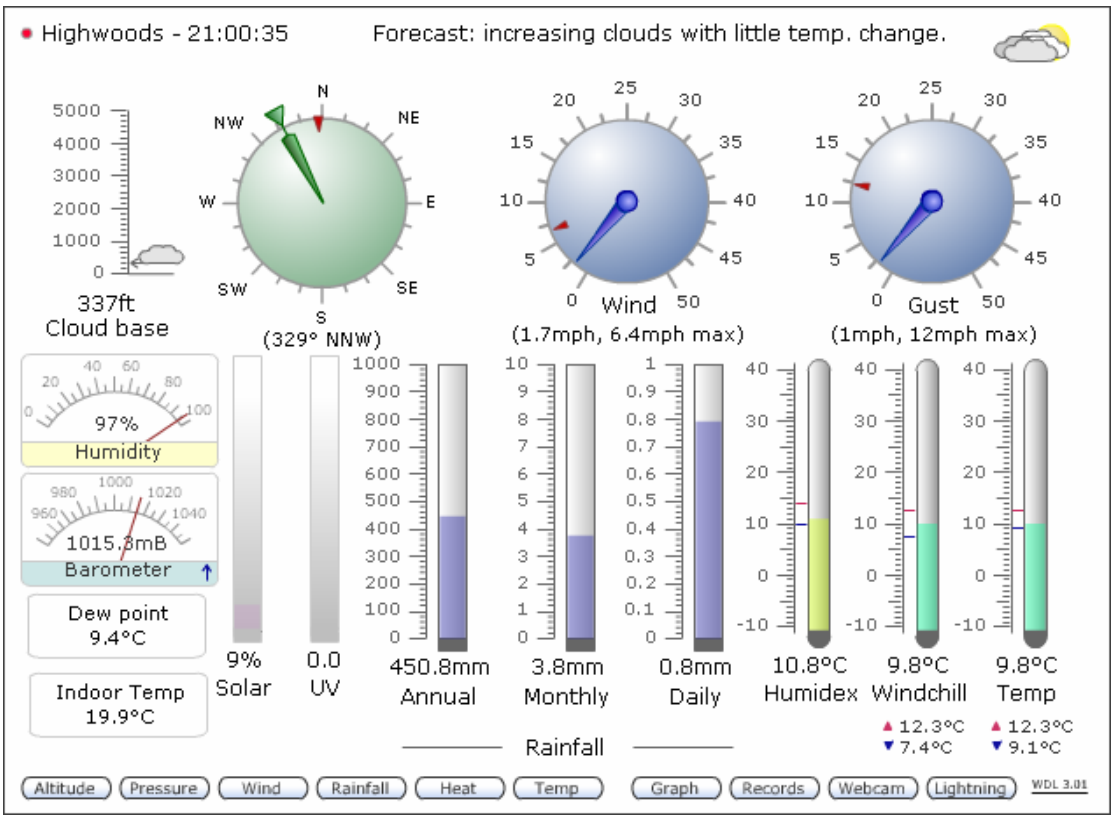
Configuring Weather Display Live



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Introduction

This document assumes you've read the readme.html file in the download package.

Weather Display Live can be customised by amending the wdlconfig.xml file in a number of ways –

- The units which are displayed by default can be pre-set
- The option to allow the display of buttons so the user can change units
- The rate at which Weather Display Live attempts to get new data
- A range of options to indicate the compass direction
- Whether to display date, time or both
- The position and size of each weather instrument
- The language of the text
- Hyperlinks on weather instruments
- Extra sensors can be displayed
- Lightning activity warning can be displayed
- Integration with Nexstorm and Lightning 2000

The wdlconfig.xml file is read once by Weather Display Live when the page is first viewed, it is only read again if the page is refreshed or re-visited. Therefore any changes to the wdlconfig.xml file will not take place until this happens. In some cases the web browser or a local proxy cache can store this file which results in changes not being displayed. See the troubleshooting section of the readme.html file for help in this situation.

> ***Warning!*** *The wdlconfig.xml file is an xml file and as such is very sensitive to errors and typographic mistakes. It is also case sensitive. Therefore it is recommended to always create a backup before making any changes.*

Pre-configured wdlconfig.xml files

Weather Display Live comes with a number of pre-configured wdlconfig.xml files, in the config folder, for different situations, such as with no UV sensor. The web page (index.html) must be amended to point to the wdlconfig.xml file required before it can be used or else Weather Display Live will be unable to find it and an error message will be displayed. For example if you choose to use the wdlconfig_no_uv.xml file then amend the 2 references in the index.html file to be –

```
="wdlv4_02.swf?http://www.mywebsite.com/wdlconfig_no_uv.xml"
```

where http://www.mywebsite.com is the domain name of your website.

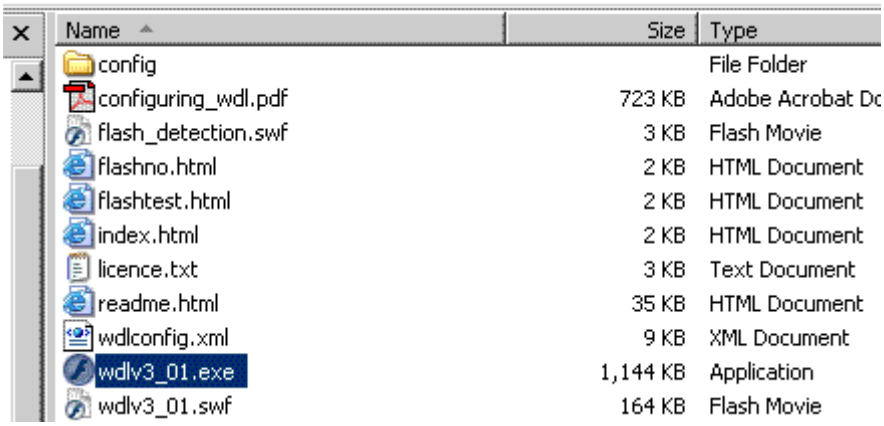
See *Pre-built configurations* for more details and screenshots of these files.

Displaying Weather Display Live on a local PC

Weather Display Live can be tested on the local PC, without having to upload to a web server, to see the effects of making changes to the wdlconfig.xml file. This is recommended when customising the wdlconfig.xml file because it is a much faster method of seeing the effects your changes are having. To view Weather Display Live on a local PC do the following –

1. Extract the files **wdlconfig.xml** and **wdlv4_02.swf** files from the downloaded package to a directory on your PC.
2. Place a copy of the clientraw.txt, clientrawextra.txt and clientrawdaily.txt files to the same directory. The clientrawextra.txt file contains the all time record details and the clientrawdaily.txt file contains 30 day information.

Weather Display Live can now be tested by double clicking on the **wdlv4_02.exe** file. Weather Display Live will be displayed in static mode, i.e. without any live updates and only showing the clientraw.txt, clientrawextra.txt and clientrawdaily.txt data files which you've just placed in that directory. This is a very good method of quickly checking that changes you make to the wdlconfig.xml file are exactly what you intend. wdlv4_02.exe is a Flash Projector file.



Basic configuration options

There are a number of configuration options which you should be aware of even if you don't intend to customise the position or size of the weather instruments. They are at the start of the wdlconfig.xml file and are detailed here.

Entering your serial number

You should copy and paste the serial number you receive into the wdlconfig.xml file in the serial number line -

```
<serialno>evaluation</serialno>
```

Replace the word 'evaluation' with this number then refresh Weather Display Live in your web browser.

About serial numbers and website addresses

The URL of your website is the web server/subdomain + domain. For example if your website is at http://www.myweb.com/ the serial number will be registered to www.myweb.com; if your website is http://members.mywebsite.org/weather the serial number will be registered to members.mywebsite.org.

Even if your page is running within a frame, the relevant URL is still the one that the actual page with the Flash file is on. This is because Weather Display Live looks for that URL on the page it is running on.

It is important to get this correct or your serial number may not work.

In addition it requires that the clientraw.txt file and the wdlconfig.xml file are also on the same domain, i.e. on the same website. This is an inbuilt security feature of Flash.

Weather Display Live will always run in evaluation mode whenever the word *evaluation* is within the `<serialno>` tags. There is no time limit in this mode but the display will be watermarked with the words *Evaluation Version*.

If you move web servers just send me an email and I'll send you a replacement serial number.

Setting the language

Weather Display Live includes built in support for several languages. You can select the language to use by specifying it within the language tag –

```
<language>english</language>
```

Currently the options are -

- english (default and may be specified by leaving the tag blank)
- finnish
- danish
- dutch
- french
- swedish
- german
- catalan
- spanish
- norwegian
- italian
- portuguese

Note that the options are case sensitive. Some languages may also require adjustment of the spacing between instruments to avoid any overlapping of text.

Setting the refresh rate and initial default units

It is recommended that you set the frequency with which Weather Display Live attempts to get new data to be the same rate as the clientraw.txt file gets updated from Weather Display. Therefore if Weather Display sends a new clientraw.txt file every 10 seconds change the line that says –

```
<refresh>4</refresh>
```

to –

```
<refresh>10</refresh>
```

The minimum is 3 and the maximum is 60. The default is 4.

You can also set the rate at which Weather Display Live requests 'records'. Normally this is approximately every 15 minutes but you can change it to every 5 minutes by entering the word 'fast' in this tag instead of 'normal' –

```
<clientrawextraRefreshRate>normal</clientrawextraRefreshRate>
```

You can change the units which are displayed in Weather Display Live at startup. To change an option such as the temperature units that Weather Display Live starts with find the line –

```
<initTempUnits>C</initTempUnits>
```

Change it so that it now reads –

```
<initTempUnits>F</initTempUnits>
```

Refresh your web page to reload Weather Display Live and see the new temperature units.

In the same way you can change the barometric pressure, rainfall, altitude, evapo-transpiration and wind units at start up.

The options are as follows –

Measurement	Options	Default	Tag
Temperature	C or F	C	`<initTempUnits>`
Wind *Catalan, French Italian and German language version only* -	mph, kts, kph or m/s. km/h (not kph)	mph	`<initWindUnits>`
Rain	mm or in	mm	`<initRainUnits>`
Snow	cm or in	cm	`<initSnowUnits>`
Pressure	mb, inHg or hPa	mb	`<initPressureUnits>`
Cloud base Height (Altitude)	ft, m or yds	ft	`<initCloudbaseUnits>`
Evapo-transpiration	mm, cm or in	mm	`<initETUnits>`

You can also choose whether to display the heat thermometer as Humidex or Heat Index., options are humidex (the default) or heatindex, and the tag is

```
<initHeatType> humidex</initHeatType>
```

For more information on Heat Index and Humidex see the Weather Display online help at http://www.weather-display.com/

Choosing the buttons to display

Now that you've set your units to display you may decide that you only want visitors to be able to change certain units, or none at all. This can be achieved by changing the appropriate tag values in the wdlconfig.xml file from 1 (the default – show the button) to 0 (don't show the button).

The relevant tags are as follows –

Temperature	<btnTemp>1</btnTemp>
Pressure	<btnPressure>1</btnPressure>
Wind	<btnWind>1</btnWind>
Rain	<btnRain>1</btnRain>
Snow	<btnSnow>1</btnSnow>
Altitude	<btnAlt>1</btnAlt>
Heat Index or Humidex	<btnHeat>1</btnwHeat>
Graph	<btnGraph>1</btnGraph>
Records	<btnRecords>1</btnRecords>
Webcam	<btnWebcam>1</btnWebcam>
Lightning	<btnLightning>1</btnLightning>
MesoMap Live	<btnMml>1</btnMml>

Note that as you remove buttons the remaining buttons will automatically align from the left of the screen. Additionally you can choose the order that buttons are displayed in the row. For example you may wish them to correspond to the positioning of the instruments you've chosen. To do this place the number within the <order> tag which corresponds to the position of the button. For example if you want the temperature button to be the 3rd from the left the temperature button tags would read -

```
<btnTemp>
      <show>1</show>
      <order>3</order>
</btnTemp>
```

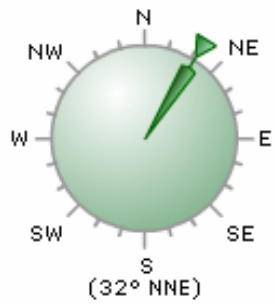
You can specify the location of the row of buttons (the button bar) by entering their <x> and <y> co-ordinates (see *Accurately positioning instruments*).

```
<btnPosition>
      <x>15</x>
      <y>392</y>
</btnPosition>
```

You cannot remove or change the Weather Display Live link. You cannot change the position of your station name but you can remove it (See *Setting the wind direction & date/time options)*.

