

**ThermoChart  
V1.1  
For  
DotNetNuke 4.8+**

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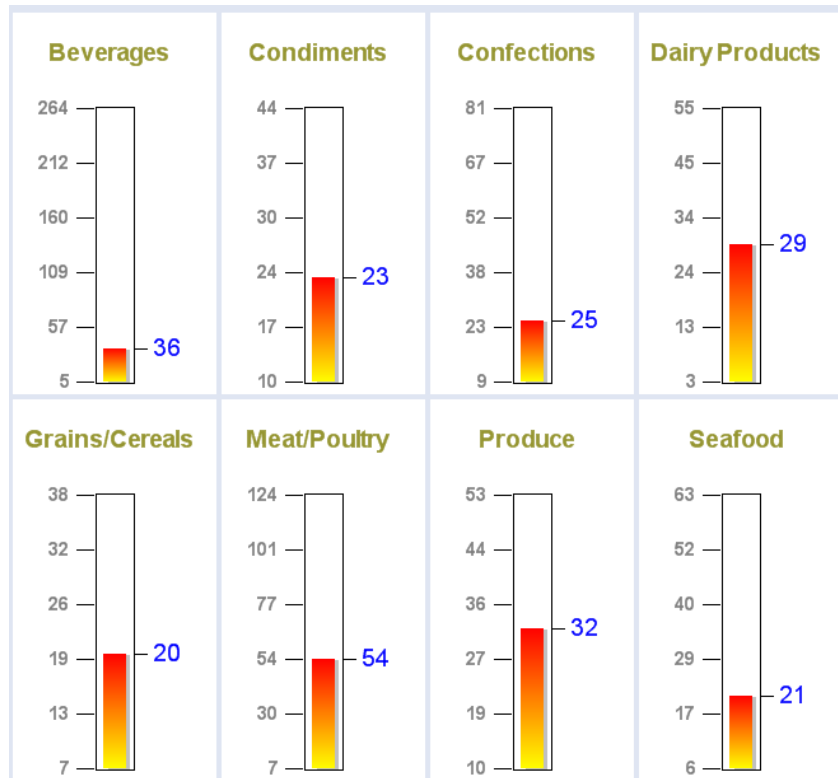
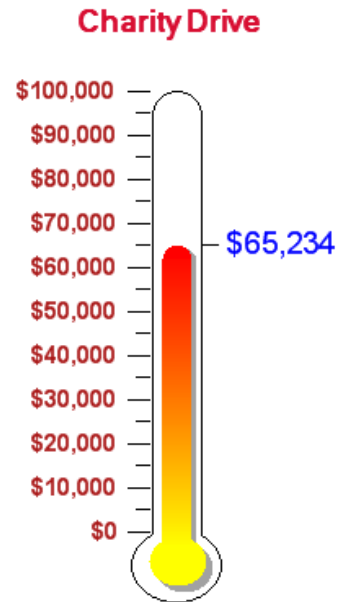
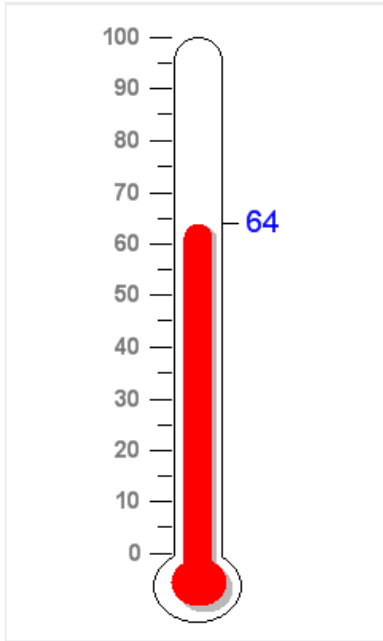
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## Release History

Version 1.0 – August 2009 Initial Release

## Introduction

ThermoChart is a DotNetNuke module that creates a Thermometer style image based on user supplied settings such as below:



# Usage

The following settings are available to the ThermoChart Module:

▼ **ThermoChart Settings**
?

