



# BullScript — What can I do with it?

To help BullCharts users understand and learn about the BullScript language, functions, keywords, etc.

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BullScript is the computer language that is used behind the scenes within the BullCharts charting software. All chart indicators and scans rely on BullScript “under the covers” to function. It is also utilised in the TradeSim back-testing system.

Many BullCharts users utilise customised BullScript to achieve things that are not otherwise able to be done readily. But what sorts of things do they do? and what can I do with BullScript?

This document shows some sample uses. Also refer to other publications that explain more about using BullScript.

## What is BullScript?

BullScript is the computer language that is used behind the scenes within the BullCharts charting software. All chart indicators and scans rely on BullScript “under the covers” to actually function. It is also utilised in the TradeSim back-testing system.

Most BullCharts users never get to see the BullScript language in use, because most of what they need to do can be achieved with the user-friendly menus and drop-down options to make choices, and select parameters and options.

However, there are times when some users might want to do something a little out of the ordinary — like tweak an indicator, and create a special formula to obtain a trading edge. This is where access to the BullScript language can be beneficial.

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## Adding “information” to a chart

Before we show a few examples, let’s try to explain the following about script. If this does not make sense at this stage, then skip this page and move on to the examples below.

It is possible to add a variety of information to a price chart.

1. A new chart indicator, or a variation of an existing one;
2. Textual information which can be hard-coded within the script;
3. Share price data that is available as **price variables** within script;
4. Calculated information that is calculated in a **formula** in the script, using price data that is available in **variables**.

For example, the following price data is available as **variables**:

**open**  
**high**  
**low**  
**close**  
**volume**  
**value**

The first four of these price variables can be abbreviated to just the first letter, and they can be upper or lower case:

**O, H, L, C**

Several price variables can be used in a formula to calculate another value.

For example, a value for **typical price** can be calculated for any one date using the **formula**:

**(High + Low + Close) / 3**

But note that in a formula such as this, BullCharts will store these price values for a range of dates (ie. an array or matrix). And the formula will be evaluated for the range of dates to produce a number of **typical price** values — one for each date.

Also note that BullCharts already has an **internal variable** for typical price, referred to as: **TYPICAL( )**. This means that wherever you want to use the value for the typical price, simply use this **variable**.

In addition to all this, you can use BullScript within a scan to create search criteria that are not readily available, including for a TradeSim scan.

Some of the following script usage samples shown below demonstrate this sort of thing. This will all make more sense when studying the following examples.

# Some examples

## Add Marker icons to a chart

The price chart shown here has a number of BullCharts **marker icons** added to the chart.

The collection of marker icons are shown in the graphic table below.

On a price chart, these are available to add to a chart using the Line Studies toolbar button.

The Icon Palette which is displayed in BullCharts is shown below.



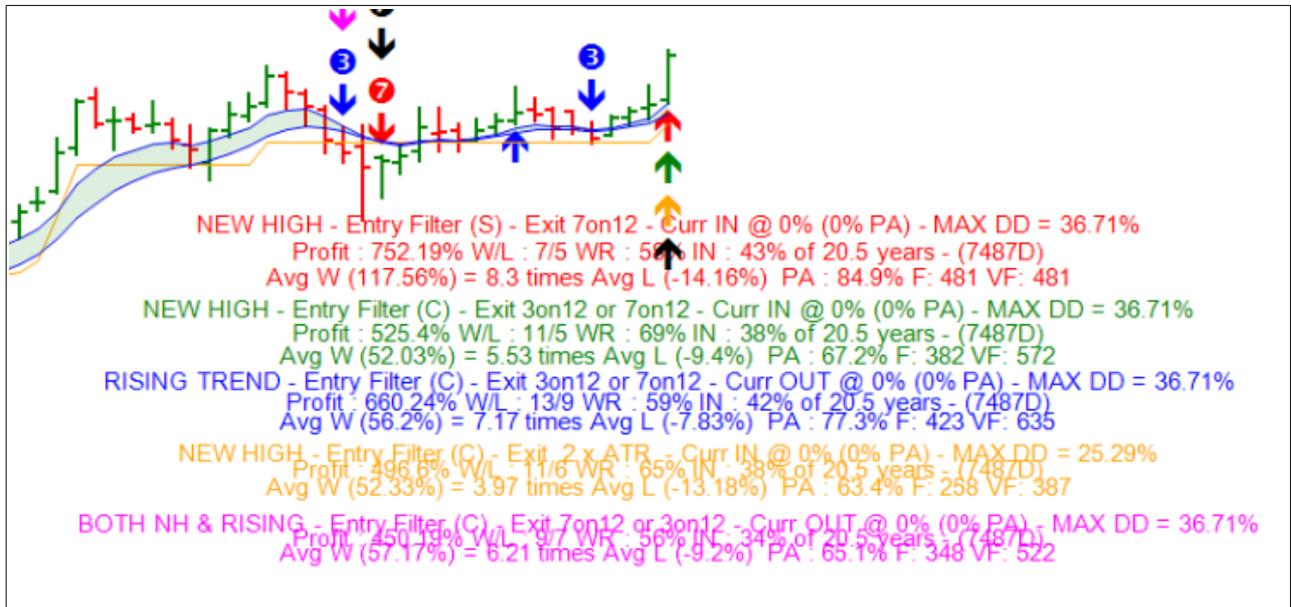
The "marker" icons in BullCharts and available in BullScript							
type0	①	type7	⑦	type15	✓	type22	☹
type1	①	type8	⑧	type16	↶	type23	☹
type2	②	type9	⑨	type17	↷	type24	🔔
type3	③	type10	⑩	type18	↶	type25	✍
type4	④	type11	↶	type19	↷	type26	☔
type5	⑤	type12	↷	type20	✖	type27	☠
type6	⑥	type13	↷	type21	☺	type28	📄
		type14	↷			type29	➔