Setting the wind & date/time options

You can choose whether to show the wind direction heading in letters and/or the wind direction degrees beneath the instrument.



The options are –

Enter 0 to hide the compass heading.
Enter 1 to show the compass heading in letters (default)
Enter 2 to show the compass heading in degrees.

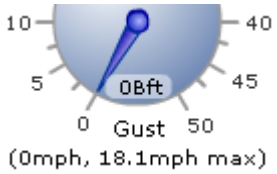
Enter 3 to show both.

```
<showCompassHeading>1</showCompassHeading>
```

If you wish to display the current wind reading in Beaufort on the wind dials then set the tag

```
<showBeaufort>0</showBeaufort>
```

to 1 instead of 0.



You can choose whether to display the date, the time or both alternating, next to your weather station name, with the following options -

Enter 0 to hide the name, date and time.
Enter 1 to alternate between date and time (this is the default).
Enter 2 to display date only.
Enter 3 to display time only.


```
<stationdatetime>1</stationdatetime>
```

You can choose the format that you wish date values to be displayed. For example the default is dd/mm/yyyy but you may wish to use the USA format of mm/dd/yyyy. You can do this by specifying the appropriate format in the tag –

```
<dateFormat>dd/mm/yyyy</dateFormat>
```

Options are –

- dd/mm/yyyy (default)
- mm/dd/yyyy
- yyyy/dd/mm
- yyyy/mm/dd
- dd.mm.yyyy
- mm.dd.yyyy
- yyyy.dd.mm
- yyyy.mm.dd
- dd-mm-yyyy
- mm-dd-yyyy
- yyyy-dd-mm
- yyyy-mm-dd

The date will not appear if any other format is entered.

Lowest temperature	9.9°C - 06:24 21/08/2004
Highest gust	21.1mph, 261° - 12:34 24/08/2004
Highest rain rate	2.0mm/min - 09:11 09/08/2004
Lowest barometer	999.9mB - 11:45 19/08/2004
Highest barometer	1021.3mB - 08:59 01/08/2004

The 'LED' on the left of each record indicates if the record is recent. If the record occurred within the last day then the indicator shows red or orange if within the last 7 days.

Lightning activity warning

If you have a lightning detector you can enable a lightning activity animated icon by setting this tag to a number other than 0. The number you set corresponds to the number of strikes/minute recorded by your detector and Weather Display. When this threshold is reached the animated lightning icon is displayed. This icon will be displayed for approximately 5 minutes from the initial triggering.

```
<lightningAlert>0</lightningAlert>
```

Clientraw.txt, clientrawextra.txt and clientrawdaily.txt files

The clientraw.txt file contains the live weather data, the clientrawextra.txt file contains the all time record information and clientrawdaily.txt contains 30 day information. You must be using Weather Display v10.18t or greater for the clientrawdaily.txt file to be generated. Usually Weather Display Live is placed in the same directory as these files but this is not essential. If you wish to place the Weather Display Live files in a different location then you must specify the location of these files by entering the full path to them in the following tags –

```
<clientraw></clientraw>
<clientrawextra></clientrawextra>
<clientrawdaily></clientrawdaily>
```

See *Configuring Weather Display to send data* for more information about setting up the data transfer via FTP of these files to your web server.

Rainfall text

You can determine whether lines appear and on which side of the 'Rainfall' text, used to highlight the rain tanks. This is useful if you choose not to show all 3 tanks. The `<txtRainFall>` tag has an `<options>` tag. You can choose to enter one of the following –

0	Both lines hidden
1	Default – both lines visible
2	Left line only
3	Right line only

Webcam

You can get Weather Display Live to display your webcam via a button.

```
<btnWebcam>
      <show>0</show>
      <order>9</order>
</btnWebcam>

<instWebcam>
      <url></url>
      <caption></caption>
      <refreshRate>120</refreshRate>
</instWebcam>
```

Enter the address of your webcam image in the `<url>` tag. Note that you can only display .jpg (non progressive) images – this is a limitation of Flash. The image is automatically sized to be 320 x 240. You can also enter a caption text which appears beneath the image. Enter the in the `<refreshRate>` the number of seconds you wish the image to be displayed before Weather Display Live attempts to refresh the picture.

Live Forecast

If you are using a Davis Vantage Pro then you can display the forecast text provided via Weather Display. To do so set this tag to a number between 1 and 99 corresponding to the number of seconds between the alternating of the current conditions and the forecast text.

```
<showDavisForecast>10</showDavisForecast>
```

In this example the current conditions and forecast text will alternate at 10 second intervals. Set to 0 to only show current conditions, set to 100 to only show forecast.

Barometer decimal places

Some weather stations read pressure to 1 decimal place whilst others cannot. You can choose the number of decimal places to show for the pressure reading in mB and hPa by setting the `<dp>1</dp>` tag within the `<instBarometer>` tag. Entering 1 will display readings to 1 decimal place, 0 will not show any decimal places.

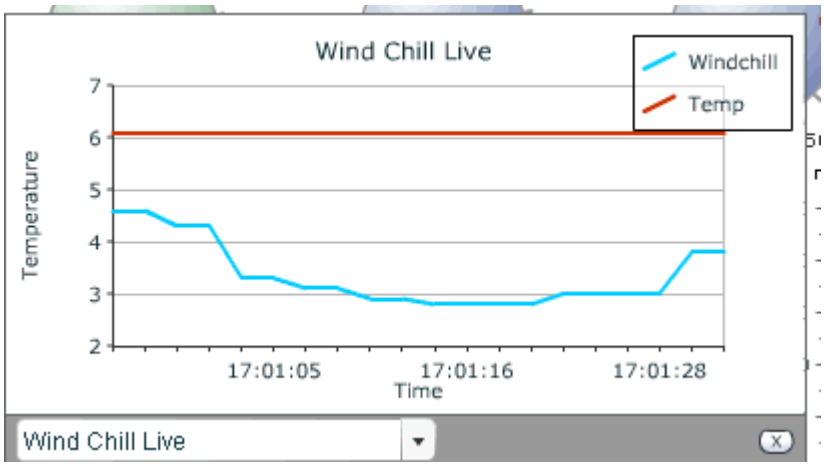
Graph Options

Temperature and Windchill Graphing

Optionally you can choose to plot windchill and temperature on the same graph. To do this set the following tag to 1

```
<graph>
      <showGraphTempAndWindChill>1</showGraphTempAndWindChill>
```

To just display windchill set the tag to 0.



Removing Graphs

You can optionally choose to display a reduced number of graphs. If you set any of the following tags to 1 the associated graphs will not be displayed –

```
<graph>
      <hideLastHourGraphs>0</hideLastHourGraphs>
      <hide1DayGraphs>0</hide1DayGraphs>
      <hide7DayGraphs>0</hide7DayGraphs>
      <hide30DayGraphs>0</hide30DayGraphs>
```

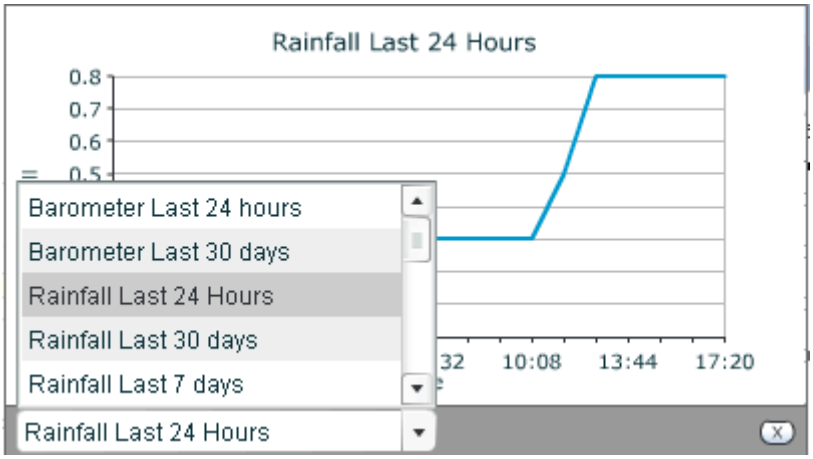
Tag	Associated Graphs
<hideLastHourGraphs>	Rainfall Temperature Wind Speed
<hide1DayGraphs>	Barometer Rain Temperature Wind Speed Solar (if enabled) UV (if enabled)
<hide7DayGraphs>	Rainfall
<hide30DayGraphs>	Barometer Rainfall Temperature Wind

Choosing Initial Graph

You can choose which graph will be displayed initially in Weather Display Live by setting the following tag –

```
<graph>
      <initGraph></initGraph>
```

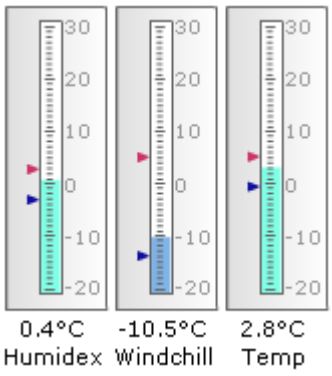
By default, and with no entry in the tag, Wind speed live will be displayed initially. If you wish to have a different graph initially displayed then enter a number corresponding to the position in the drop down list of graph options. For example if you enter 3 in the tag then, for the example below, Rainfall Last 24 Hours will be displayed.



Locking Temperature Scales

Sometimes you can find that the temperature instrument scales are not the same which can be slightly confusing for the viewer. This most often happens when the wind chill factor is particularly high (causing a low temperature value). To prevent this happening you can lock the scales for temperature, wind chill, heat or humidity, dew and apparent temperature (assuming they are displayed) by setting the following tag to 1 –

```
<lockTempScales>0</lockTempScales>
```



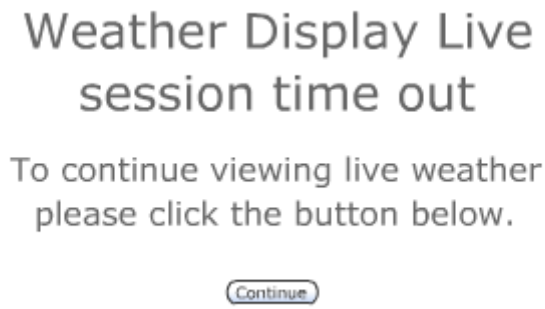
Session Time Outs

Although Weather Display Live tries to be economical with data bandwidth it's not easy to control user's behaviour i.e. a user may leave Weather Display Live in their browser for a long time whilst not directly looking at it. To avoid this waste of bandwidth there is now a time out setting whereby you can enter the length of time of inactivity by the user before Weather Display Live "times out" and has to be "restarted". During time out Weather Display Live does not attempt to get new data thereby saving bandwidth. Restarting by the user simply requires a press of a button – it does not require the whole page to be refreshed. Activity is determined as any button presses, drop down list selections etc. Any such action will reset the time period.

To configure the duration of inactivity required to trigger the time out simply enter the required time in minutes in this tag –

```
<sessionTimeOut>15</sessionTimeOut>
```

by default the time out value is set to 15 minutes. Entering 0 will disable this feature.



No Data Count

Should your data feed fail to your webserver for whatever reason it may not be immediately obvious. To help in this situation Weather Display Live can keep track of the number of times that it has been unable to consecutively get new data.

If the number of failed attempts goes above the threshold a “No Data” warning is displayed in place of the station name alongside the “LED” at the top right of the display.

You can set the threshold with this tag –

```
<noDataCount>5</noDataCount>
```

by default this is set to 5 failed attempts.

