future references with `xloc.bar_index`
 - Additional securities
 - Historical buffer and `max_bars_back`
- Examples
 - Pivot Points Standard
 - Pivot Points High/Low
 - Linear Regression
 - Zig Zag
- Non-standard charts data
 - Introduction
 - `ticker.heikinashi()`
 - o `ticker.renko()`
 - o `ticker.linebreak()`
 - `ticker.kagi()`
 - `ticker.pointfigure()`
- Plots
 - Introduction
 - `plot()` parameters
 - Plotting conditionally
 - Value control
 - Color control
 - Levels
 - Offsets
 - Plot count limit
 - Scale
 - Merging two indicators
- Repainting
 - Introduction
 - For script users
 - For Pine Script[™] programmers
 - Historical vs realtime calculations
 - Fluid data values
 - Repainting `request.security()` calls
 - Using `request.security()` at lower timeframes
 - Future leak with `request.security()`
 - `varip`
 - Bar state built-ins
 - `timenow`
 - Strategies
 - Plotting in the past
 - Dataset variations
 - Starting points
 - Revision of historical data
- Sessions
 - Introduction
 - Session strings
 - Session string specifications
 - Using session strings
 - Session states
 - Using sessions with `request.security()`
- Strategies
 - A simple strategy example

- Applying a strategy to a chart
- Backtesting and forwardtesting
- Broker emulator
- Order placement commands
- Closing market position
- OCA groups
- Risk management
- Currency
- Margin
- Tables
 - Introduction
 - Creating tables
 - Placing a single value in a fixed position
 - Coloring the chart's background
 - Creating a display panel
 - Displaying a heatmap
 - Tips
- Text and shapes
 - Introduction
 - o `plotchar()`
 - o `plotshape()`
 - o `plotarrow()`
 - Labels
 - Creating and modifying labels
 - Positioning labels
 - Reading label properties
 - Cloning labels
 - Deleting labels
 - Realtime behavior
- Time
 - Introduction
 - Four references
 - Time built-ins
 - Time zones
 - Time variables
 - 'time' and 'time_close'
 - `time_tradingday`
 - `timenow`
 - Calendar dates and times
 - `syminfo.timezone()`
 - Time functions
 - `time()` and `time_close()`
 - Calendar dates and times
 - `timestamp()`
 - Formatting dates and time
- Timeframes
 - Introduction
 - Timeframe string specifications
 - Comparing timeframes