Table showing the BullScript variable that is used for each of the available icons.

## Add text to chart example

Add a variety of price-related information, or other text, onto the price chart.

This sample shows that a variety of text information can be added to a chart, including price-related data and other details.



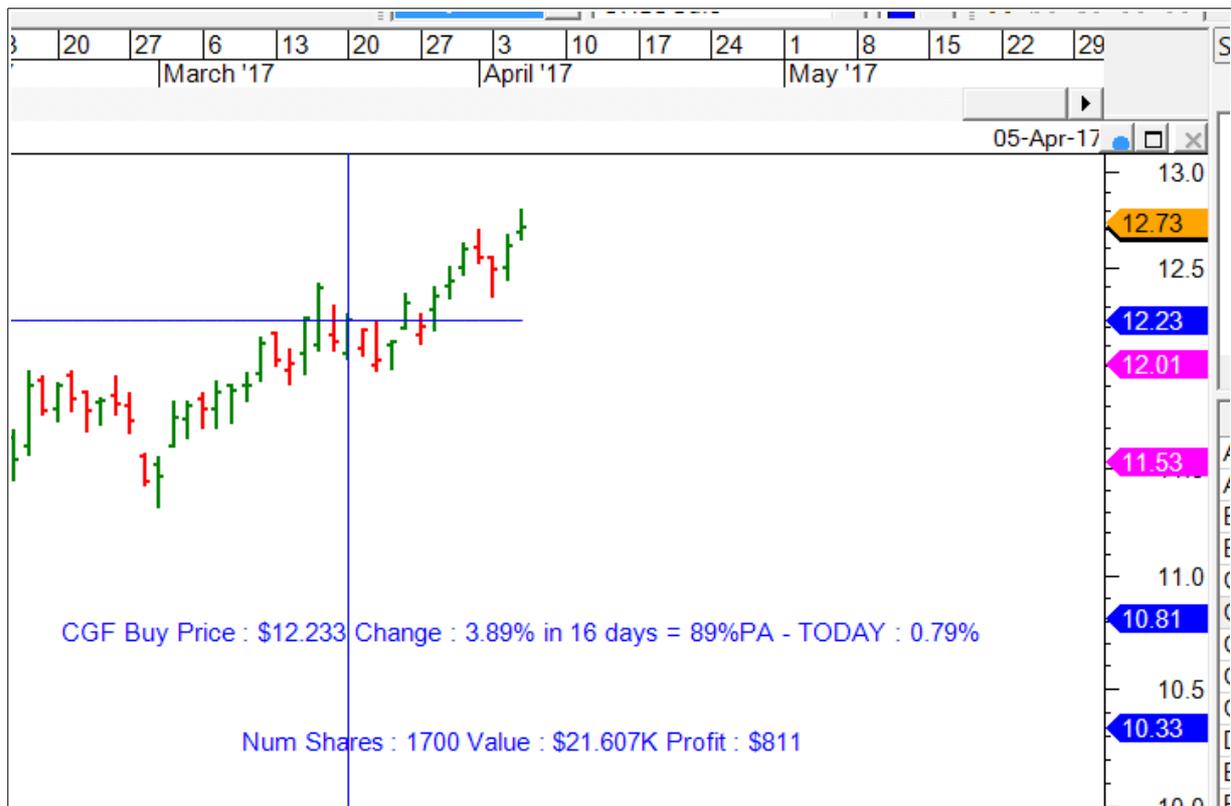
## Add text example — the shares owned plus statistics