Auto Swap Heat Index / Windchill

There are times when it is more appropriate to display heat index instruments rather than windchill. Since heat index values are not relevant below approx 17°C it is more appropriate to show windchill below this temperature and vice versa. Weather Display Live can now do this automatically for you.- set the following tag in the wdlconfig.xml file to 1 to enable this feature –

```
<autoSwapHeatWindchill>1</autoSwapHeatWindchill>
```

If the max humidex goes above 17°C for the day then the windchill instrument will disappear and heat/humidex instrument will be shown instead in its place. This works best if you use the same instruments in exactly the same location. It will also swap the min/max text boxes for heat and windchill as well. This works for all windchill/heat instruments except dual linear and text only boxes.

Configuring Weather Display to send data

Weather Display Live gets its data from three small data files - clientraw.txt, clientrawextra.txt and clientrawdaily.txt - uploaded to the web server by Weather Display on a regular basis. To configure Weather Display you need to follow these steps:

1. On the Weather Display menu select: *Setup - Control Panel*

2. On the Control Panel select 

3. Open this tab 

4. On the screenshot below complete these required items (circled in red)

- Enable check box
- Weather Station Name

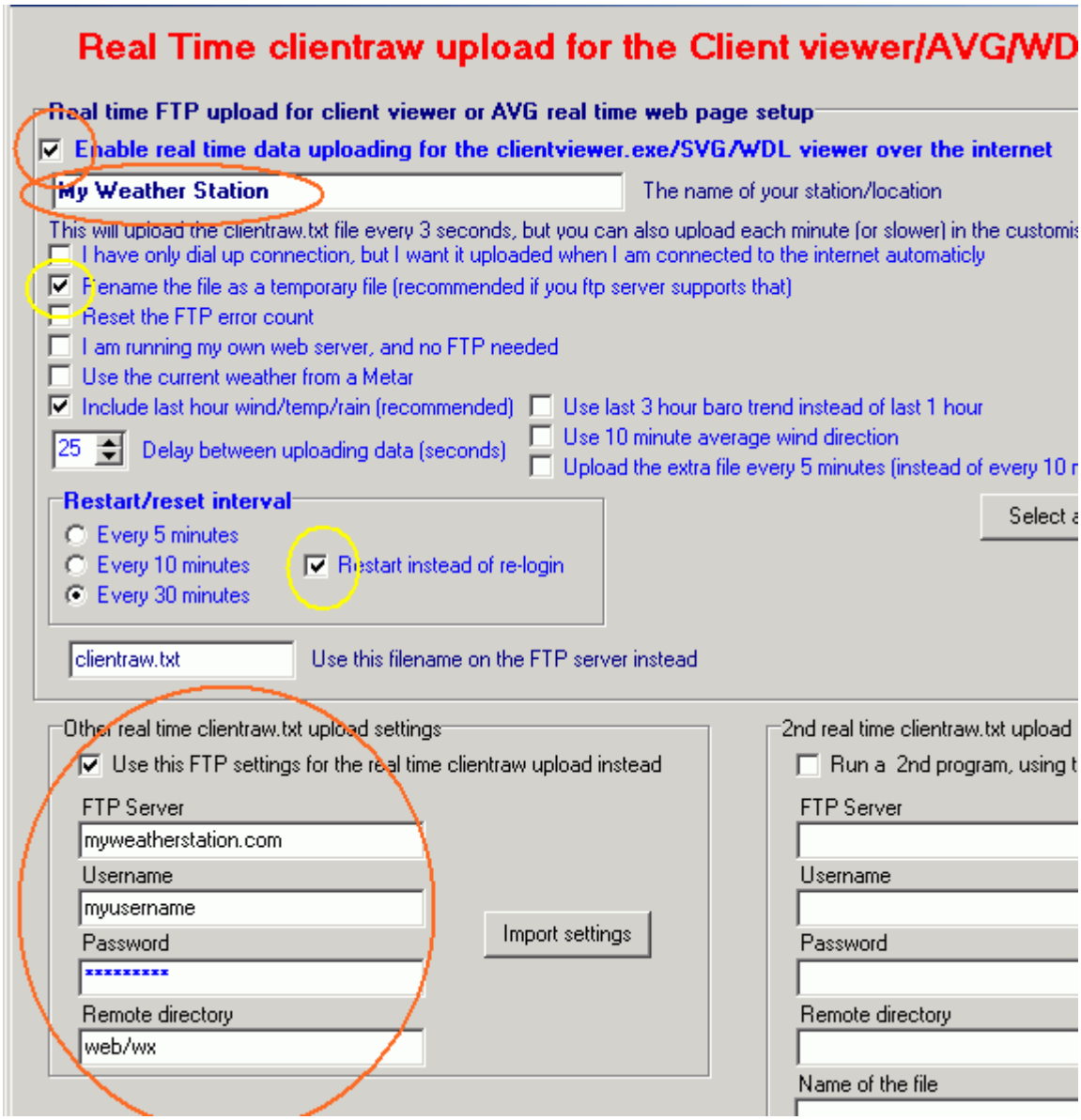
It is also recommended to set the two options circled in yellow below

- Rename file (may not be supported by all FTP/web servers)
- Restart instead of re-login

You can change other options, but it's probably a good idea to get the default configuration working and modify the options afterwards.

If you don't already have Weather Display's FTP set up to upload to your website, or want to put the clientraw.txt in a different location complete the items in the large circle at the bottom of the page.

Click on the OK button when done. Weather Display will start a separate program clientrawrealtimeftp.exe that shows in the system tray as 


Real Time clientraw upload for the Client viewer/AVG/WD
Real time FTP upload for client viewer or AVG real time web page setup
Enable real time data uploading for the clientviewer.exe/SVG/WDL viewer over the internet
My Weather Station
The name of your station/location
This will upload the clientraw.txt file every 3 seconds, but you can also upload each minute (or slower) in the customis
I have only dial up connection, but I want it uploaded when I am connected to the internet automaticly
Filename the file as a temporary file (recommended if you ftp server supports that)
Reset the FTP error count
I am running my own web server, and no FTP needed
Use the current weather from a Metar
Include last hour wind/temp/rain (recommended)
Use last 3 hour baro trend instead of last 1 hour
Use 10 minute average wind direction
Upload the extra file every 5 minutes (instead of every 10 r
25
Delay between uploading data (seconds)
Restart/reset interval
Every 5 minutes
Every 10 minutes
Every 30 minutes
Restart instead of re-login
Select a
clientraw.txt
Use this filename on the FTP server instead
Other real time clientraw.txt upload settings
Use this FTP settings for the real time clientraw upload instead
FTP Server
myweatherstation.com
Username
myusername
Password
****
Remote directory
web/wx
Import settings
2nd real time clientraw.txt upload
Run a 2nd program, using t
FTP Server
Username
Password
Remote directory
Name of the file

Integration with Lightning Software

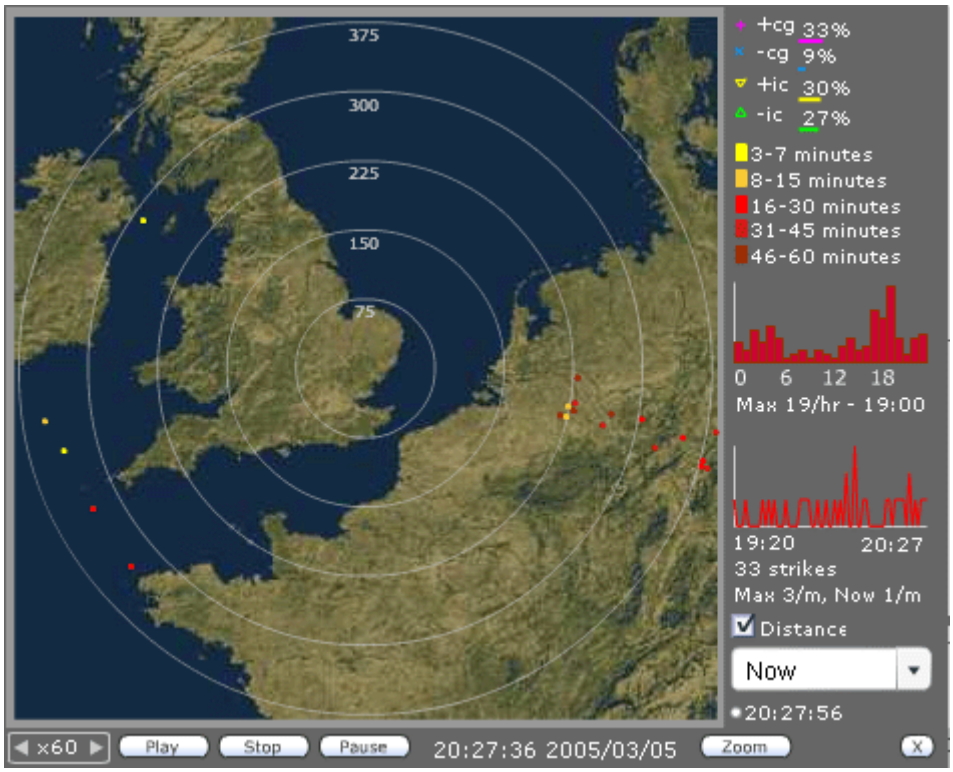
Introduced in v3_02 is integration with lightning detection software from Astrogenics and Aninoquisi.

If you are using Nexstorm from Astrogenics, the strike data can be updated and displayed at a rate of up to every 4 seconds giving you a near real time view of activity. You can even play back the recent lightning activity.

If you are using Lightning 2000 then you can incorporate the lightning strikes map into Weather Display Live and a link can be provided to a strike information text file.

Configuring for Nexstorm

You can now display lightning maps in a very similar manner to the StormVue Java applet but from within Weather Display Live!



Make sure you're using the version of Weather Display 10.19k or later and that the file nexstorm.txt is being correctly uploaded to your website. If you wish to display the last 24 hour plots you need to be running Weather Display 10.21f or later and ensure that the 24 files named nextstorm0.txt – nextstorm23.txt are also being placed in the same location. Put this location into the `<data>` tag in the wdlconfig.xml file. Ensure you have 'nexstorm' in the `<software>` tag.

```
<lightning>
      <software>nexstorm</software>
      <data></data>
      <map></map>
      <mapZoom></mapZoom>
      <distanceRings>75 150 225 300 375</distanceRings>
      <distanceRingsZoom>50 100 150</distanceRingsZoom>
      <distanceRingsColor></distanceRingsColor>
      <showDistances>1</showDistances>
      <distanceUnits>miles</distanceUnits>
      <disclaimer></disclaimer>
      <refresh>15</refresh>
      <offset></offset>
      <range>375</range>
      <rangeZoom>187</rangeZoom>
</lightning>
```

Maps

You'll need to specify a map for the background - this should be 350 x 350 pixels and in jpg (non progressive) format. The radius from your location in the centre should correspond to the range – normally 375 miles – but you can specify this if your installation can track storms from a greater distance. If you wish to calibrate the map in kilometres put 'km' into the `<distanceUnits>` tag. Put the location of the map in the `<map>` tag.

You can optionally put a 'zoomed in' map into the `<mapZoom>` tag with a corresponding value of the range in the `<rangeZoom>` tag. If you leave it blank then the zoom button will not be displayed.

Disclaimer, offset and refresh rates

You can optionally choose to put a disclaimer message which will be displayed when the lightning window is first started. If you wish to not display a message just leave the tag empty.

If you have put an offset correction in the Nexstorm software you'll need to do the same for Weather Display Live by putting in an offset in degrees in the `<offset>` tag.