---

**Chart Title:**

**Title Font Settings:**   
font name [size [color ]]

---

**Current Value:**       **IMC Parameter:**

**Show Value:**     **As Percent:**       **Value Format:**

**Value Font Settings:**   
font name [size [color ]]

**User Format:**

---

**Scale Location:**       **Scale Format:**

**Minimum Value:**       **Maximum Value:**

**Major Marker Count:**       **Minor Marker Count:**

**Scale Font Settings:**   
font name [size [color ]]

---

**Enable SQL Command:**       **Show SQLCommand (testing):**

**Matrix Rows:**       **Matrix Columns:**

**SQL Command:**

**Connections String:**

---

**Height:**       **Width:**

**Margin Sizes:**       **Marker Sizes:**

**Shaft Width:**       **Center Line Adjust:**

---

**Show Bulb:**       **Rounded Tip:**

**Show Shadow:**       **Show Gradient over Range:**

**Mercury Color Settings:**   
color [:color2 [:color3 ]]

**Background Color Settings:**   
background color [:Line Color [:Line2 Color]]

**Shadow Color Settings:**   
Shadow color

---

**Header:**

**Footer:**

[Update](#)    [Cancel](#)

**Chart Title** is the text used for a chart title. **Title Font Settings** defines the font, font size, color used for the Title when present.

**Current Value** defines the current size of the mercury in the Thermometer. There are several ways to define the current value, see Section on "Setting Current Value" below for a description on **IMC Parameter** among other methods. **Show Value** indicates whether the current value used to draw the size of the "mercury" in the Thermometer will be shown. **As Percent** indicates that the value displayed will be a percentage based on the value express as a percentage of the difference between the Maximum and Minimum values (percentage = value / (max – min) )

The **Value Font Settings** defines the Font, Font Size, and Color used when displaying the Current value. The current value is display on the opposite side of the thermometer as the scale. If not scale is present and the value will display on the left side **Value Format** defines the display type of the current value. The pre-defined types are Integer, Decimal, and Currency and User-defined. If the Value Format is User-Defined, then **User Format** defines the format to be used.

**Scale Location** defines whether the scale will be place on the left side (default), right side, or no scale will be present. Scale Format when defined overrides the Value format. The **Minimum Value** defines the lower value displayed, while **Maximum Value** defines the upper value displayed. The **Major Marker Count** defines how many markers will be displayed. Major Markers include the corresponding value. The **Minor Marker Count** defines how many minor markers will be displayed between Major Markers. The **Scale Font Settings** defines the Font, Font Size, and Color used when displaying the Scale values.

Enable SQL indicates that the current value(s) will be provided by a SQL command. You can see the SQL command processed (after substitutions) by enabling **Show SQL Command (Testing)**. The **Matrix Rows** and **Matrix Columns** define the shape of a table of Thermometers. If either value is greater than zero (0) then the matrix processing is assumed and expects one or more rows returned from the SQL Command. Each Row corresponds to a separate Thermometer. If the value of Matrix Rows is zero, then no limit of rows is set. If the Matrix values are zero (default) then only one row is process, even if more are returned.

The **SQL Select** defines the command processed by database as defined by the **Connection String**. The Connection String will default to the DotNetnuke database if left blank. You can reference a connection string placed in the AppSetting section of the Web.Config by prefixing the keyname with "@". The SQL command needs to define one or more explicit columns names **CurrentValue**, **MaxValue**, **MinValue**, or **Title**. The values in these columns will be placed in the corresponding value for each chart generated.

**Height** defines the height of the image generated. **Width** defines the width of the image generated. **Margin Sizes** define the corresponding margin sizes within the image created. Separate parameters values: Top, Right, Bottom, and Left, with a comma. **Marker Sizes** defines the size of the marker lines. Separate parameters values; Major, Minor, and Margin, with a comma. **Shaft Width** defines how wide the shaft of the thermometer. A value of zero (0) defines the default. A positive value defines an absolute width, while a negative value defines a percent width based on the width of the image (e.g. -5 = 5% of image width). **Center-Line Adjust** defines how far left or Right of the Center line will the Shaft of the Thermometer will appear. The default is zero (0). To move Left use a negative number, to move right use a positive number.