Add informational text to a chart to indicate statistics for a share that is owned. The information shown here in the example below includes:

- The name of the security — CGF
- The Buy Price value.
- The Change in share price from the buy price to the latest value (percentage, but we could show the value).
- The number of days that the shares have been held.
- The annualised change in share price.
- The number of shares held.
- The position value and profit (loss) amount.

Note that some of the information is:

1. Textual and is included within the script (ie. hard-coded);
2. Share price data and is available as **variables** within script;
3. Calculated information that is calculated in a **formula** in the script, using price data that is available in **variables**.



## Add Indicator Ribbon — MA 7 and 12 cross-over

Add custom indicator ribbons to the bottom of the chart. eg. Moving Average Cross-over. In this example, the ribbon across the bottom of the chart is easier to read at a glance than the Moving Average Cross-over indicator.



The following text can be copied and pasted into a new BullCharts indicator when editing in the **Indicator Builder** mode.

```
[ Description = Ribbon to show 7 on 12 EMA crossover; TARGET = RIBBON ;
author=Bleakley, Des ];

[color = pale green; name = Good 7 on 12; fillstyle = small grid ];
ma(C,shortma,E)>ma(C,longma,E);
[color = pink; name = Bad 7 on 12; fillstyle = small grid];
TRUE;
```

## Add Indicator Ribbon — New 52 week high

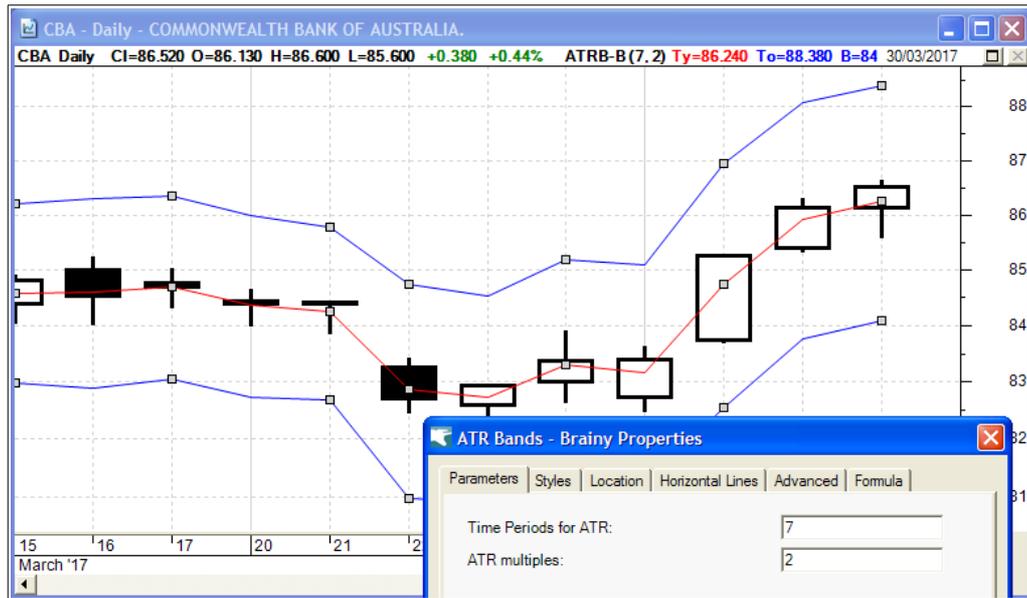
Add custom indicator ribbons to the bottom of the chart. eg. Achieving a new 52 week high. In this example, the green portion of the ribbon indicates the period(s) achieving a new 52 week high.