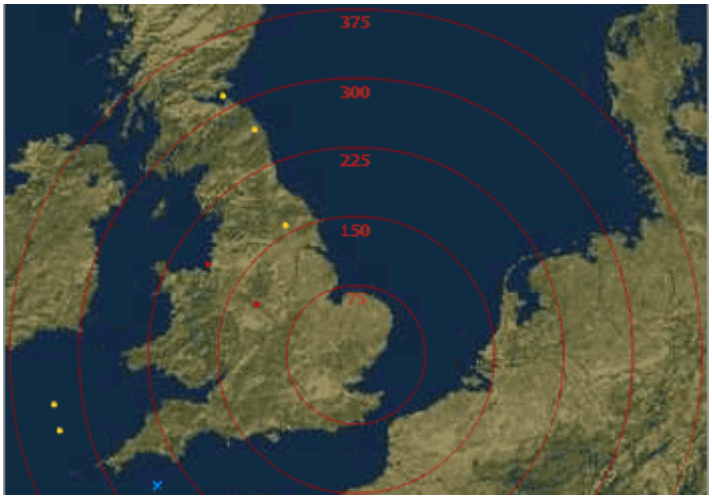
You can set the frequency with which the lighting data is refreshed by entering the appropriate value in the `<refresh>` tag. A minimum of 4 seconds is allowed and the default is 15.

Configuring Weather Display to access Nexstorm

To enable Weather Display to read the Nexstorm data make sure you've enabled the Flashgate IPC in Nexstorm: Options - FlashGate IPC - IPC strike enabled. Then in Weather Display tick the following: Setup - Extra settings/Misc Settings - I want to integrate with Nexstorm.

Distance rings

You can optionally choose to display distance rings and distance units for both the normal and the zoomed maps. You can even choose the colour of the rings to match your map colours. Here are the distance rings displayed in red –

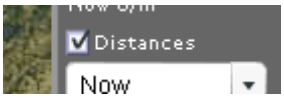


To choose the positioning of the rings enter the distance at which you wish them to appear in the `<distanceRings>` and `<distanceRingsZoom>` tags. Separate each ring distance with a space. You should enter in the same units that you've chosen in the `<distanceUnits>` tag.

You can choose to not display the distances on each ring by setting the `<showDistances>` tag to 0.

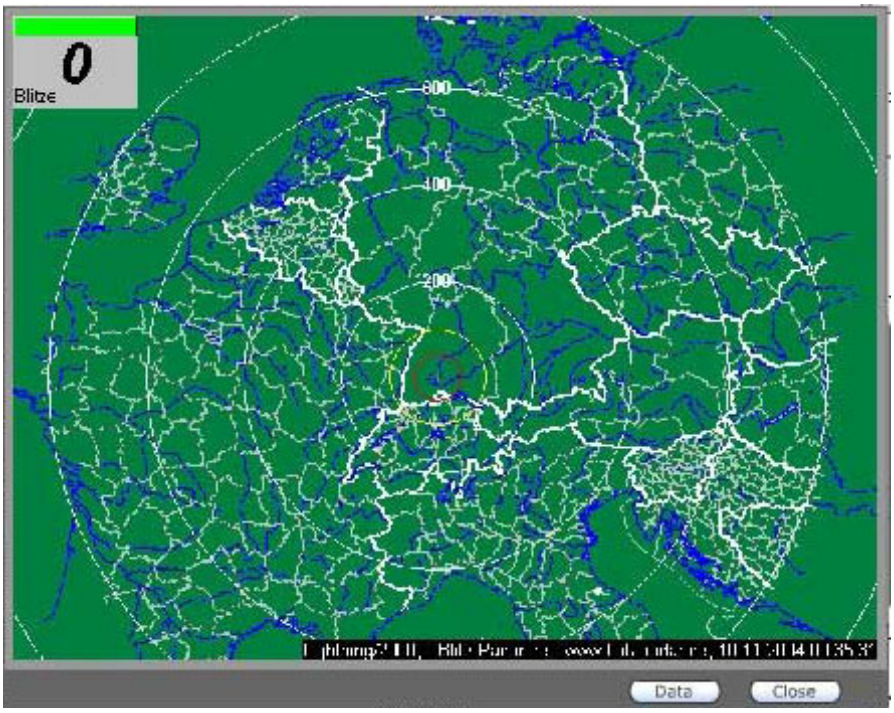
By default the rings are shown in white but you can choose whichever colour you wish by entering the appropriate colour value, in hex, in the `<distanceRingsColor>` tag. These values are readily available on the internet but, for example, white is FFFFFF, yellow is FFFF33, green is 33CC33, red is CC0000 and blue is 0000FF.

The visitor to your website can choose to turn the rings off or on by unticking the 'Distances' checkbox.



Configuring for Lightning 2000

Weather Display Live can also display information from Lightning 2000 although not with the same sophistication. This is due to a live feed not being accessible as yet from Lightning 2000.



To configure Lightning 2000 in Weather Display Live first make sure you have 'l2k' entered in the `<software>` tag.

```
<lightning>
      <software>l2k</software>
      <data></data>
      <map></map>
      <distanceUnits></distanceUnits>
      <refresh>15</refresh>
      <offset></offset>
      <range></range>
</lightning>
```

In the <map> tag enter the location for the lightning strikes map.

You can set the frequency with which the lighting data is refreshed by entering the appropriate value in the <refresh> tag. A minimum of 4 seconds is allowed and the default is 15.

If you wish to let visitors view the nowcast.txt or summary.txt files put their location into the <data> tag.

You can optionally choose to put a disclaimer message which will be displayed when the lightning window is first started. If you wish to not display a message just leave the tag empty.

The other lightning tags are not used with Lightning 2000.

Showing the Lightning button

Finally make sure you're displaying the button 'lightning' to give users the option to see the lightning display –

```
<btnLightning>
      <show>1</show>
      <order>10</order>
</btnLightning>
```

Note that Weather Display Live will count strikes even if they are off the map. Just because they are not displayed doesn't mean they haven't occurred!

MesoMap Live

Introduced with v4_01 of Weather Display Live is MesoMap Live which provides you with a way of displaying weather data from Metars and Weather Display stations on a map. The version included with Weather Display Live is a reduced feature version of the full MesoMap Live incorporating support for one map only. The weather data is updated every 15 minutes from Weather Display stations and on a less frequent basis from Metars which vary depending upon the airport.

MesoMap Live is free to use in Evaluation mode for a limited number of stations for a fixed map of the UK. If you wish to configure your own map then you'll need to subscribe to a live data feed at http://wxd.weather-watch.com/amember/signup.php

To set up a map you will need to –

1. Configure your map location by entering longitude and latitude co-ordinates at the **MesoMap Live Management Centre (MMLMC)** http://wxd.weather-watch.com/mml_sys/index.php
2. Make a map to match your co-ordinates. Maps can be found on the internet at places such as http://www.aquarius.geomar.de/omc_intro.html. Each map must be in jpg format (not progressive jpg). This is a requirement in Flash. For best results the map must be 350x350 pixels
3. Configuring the wdlconfig.xml file to match your map.

Testing in evaluation mode

Place the file mapsmall.jpg in the same directory as Weather Display Live and make sure that the following tags haven't been changed –

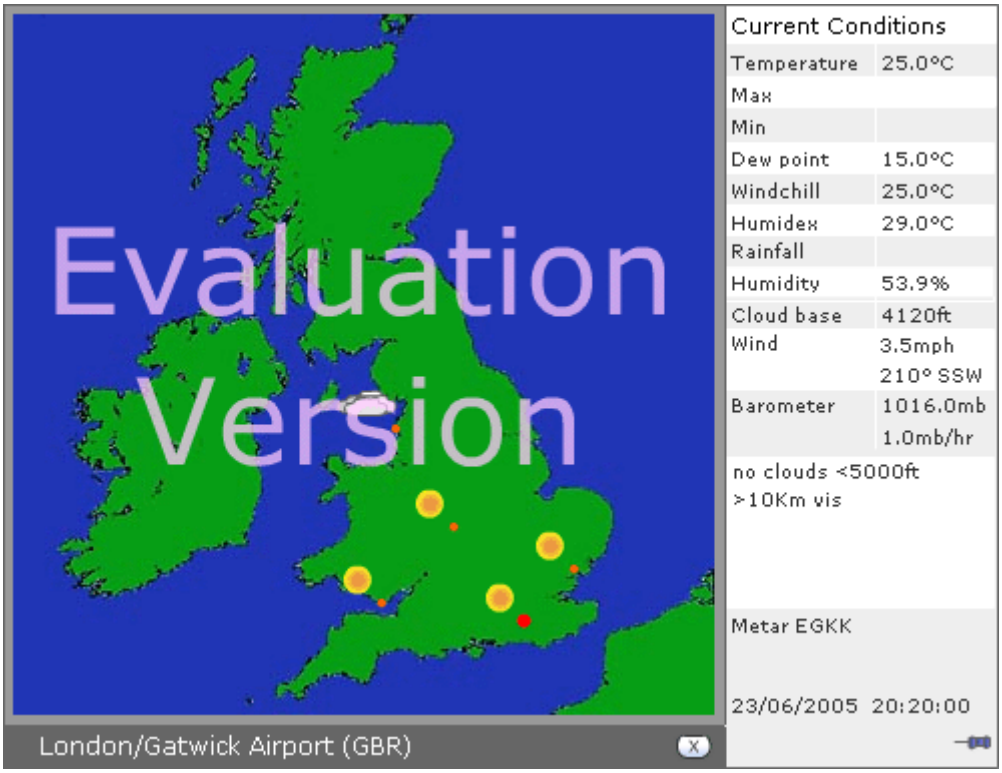
```
<map>
      <number>1</number>
      <url>mapsmall.jpg</url>
</map>
<userName>evaluation</userName>
```

Then display the MesoMap Live button so that you can show MesoMap Live –

```
<btnMml>
      <show>1</show>
      <order>12</order>
</btnMml>
```

Ensure that the `<order>` number corresponds to the position at which you wish the button to appear. If you enable all 12 available buttons you will find that they won't all fit on the screen but this is an unlikely situation.

You should then be able to refresh Weather Display Live in your browser, click on the MesoMap button and see the evaluation version displaying a few stations on a map of the UK.



Note that you can keep the slide bar permanently open by clicking on the "push pin" at the bottom right of the screen.

Configuring your own map

After signing up for a data feed at http://wxd.weather-watch.com/amember/signup.php, and hopefully sharing your own weather data with the world, you'll be able to create your own map.

There are several sources of free maps on the internet with one of the best being at http://www.aquarius.geomar.de/omc_intro.html You will probably need to make some adjustments to it in your favourite image editing program but the effort will be well worth it. Enter the location of your map into the `<url></url>` tags.

Setting the speed of weather icon rotation

To change the speed of rotation between weather parameters enter the required speed in seconds into this line

```
<auto>5</auto>.
```

Change 5 to 10 for a pause of 10 seconds between each rotation. Setting to 0 will cause the rotation to stop and allow you to have a static display showing all parameters at once. You will need to amend the offsets in this situation to avoid icons overlapping.

Slide Bar

You can choose whether the current conditions slide bar is always open or opens only when a station is 'moused over'. Use the tag –

```
<slideBar>0</slideBar>
```

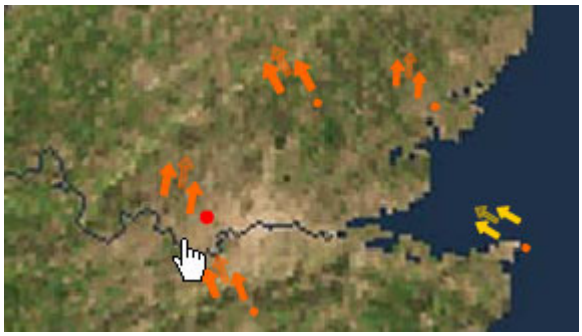
Set to 0 to keep it closed until 'moused over' or 1 for it to always be open.

Changing the Colour of the Station Markers

By default the station markers are an "orangey–red" colour but this might not suit the colour of the map you are using. However this can be customised. To change the colour simply enter the colours for when "moused over" and normal in hexadecimal as you would do for a web page. For example to change the markers to a bright yellow and an orange when "moused over" you would change the tags –

```
<stationColour>#FFFF00</stationColour>
<stationHighlight>#FF9900</stationHighlight>
```

Most image editors will show you the hexadecimal equivalents for colours and they are also readily available on the intranet.



Offsets and Size

You can specify the offset from the station marker for the temperature, wind, pressure and condition icons. Default values have been used but if you change the size of icons or use a static rather than rotational display of information you may wish to make amendments. This can also be useful if you have a limited number of stations for your map, enlarging the icons can improve the look.