**Show Bulb** indicates whether the Thermometer bottom bulb and rounded top should be displayed. When not enabled, the Thermometer displayed is rectangular in shape. **Round Tip** indicate whether the displayed "mercury" should have rounded tip. If enabled, then the 100% value displayed will be at the top of the rounded top of the Thermometer. If Show Bulb is disabled (unchecked) then Round Tip is disabled. **Show Shadow** indicates that a shadow should be shown beside the "mercury" within the Thermometer.

**Show Gradient Over Range** indicates that if a gradient (two color) mercury is being displayed, the gradient will be spread over the shaft from Minimum value to Maximum value and the gradient displayed

will correspond to the appropriate percentage of the gradient. When disabled, the gradient will be spread over the minimum value to current value. If Show Gradient Over Range is enable, Round Tip is disabled.

[Mercury Color Settings](#) defines the colors used to display the Mercury in the Thermometer. The colors can be expressed as a known name or with a hex-value in the form of "#123456". A single color will display the same color from the bottom to the top of the mercury. Two colors, separated by a colon, will display color 2 at the bottom to color1 at the top.

[Background Color Settings](#) defines the background color used when creating the Thermometer image. The colors can be expressed as a known name or with a hex-value in the form of "#123456". A second color defines the Line color used to draw the outline of the Thermometer and a third color will define the color used for the Major and Minor Markers. The default Major Marker color is Black, and the default Minor Marker color is grey.

[Shadow Color Settings](#) define the shadow color used when the shadow is shown. The default color is Silver. The color can be expressed as a known name or with a hex-value in the form of "#123456".

The [Header](#) and [Footer](#) Text defines text that can be displayed above and below the image. The text can include HTML tags. The current value can be displayed in the text by using the substitution parameter [value]. Similarly the current percentage of the Maximum can be display as [percent].

## Setting Current Value

The current value of the ThermoChart can be set in 4 ways:

1. Static value set via the Settings form.
2. Dynamic value provided by Query Parameter IV. For example a link to the page may include the desire value as follows: ...mysite.com?IV=63 This will display a value of 63 and supersede and static value.
3. Dynamic value provided via Inter-module Communication (IMC). The displayed value supplied by another module. The user must provide the parameter value name to be used. The value will supersede values in the above methods. See
4. By enabling the SQL Command, ThermoChart will look for column names of CurrentValue, MaxValue, MinValue and Title. If the columns exist in the result set then the corresponding value within the Chart will be updated. If the Matrix Row or Column values are non-zero, then a chart will be created for each row returned – to maximum Matrix Rows (if defined). For example:

```
Select
    C.CategoryName as Title,
    Round(Avg(P.UnitPrice),0) as CurrentValue,
    Round(Max(P.UnitPrice),0) as MaxValue,
    Round(Min(P.UnitPrice),0) as MinValue
from
    Products P
    join Categories C on C.CategoryID = P.CategoryID
Group by
    C.CategoryID, C.CategoryName
Order by
    C.CategoryID, C.CategoryName
```

Using the NorthWind database the above SQL command will return 8 rows. ThermoChart will create 8 charts each with different Title, Maximum, Minimum, and Current Values. The values

found will supersede existing chart settings. NOTE: Not all values are required, however CurrentValue is typically supplied.