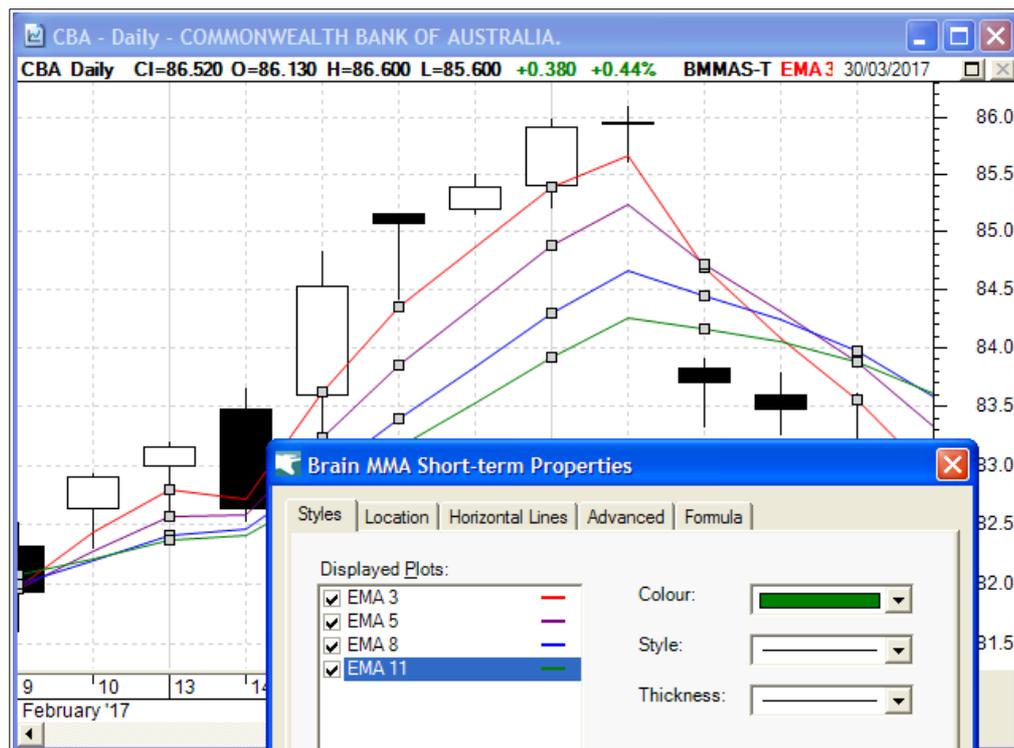
```
[Description=New 52 Week High Close;Target=RIBBON;author=Bleakley, Des ];
newhigh := C=highest(C,52);
[name="Insufficient Data";color = yellow];
barnumber < 52;
[name=Not High;color =lightpink];
NOT newhigh;
[name=New High;color=green];
newhigh;
```

```
[Description=New 52 Week High Close;Target=RIBBON;author=Bleakley, Des ];
newhigh := C=highest(C,52);
[name="Insufficient Data";color = yellow];
barnumber < 52;
[name=Not High;color =lightpink];
NOT newhigh;
[name=New High;color=green];
newhigh;
```

## Create indicator to show "ATR Bands"

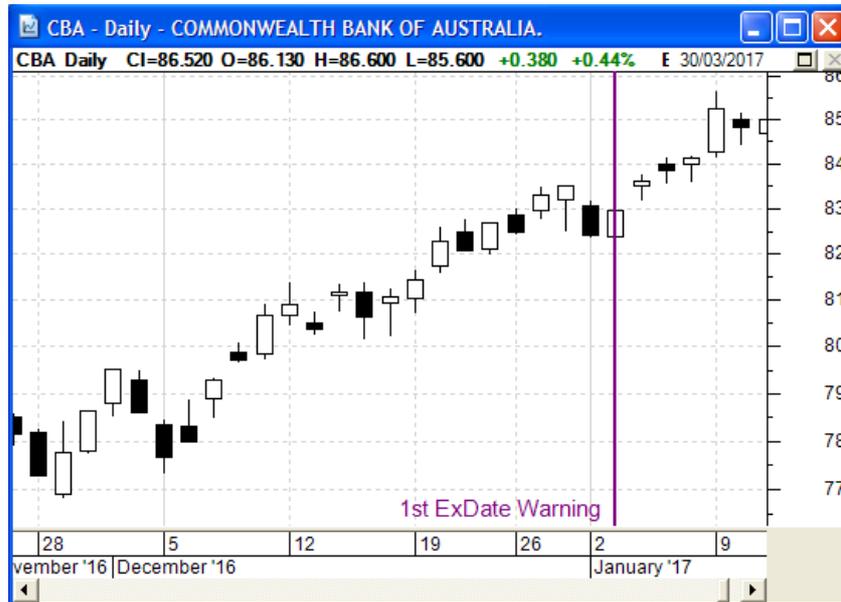


## Create your own Multiple MA indicator



## Add a fundamental value to the chart

This example shows the ex-dividend date (first warning) added to the chart. This was manually created as a custom indicator before it was included within BullCharts as a standard indicator.