To change the offset simply enter values, corresponding to the number of pixels away from the station marker into the <x> and <y> tags.

The size tags are based on a percentage. Therefore to increase the size of an icon by 50% you would enter 150.

For example to increase the size of the temperature values by three quarters and move them away from the station marker by twice the amount you would enter values such as –

```
<tempOffsetx>24</tempOffsetx>
<tempOffsety>24</tempOffsety>
<tempSize>175</tempSize>
```

Don't forget you can do this for individual weather parameters, either globally or for individual maps – see *Global and Individual Map Settings.*

Fine Alignment of Maps

Sometimes it can be difficult to ensure your map is accurately aligning with the location of stations. To assist you can tweak the position by +- 50 pixels globally or for individual maps. Simply enter the required offset into this tag then refresh your webpage to view the changes –

```
<fineAlignx>0</fineAlignx>
<fineAligny>0</fineAligny>
```

Wind Arrows

The wind arrows can be animated or static. By default they are set to be animated but can be changed to static by entering a 0 into this tag –

```
<windAnimated>1</windAnimated>
```

Linking to the Full Version of MesoMap Live

If you have the full version of MesoMap Live then you can add a button to the screen which will launch a new browser window with the appropriate web page.

To do this enter your MesoMap Live web page into the `<fullVersionUrl></fullVersionUrl>` tag and enter the label that you want to appear on the button into the `<fullVersionLabel></fullVersionLabel>` tag

```
<fullVersionUrl></fullVersionUrl>
<fullVersionLabel></fullVersionLabel>
```

If you wish to have more than one map, larger maps, more user controls and more customisable features then upgrade to the full version of MesoMap Live. See http://www.weather-display.com/mmlive.php for more information.

Customising the weather instruments

Introduced with v2 of Weather Display Live is the ability to configure the visibility, size and position of all the weather instruments and most of the other objects. Additionally, for many instruments you can choose whether to display the data on an instrument, as text or not display it at all. If you display the data as an instrument then you have the option of setting a hyperlink on it with tool tip type text of your choice. This is all set within the wdlconfig.xml file.

A number of pre-built wdlconfig.xml files are bundled in the installation package, to meet common requirements, but virtually any configuration can be achieved through amending the wdlconfig.xml file, or one of the other configuration files, yourself.

The instrument tag

A typical instrument tag in the wdlconfig.xml file looks like this –

```
<instTemp>
      <x>520</x>
      <y>262</y>
      <show>1</show>
      <size>100</size>
      <url></url>
      <title></title>
      <colour></colour>
      <instrument>temp</instrument>
</instTemp>
```

This particular set is for the main Temperature instrument.

- The <x> and <y> tags are co-ordinates specifying the position of the instrument (see *Accurately positioning instruments*).
- The <show> tag determines whether the instrument is displayed or not, 1 to show, 0 to hide.
- The <size> tag sets the percentage size of the instrument – 100 is normal size, 50 is half size, 200 is twice normal size etc.
- The <url> tag is the hyperlink to place on the instrument and the <title> tag is the associated tool tip type text.
- The <colour> tag is specific to this instrument and determines the colour of mercury in the thermometer. If left blank the colour changes dependent upon temperature or else an hexadecimal value can be entered for a fixed colour.
- Finally the <instrument> tag determines how the data will be shown, the options for this instrument being temp (as a thermometer), textLinear for a gauge style instrument or textTemp (as text). Note that this is case sensitive.

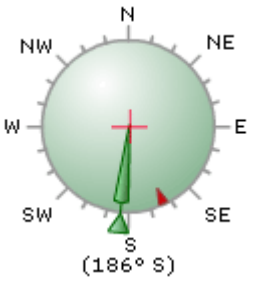
Some data readings can be displayed as animated dials or gauges, or as text, whilst

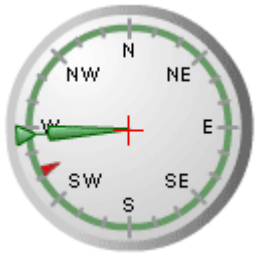
others can only be displayed as instruments (the wind dials) or as text (the barometer). There are also some objects which are text only, by nature, but can still be placed anywhere on the screen, such as the rainfall rate, the current conditions or the minimum/maximum temperature readings.

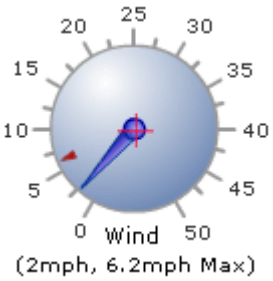
The weather instrument options

+ indicates the registration point (see *Accurately positioning instruments)*

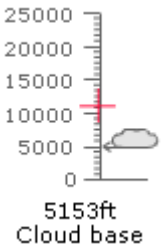
.

	Description	Wind Direction – open style instrument
	Tag	`<instWindDir>`
	Instrument options	windDirOpen windDirGauge textWindDir (text only)
	Notes	Red arrow indicates the averaged wind direction.

	Description	Wind Direction – gauge style instrument
	Tag	`<instWindDir>`
	Instrument options	windDirOpen windDirGauge textWindDir (text only)
	Notes	Red arrow indicates the averaged wind direction.

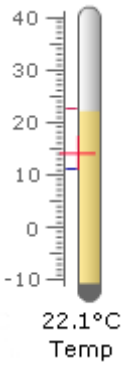
	Description	Average Wind Speed, or Gust Wind Speed. Open style instrument
	Tag	`<instWindAvg>` `<instWindGust>`
	Instrument options	windSpeedOpen windSpeedGauge textWindAvg (text only) textWindGust (text only)
	Notes	Red arrow indicates the maximum wind speed or gust of the day

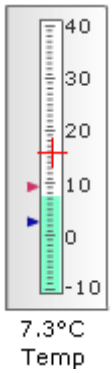
	Description	Average Wind Speed, or Gust Wind Speed. Gauge style instrument
	Tag	`<instWindAvg>` `<instWindGust>`
	Instrument options	windSpeedOpen windSpeedGauge textWindAvg (text only) textWindGust (text only)
	Notes	Red arrow indicates the maximum wind speed or gust of the day

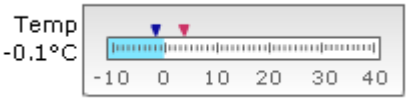
	Description	Cloud Base Height
	Tag	`<instCloudBase>`
	Instrument options	This instrument only, text option not available
	Notes	

	Description	Weather Icons
	Tag	`<instIcons>`
	Instrument options	Icon only, text option not available
	Notes	The lightning activity warning icon is displayed here when triggered.

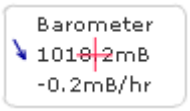
	Description	Rainfall rate / days without rain
	Tag	`<txtRainRate>`
	Instrument options	`<showRainRateHour>`
	Notes	Rainfall rate appears during and after rain. The total number of days without rain will be shown if more than 3. Setting the tag `<showRainRateHour>` to 1 will display the rate /hour.

	Description	Temperature, WindChill, Heat, Dew point, Indoor temperature, Apparent temperature, extra sensors.
	Tag	<instTemp> <instWindChill> <instHeat> <instDew> <instTempIndoor> <instApparent> <instTempSoil>
	Instrument options	temp (thermometer) tempLinear (bar) tempLinearHorizontal (bar) tempGauge (gauge) textTemp (text only)
	Notes	<colour> tag will set colour of 'mercury' – enter a value in hexadecimal. 'Mercury' will auto colour if tag left blank. Instrument options tag is case sensitive!

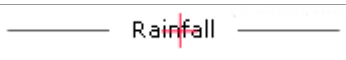
	Description	Temperature, WindChill, Heat, Dew point, Indoor temperature, Apparent temperature. Bar style instrument, extra sensors.
	Tag	<instTemp> <instWindChill> <instHeat> <instDew> <instTempIndoor> <instApparent> <instTempSoil>
	Instrument options	temp (thermometer) tempLinear (bar) tempLinearHorizontal (bar) tempGauge (gauge) textTemp (text only)
	Notes	<colour> tag will set colour of 'mercury' – enter a value in hexadecimal. 'Mercury' will auto colour if tag left blank. Instrument options tag is case sensitive!



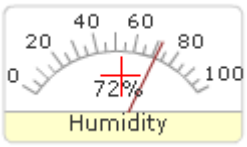
Description	Temperature, WindChill, Heat, Dew point, Indoor temperature, Apparent temperature, extra sensors. Bar style horizontal instrument
Tag	`<instTemp>` `<instWindChill>` `<instHeat>` `<instDew>` `<instTempIndoor>` `<instApparent>` `<instTempSoil>`
Instrument options	temp (thermometer) tempLinear (bar) tempLinearHorizontal (bar) tempGauge (gauge) textTemp (text only)
Notes	`<colour>` tag will set colour of 'mercury' – enter a value in hexadecimal. 'Mercury' will auto colour if tag left blank. Instrument options tag is case sensitive!



Description	Barometer including direction of change icon and rate of change (text and mercury version only).
Tag	`<instBarometer>`
Instrument options	textBarometer gaugeBarometer (gauge) meterBarometer (displays meter below) mercuryBarometer (displays mercury barometer below)
Notes	Instrument options tag is case sensitive!

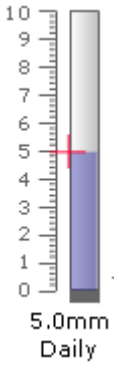


Description	Text logo for rain tanks
Tag	`<txtRainFall>`
Instrument options	None
Notes	This object has an `<options>` tag which determines whether the lines appear either side of the text.

	Description	VU style meter for Humidity, Indoor humidity, Barometer

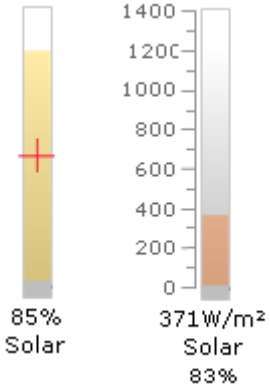
	Tag	`<instHumidity>`
		`<instHumidityIndoor>`
		`<instBarometer>`

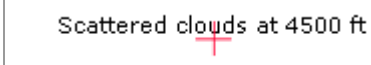
	Instrument options	meterHumidity (meter) meterBarometer (meter) textHumidity (text only)
	Notes	Instrument options tag is case sensitive!

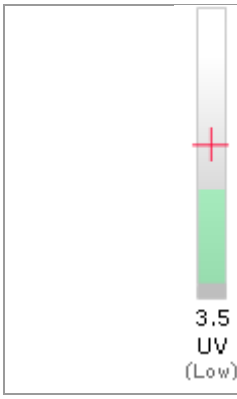
	Description	Rain tank Daily, Monthly, Annual

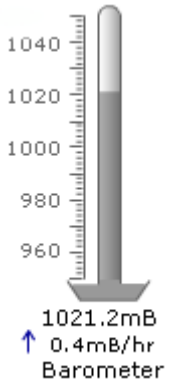
	Tag	`<instRainDay>`
		`<instRainMonth>`
		`<instRainYear>`

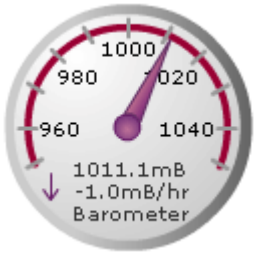
	Instrument options	rain (tank) rainLinear (bar) textRain (text only)
	Notes	Instrument options tag is case sensitive!

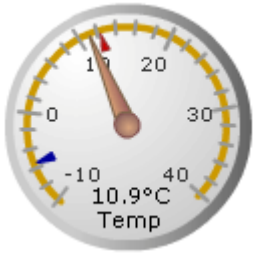
	Description	Solar Bar
	Tag	`<instSolar>`
	Instrument options	None
	Notes	Enter 0 – 3 in the `<options>` tag for the following - 0. Solar bar displayed in % with % value displayed as text. 1. Solar bar displayed in % with both % and W/m^2 value displayed as text. 2. Solar bar displayed in W/m^2 with both W/m^2 and % value displayed as text 3. Solar bar displayed in W/m^2 with W/m^2 displayed as text. The instrument may need to be given more width space if W/m^2 is shown. The solar graph will automatically be enabled if the solar bar is displayed.