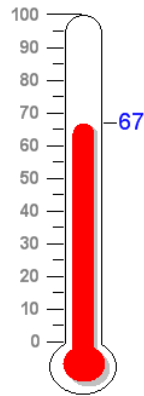
## Samples

### 1 - Simple Thermometer

The follow image was created by setting: (All other settings were default)

- Current Title to "Default ThermoChart"
- Current value of ThermoChart to 67

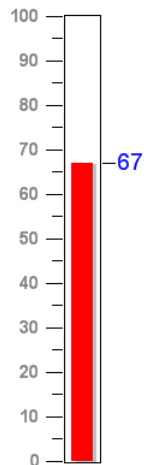
Default ThermoChart



### 2 - Simple Rectangular Guage

The follow image was created by setting: (All other settings were default)

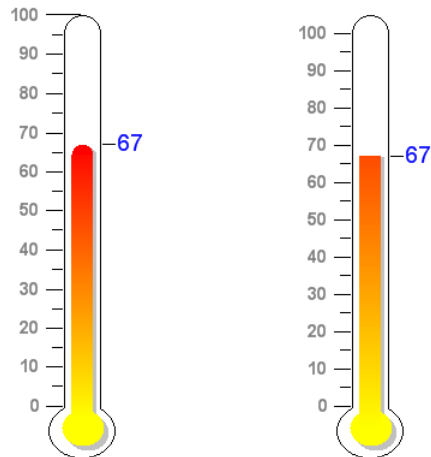
- Current value of ThermoChart to 67
- UnChecked Show Bulb



### 3 - Simple Gradient Thermometers

The follow image was created by setting: (All other settings were default)

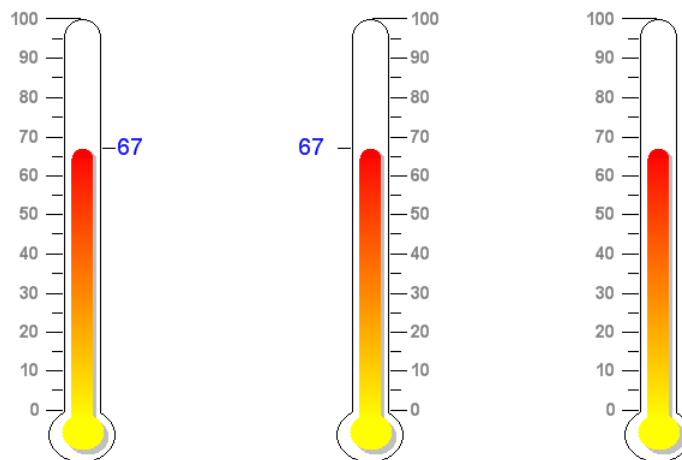
- Current value of ThermoChart to 67
- Changed Mercury color to "Red:Yellow"
- Second image has Gradient Over Range checked – Round tip will be disabled.



### 4 – More Simple Gradient Thermometers

The follow image was created by setting: (All other settings were default)

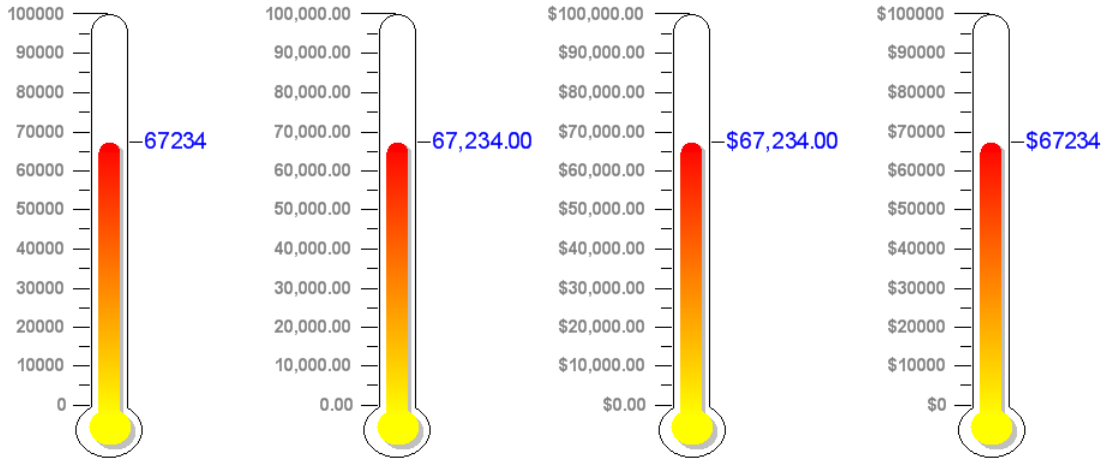
- Current value of ThermoChart to 67
- Changed Mercury color to "Red:Yellow"
- Second chart has Scale Location set to Right side
- Third chart has Show Value unchecked