## Customise the (new) Fundamental indicator



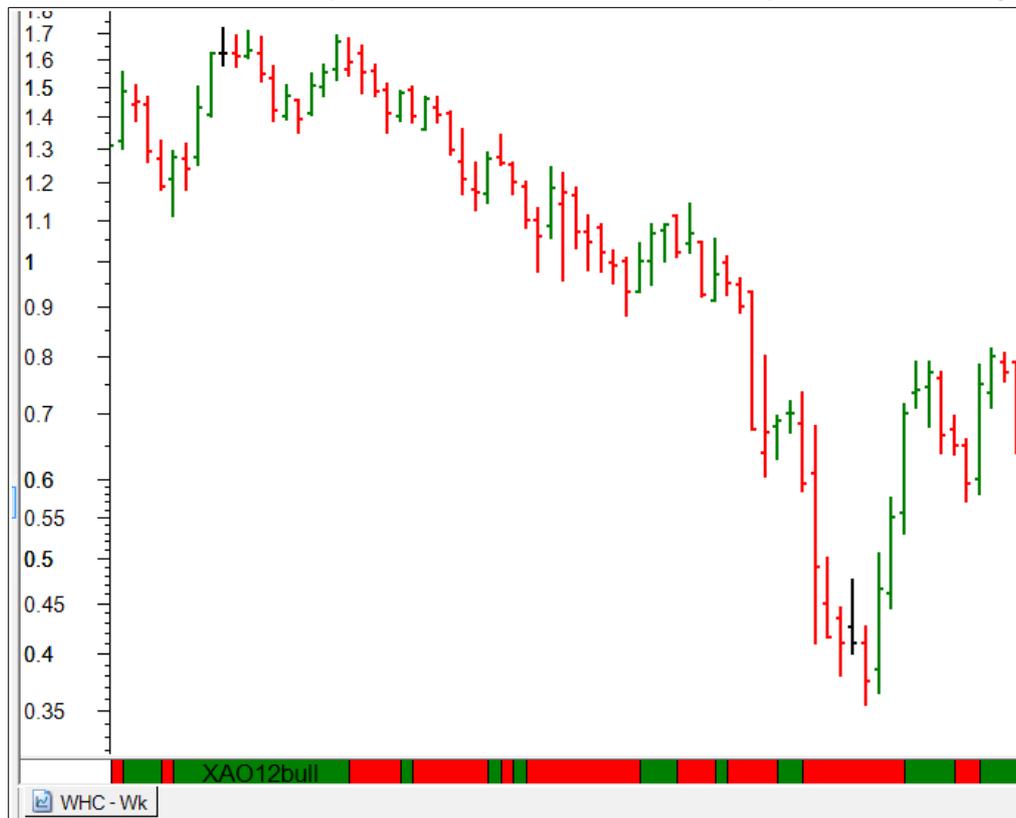
## Plot "profit of a trade" in new pane

The graph of the amount of profit in a trade is added as a new plot (the lower pane of this sample).



## Ribbon — XAO > EMA12 — bull or bear

Add a ribbon to the chart to indicate whether the market is overall bullish or bearish. This ribbon indicates whether the XAO index is greater than the 12-period EMA of the XAO (one way to indicate bullishness). This ribbon is shown on the price chart of any stock.



```
[Description=Ribbon - If XAO Close < 12 EMA then BEAR market, otherwise  
BULL market; author = Bleakley, Des;];
```

```
bear := LoadSymbol("XAO", Close) < ma(LoadSymbol("XAO", Close),12,E);  
[Target=RIBBON;name = XAO12bear; color = red];  
bear;  
[Target=RIBBON;name=XAO12bull;color=green];  
NOT bear;
```

```
[Description=Ribbon - If XAO Close < 12 EMA then BEAR market,  
otherwise BULL market; author = Bleakley, Des;];
```

```
bear := LoadSymbol("XAO", Close) < ma(LoadSymbol("XAO",  
Close),12,E);  
[Target=RIBBON;name = XAO12bear; color = red];  
bear;  
[Target=RIBBON;name=XAO12bull;color=green];  
NOT bear;
```