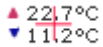
	Description	Current Conditions text.
	Tag	<txtConditions>
	Instrument options	None
	Notes	This object can hold several lines of text which is why the registration point appears too low.

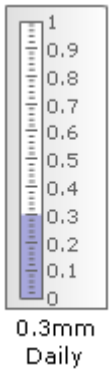
	Description	UV Bar
	Tag	<instUV>
	Instrument options	None
	Notes	Last 24 hour UV graph will be displayed if <show> is set to 1.

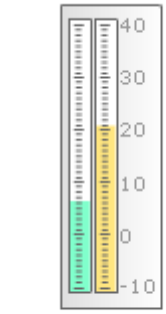
	Description	Mercury style barometer including direction of change icon and rate of change.
	Tag	<instBarometer>
	Instrument options	mercuryBarometer gaugeBarometer (gauge) meterBarometer (displays meter above) textBarometer (displays text barometer above)
	Notes	Instrument options tag is case sensitive!

	Description	Gauge style barometer including direction of change icon and rate of change.
	Tag	<instBarometer>
	Instrument options	gaugeBarometer (gauge) mercuryBarometer meterBarometer (displays meter above) textBarometer (displays text barometer above)
	Notes	Instrument options tag is case sensitive!

	Description	Gauge for Temperature, WindChill, Heat, Dew point, Indoor temperature, Apparent temperature, extra sensors.
	Tag	<instTemp> <instWindChill> <instHeat> <instDew> <instTempIndoor> <instApparent> <instTempSoil>
	Instrument options	temp (thermometer) tempLinear (bar) tempLinearHorizontal (bar) tempGauge (gauge) textTemp (text only)
	Notes	Instrument options tag is case sensitive!

	Description	Minimum / Maximum readings for Temperature, Indoor temperature, WindChill, Heat, Barometer
	Tag	<txtTempMinMax> <txtTempIndoorMinMax> <txtWindChillMinMax> <txtHeatMinMax> <txtBaroMinMax>
	Instrument options	None
	Notes	Text only

	Description	Rain bar Daily, Monthly, Annual
	Tag	<instRainDay> <instRainMonth> <instRainYear>
	Instrument options	rain (tank) rainLinear (bar) textRain (text only)
	Notes	Instrument options tag is case sensitive!

	Description	Dual temperature
	Tag	<instDualTemp1> <instDualTemp2> etc.
	Instrument options	tempDualLinear tempDualLinearHorizontal
	Notes	You can determine what to display by entering one of the following into the tags <temp1> and <temp2>. Choose from – Temp, Dew, Heat, Windchill, Apparent, TempSoil, TempIndoor or any of the extra sensors when displaying temperature – Extra1 - Extra16. See below for more on this instrument.

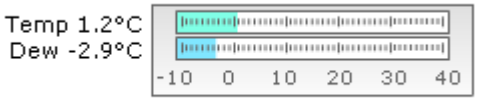
Not applicable	Description	Extra Sensors
	Tag	<instExtra1> to <instExtra16>
	Instrument options	temp (thermometer) tempLinear (temp gauge) textTemp (text only) meterHumidity (meter) textHumidity (text only)
	Notes	There is an additional tag called <label></label> which is the text that appears below the instrument.

The extra sensor tags can be used to display a wide range of instruments or text, depending upon what is fed into those inputs on Weather Display. To use them effectively though you will have to customise Weather Display Live as they do not appear on the basic Weather Display Live screen.

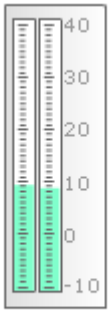
Dual Temperature Instrument

The dual temperature instrument provides a lot of flexibility as to what is displayed. The instrument can be used as many times as you wish on the display and you can choose from 6 different temperature options plus any of the 16 extra sensors.

The basic tags are as follows –




```
<instDualTemp1>
      <x>50</x>
      <y>262</y>
      <show>0</show>
      <size>100</size>
      <url></url>
      <title></title>
      <colour></colour>
      <temp1>Dew</temp1>
      <temp2>Temp</temp2>
      <instrument>tempDualLinear</instrument>
</instDualTemp1>
```



If you wish to add more than one instrument simply add the group of tags above again to the wdlconfig.xml file but increment the tag to be `<instDualTemp2>` or `<instDualTemp3>` etc. as required.

The instrument tag can be either `tempDualLinear` or `tempDualLinearHorizontal` – both styles are shown above. Note that the scales are permanently locked so it's not advisable to display two values which exceed a difference of 50°C.

You can choose which temperature values to display by entering the appropriate values into the tags –

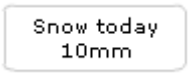
```
<temp1>Dew</temp1>
<temp2>Temp</temp2>
```

In this example the instrument will display Dew on the left and Temperature on the right but you can choose from –

- Temp
- Apparent
- Dew
- Heat
- Windchill
- TempIndoor
- TempSoil
- Extra1
  to
- Extra16

When you use one of the 16 extra sensors the label shown corresponds to the label value you entered in the wdlconfig.xml file for that extra sensor tag.

Snowfall



You can enter details of snowfall into Weather Display and then optionally choose to display the information from Weather Display Live. There are 3 instrument tags for snowfall as follows –

```
<txtSnowToday>
      <x>50</x>
      <y>100</y>
      <show>0</show>
      <size>100</size>
      <url></url>
      <title></title>
</txtSnowToday>
<txtSnowMonth>
      <x>50</x>
      <y>50</y>
      <show>0</show>
      <size>100</size>
      <url></url>
      <title></title>
</txtSnowMonth>
<txtSnowSeason>
      <x>50</x>
      <y>250</y>
      <show>0</show>
      <size>100</size>
      <url></url>
      <title></title>
</txtSnowSeason>
```

When the <show>1</show> tag is set to 1 then a text box is displayed indicating the snowfall for the day, month or season as appropriate. Note that you'll need to position the text box at a suitable place on the screen.

You can choose to show a 'snow' button which will allow your users to choose between inches and centimetres. See the earlier section in this guide about configuring buttons and initial units.

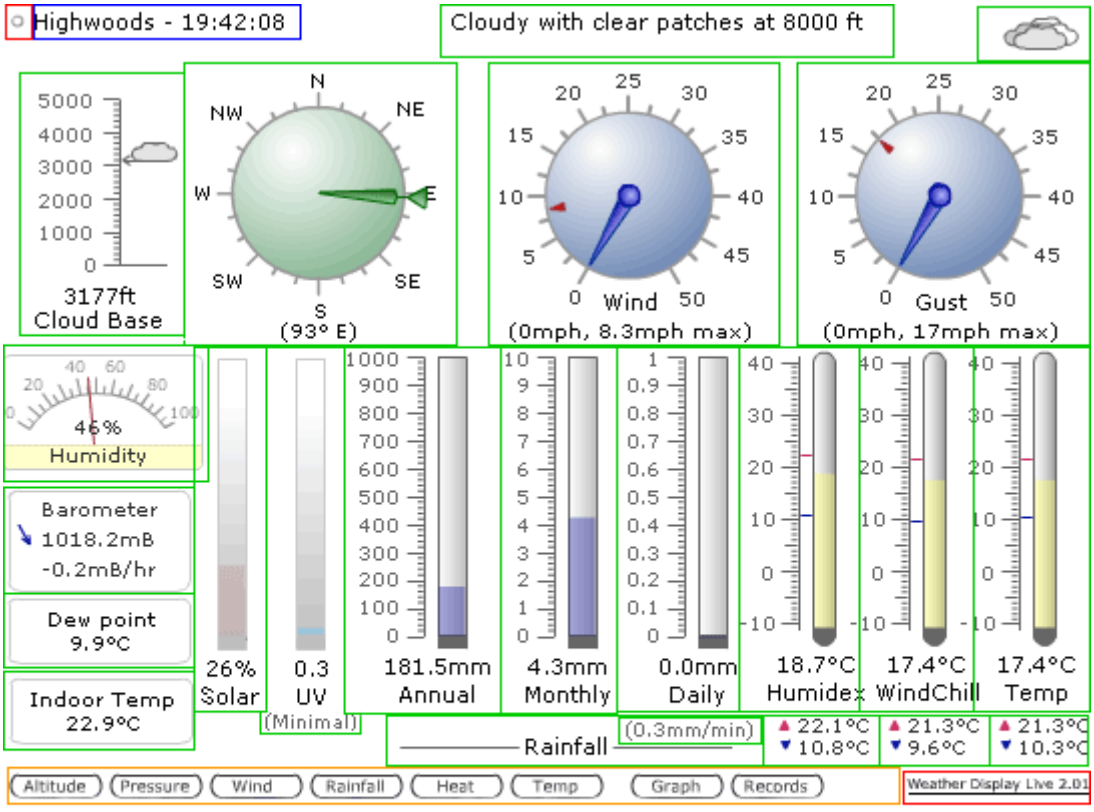
Evapo-transpiration

The current evapo-transpiration (ET) rate is fed in the clientrawextra.txt file from Weather Display which you can then display as text in Weather Display Live. You can choose the units to display from mm or inches. The units will change with the "Rain" units button.

```
<txtET>
      <x>50</x>
      <y>100</y>
      <show>1</show>
      <size>100</size>
      <url></url>
      <title></title>
</txtET>
```

Moving Instruments on the Screen

Each of the instrument or text objects can be moved or positioned according to this picture –



The object cannot be modified

The object can be removed or moved but cannot be resized

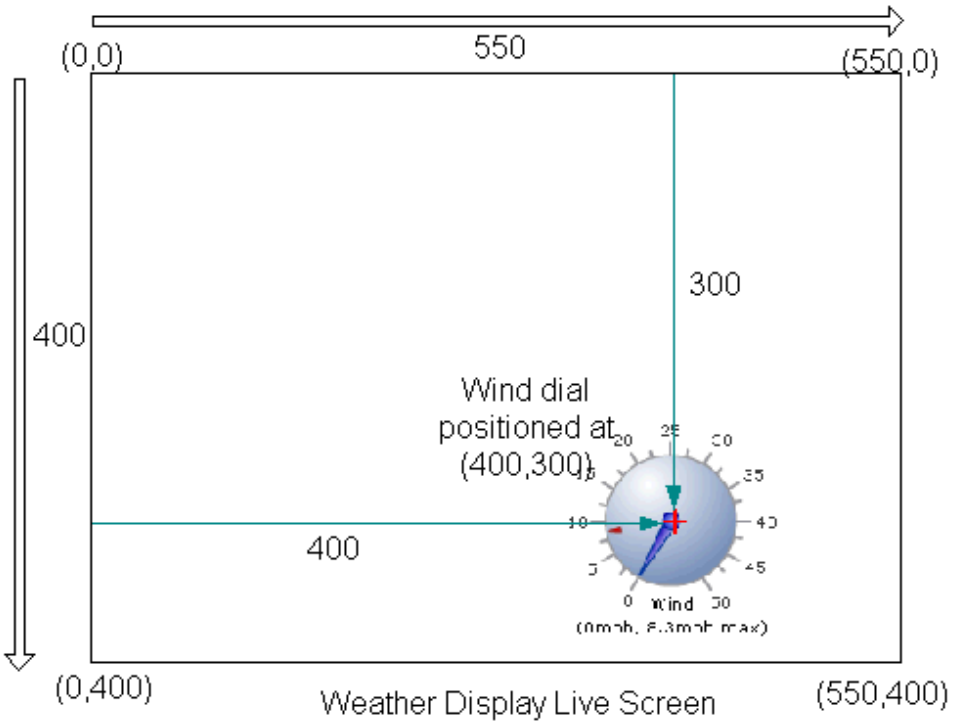
The object can be moved, removed or resized

The object can be removed or modified but not resized

Accurately positioning instruments

The screen is based upon a blank screen 550 units wide by 400 units deep. The position of each weather object is based upon the x,y co-ordinates where the top left corner is 0,0.