### 5 – Value Formatted Thermometers

The follow image was created by setting: (All other settings were default)

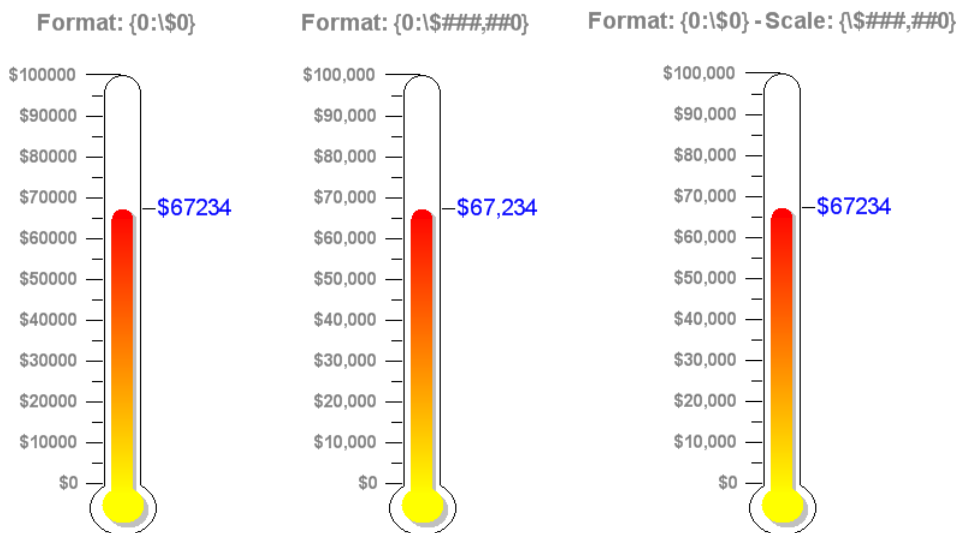
- Current value of ThermoChart to 67,234
- Changed Mercury color to "Red:Yellow"
- Maximum Value set to 100,000.
- First chart has Integer format, second as Decimal, and third as Currency.



### 6 – User Defined Formatted Thermometers

The follow image was created by setting:

- Using above settings and Title with explicit format used.

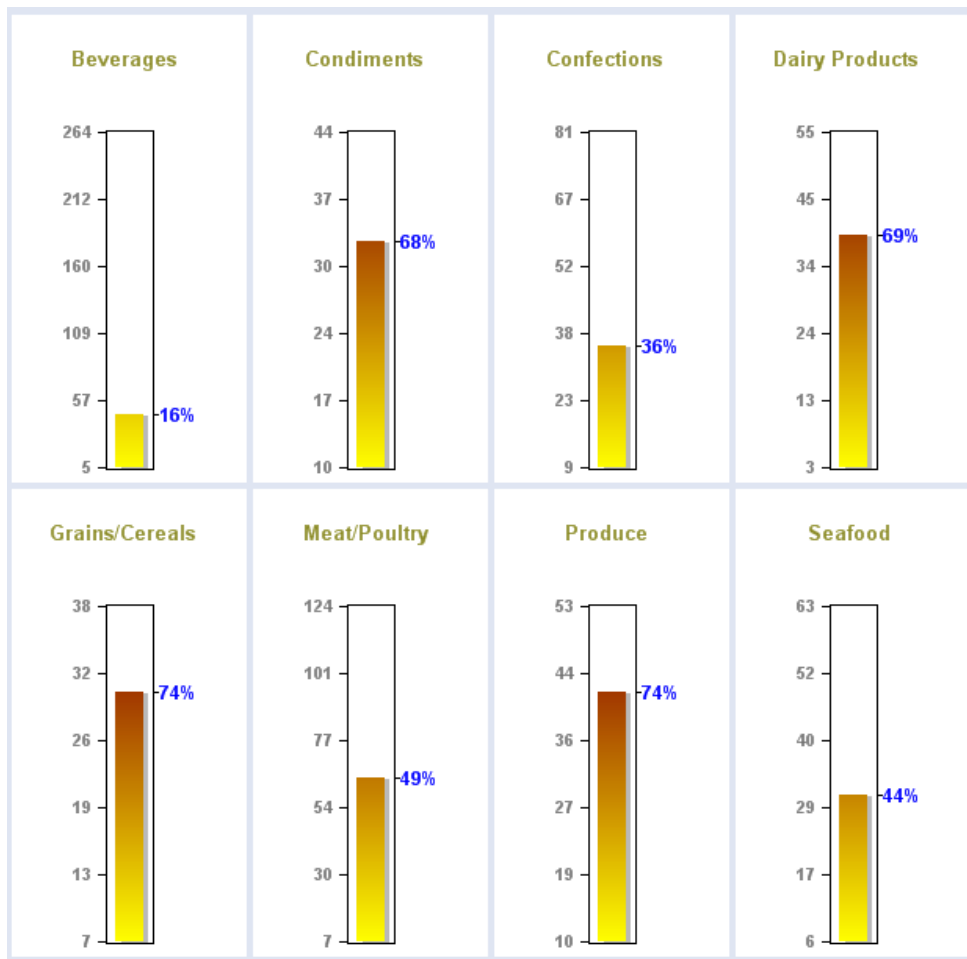


## 7 – Matrix of Gauges

The follow image was created by setting:

- Enabled SQL, Disabled Show Bulb, Enabled Value as Percent
- Set Matrix Columns to 4 – (8 row of data expected)
- Set Connection String to reference NorthWind database.
- Set SQL Command to:

```
Select
    C.CategoryName as Title,
    Round(Avg(P.UnitPrice),0) + 10 as CurrentValue,
    Round(Max(P.UnitPrice),0) as MaxValue,
    Round(Min(P.UnitPrice),0) as MinValue
from
    Products P
    join Categories C on C.CategoryID = P.CategoryID
Group by
    C.CategoryID, C.CategoryName
Order by
    C.CategoryID, C.CategoryName
```



The follow is the setting form for the above example:

**ThermoChart Settings**

Chart Title:

Title Font Settings:   
font name [,size [,color ]]

---

Current Value:       IMC Paramter:

Show Value:  as Percent:       Value Format:

Value Font Settings:   
font name [,size [,color ]]

User Format:

---

Scale Location:       Scale Format:

Minimin Value:       Maximum Value:

Major Marker Count:       Minor Marker Count:

Scale Font Settings:   
font name [,size [,color ]]

---

Enable SQL:       Show SQL Command (Testing):

Matrix Rows:       Matrix Columns:

SQL Select:

Connection String:

---

Height:       Width:

Margin Sizes:       Marker Sizes:

Shaft Width:       Center-Line Adjust:

---

Show Bulb:       Round Tip:

Show Shadow:       Show Gradient Over Range:

Mercury Color Settings:   
color [:color2 [:color3 ]]

Background Color Settings:   
background color [:Line Color [:Line2 Color]]

Shadow Color Settings:   
Shadow color

All Changes are high-lighted in Yellow.

## Licensing

ThermoChart is available from [www.tressleworks.ca](http://www.tressleworks.ca) under the same licensing that DotNetNuke implements. (BSD License model) You are free to use the module in any site you choose, however please give credit where credit is due.

## Support

Support is limited as this is a mixture of existing code. Send questions, concerns and comments to [THERMOCHART@tressleworks.ca](mailto:THERMOCHART@tressleworks.ca)