The following diagram shows this graphically –



A weather object, perhaps a wind speed instrument, has been positioned in the lower right of the screen, where its co-ordinates are (400,300).

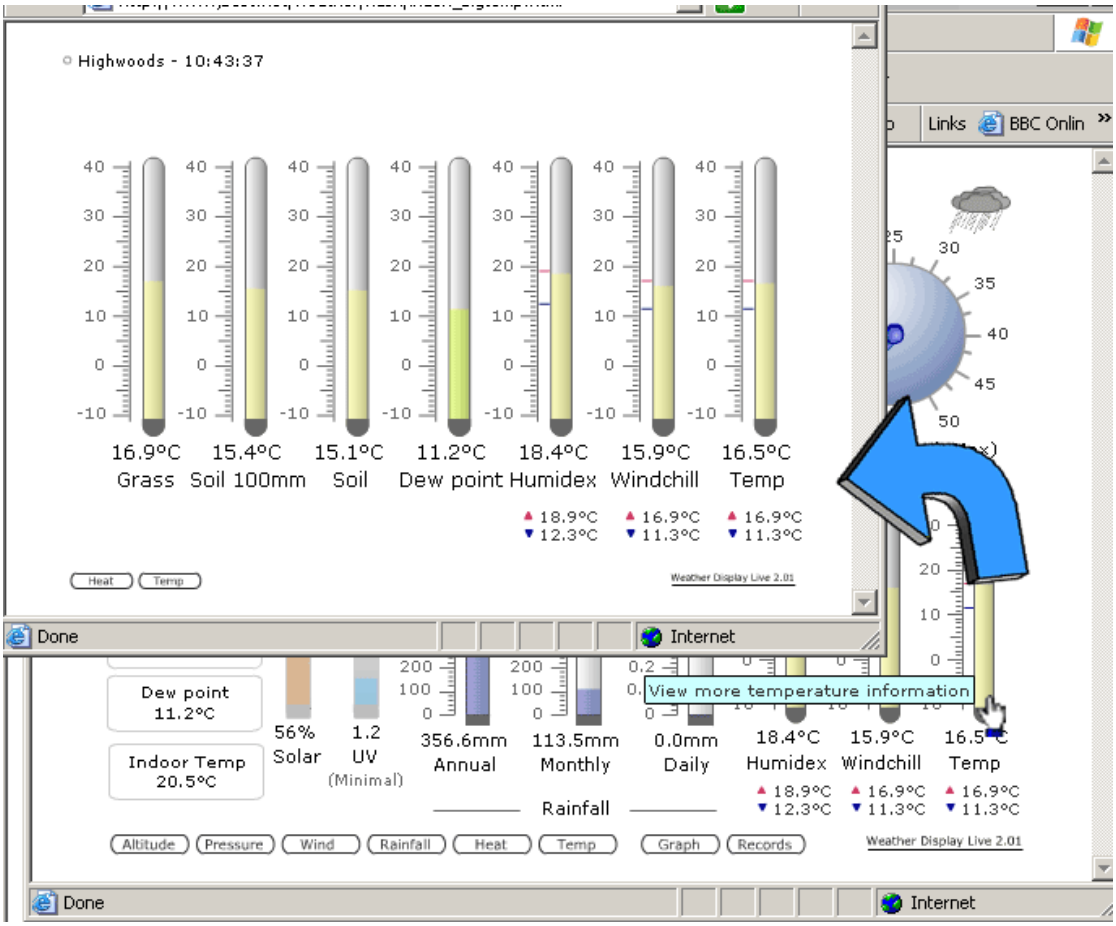
Therefore the tag in the wdlconfig.xml file would look like this –

```
<instWindAvg>
      <x>400</x>
      <y>300</y>
      <show>1</show>
      <size>100</size>
      <url></url>
      <title></title>
</instWindAvg>
```

All objects have a registration point, usually directly in the middle, which corresponds to where they are positioned. The registration point of each object is shown in the list of objects above by the red cross +. In this manner all the objects on the Weather Display Live screen can be accurately positioned.

More configuration possibilities

The ability to create hyperlinks on instruments brings the possibility of having a main screen which can then offer links to further screens showing more information about that particular measurement. For example you may have a basic Weather Display Live screen which has a link on the main temperature thermometer. When this link is clicked it opens a new web page with a different Weather Display Live screen containing further thermometers for soil temperature, grass temperature etc. which can be set up using the extra sensors. There is no limit to the number of Weather Display Live instances that can be used on one website.



.

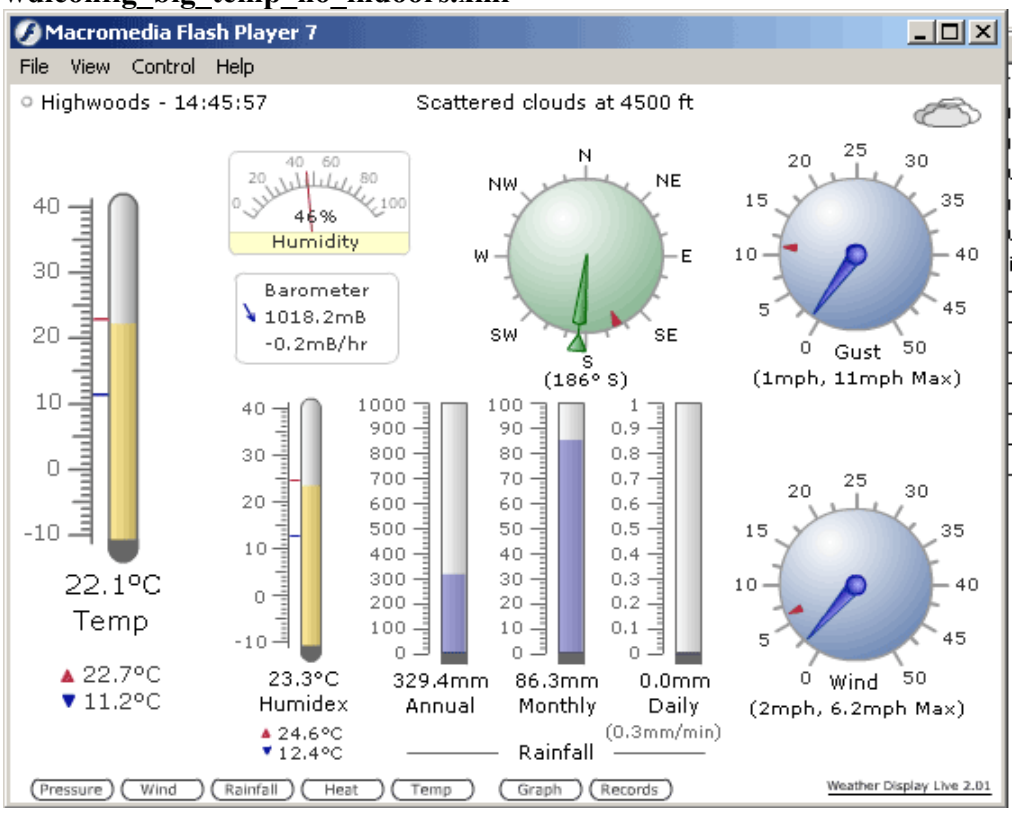
Pre-built configurations

The download package contains a folder called ‘config’. Within it are several wdlconfig.xml files offering a range of Weather Display Live screens. These can be used as they are or used as the basis for a customised display.

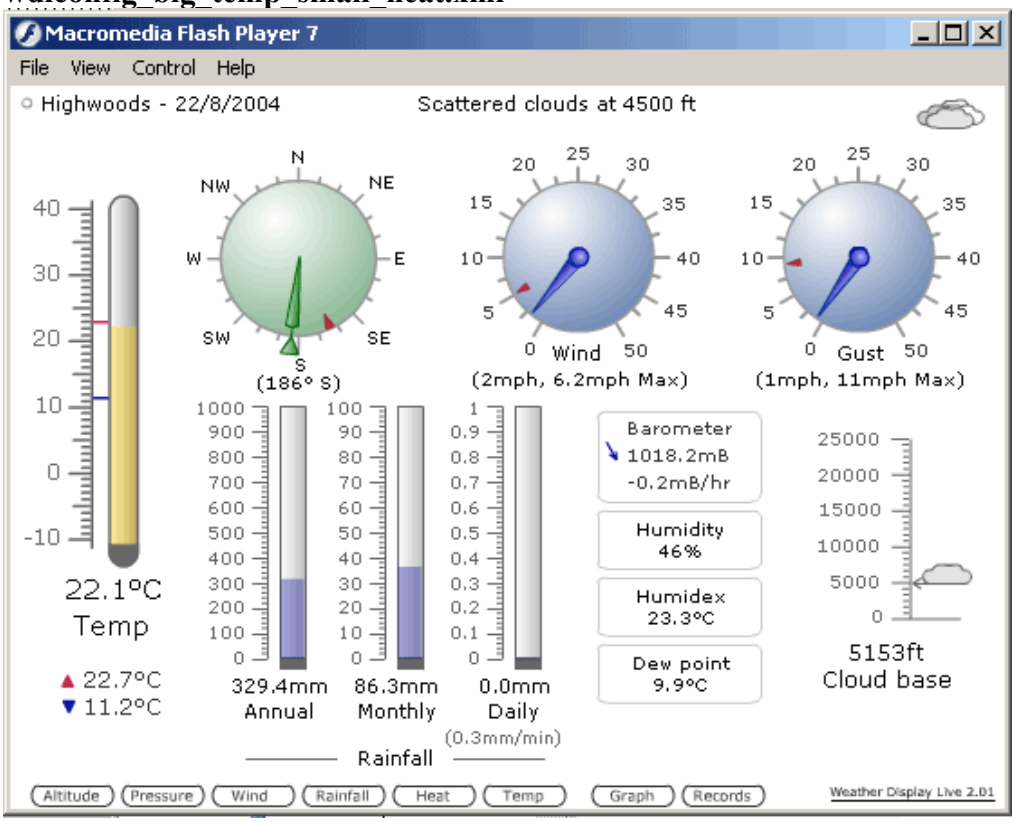
Remember to alter the 2 lines in the index.html file so that the reference is pointing to the wdlconfig.xml file you wish to use. There is no need to rename the file to wdlconfig.xml unless you are viewing it on the local PC. This is because the index.html file is not used when viewing locally so a different name cannot be specified.

Pre-built configuration screenshots

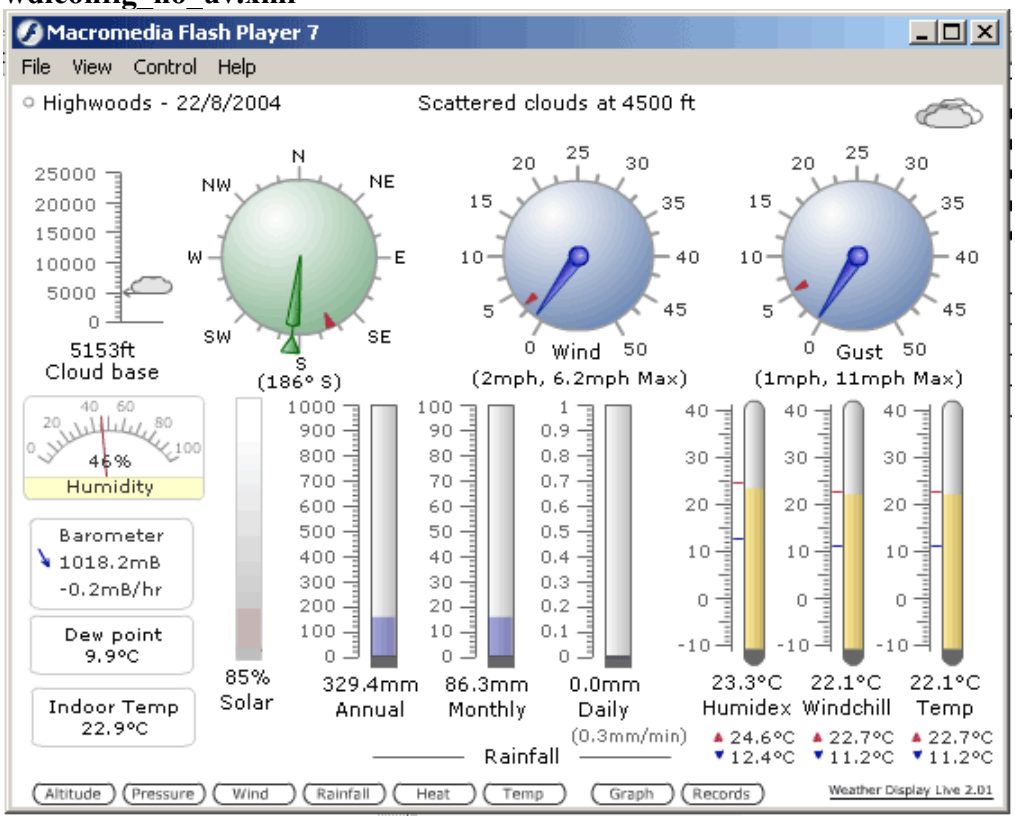
wdlconfig_big_temp_no_indoors.xml



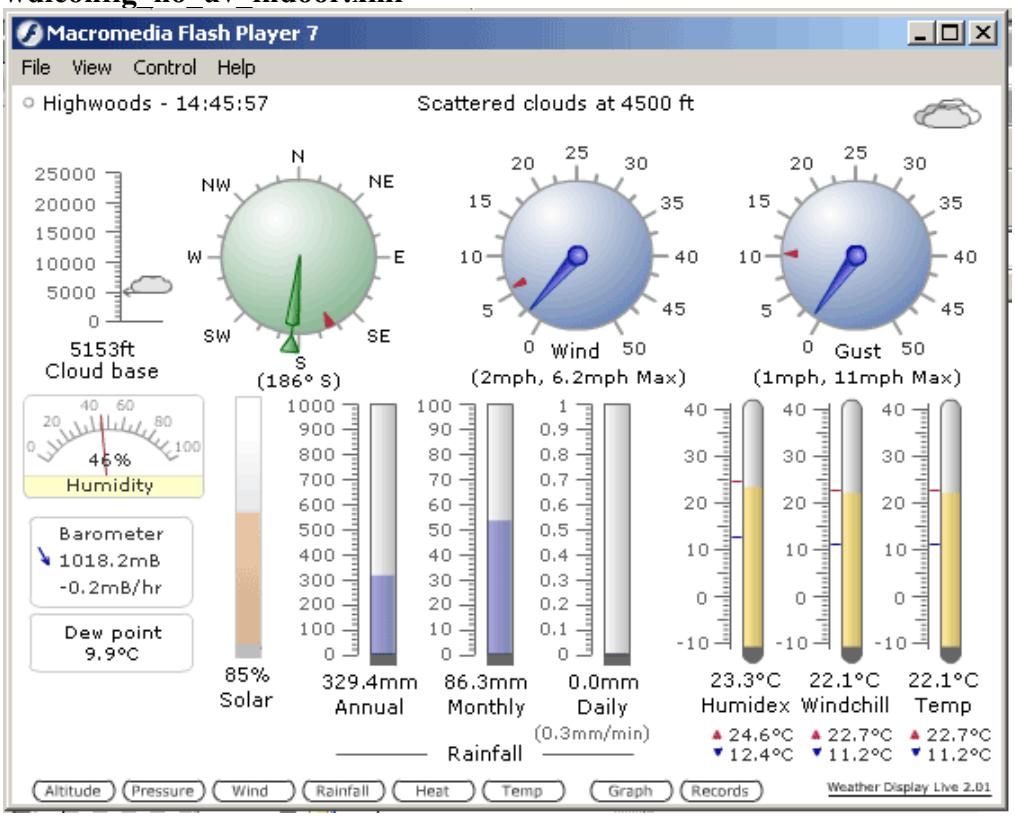
wdlconfig_big_temp_small_heat.xml



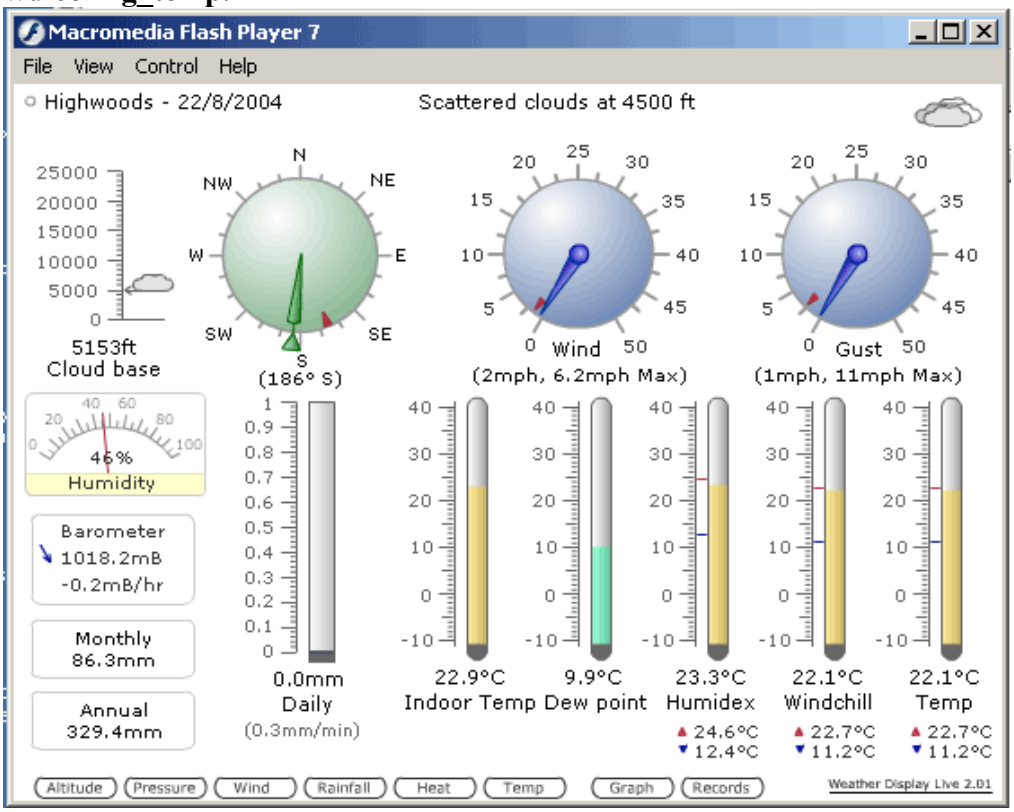
wdlconfig_no_uv.xml



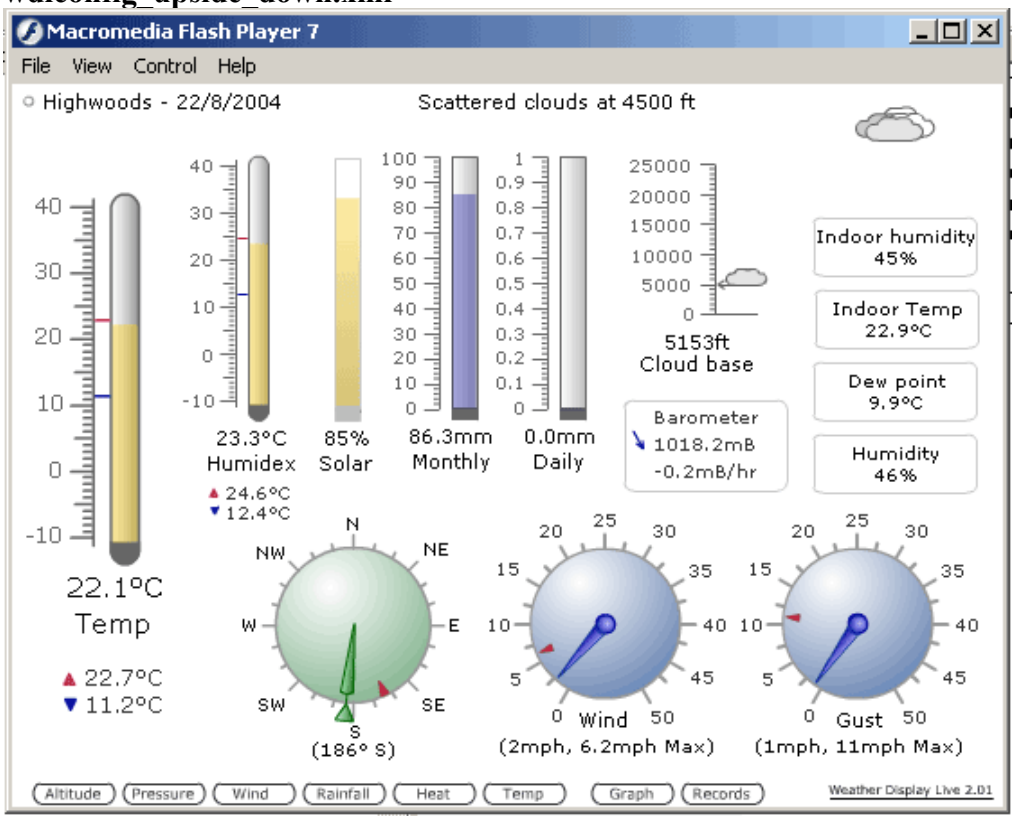
wdlconfig_no_uv_indoor.xml



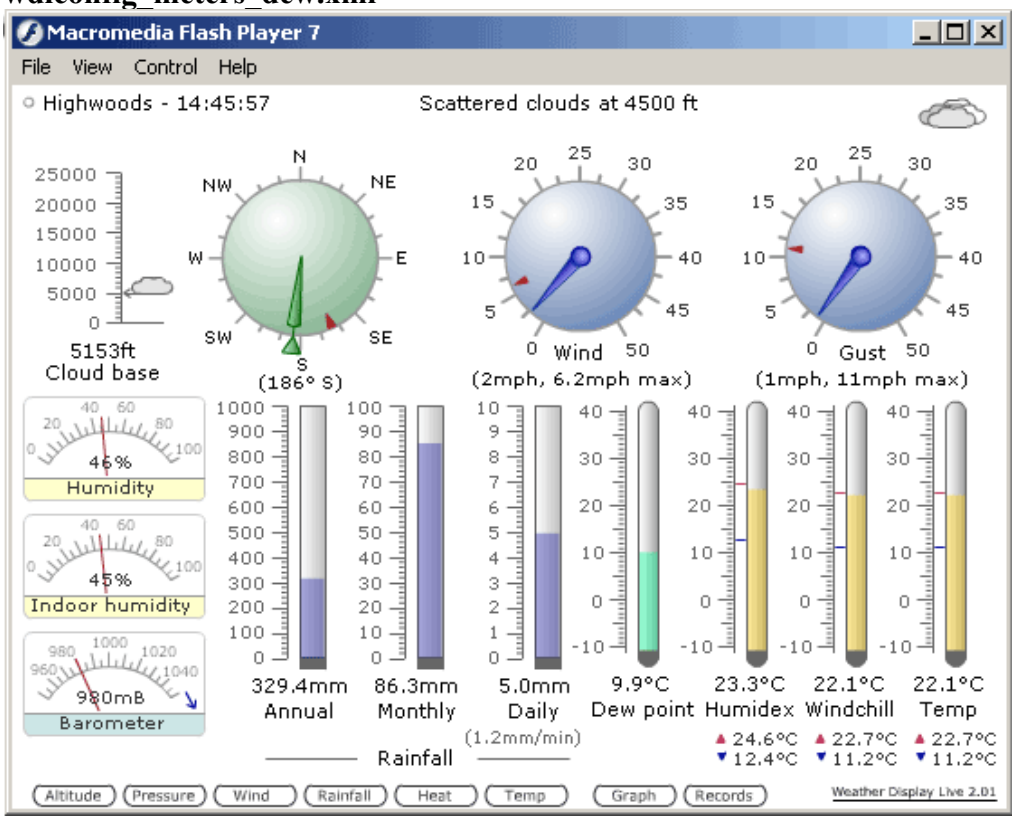
wdlconfig_temp.xml



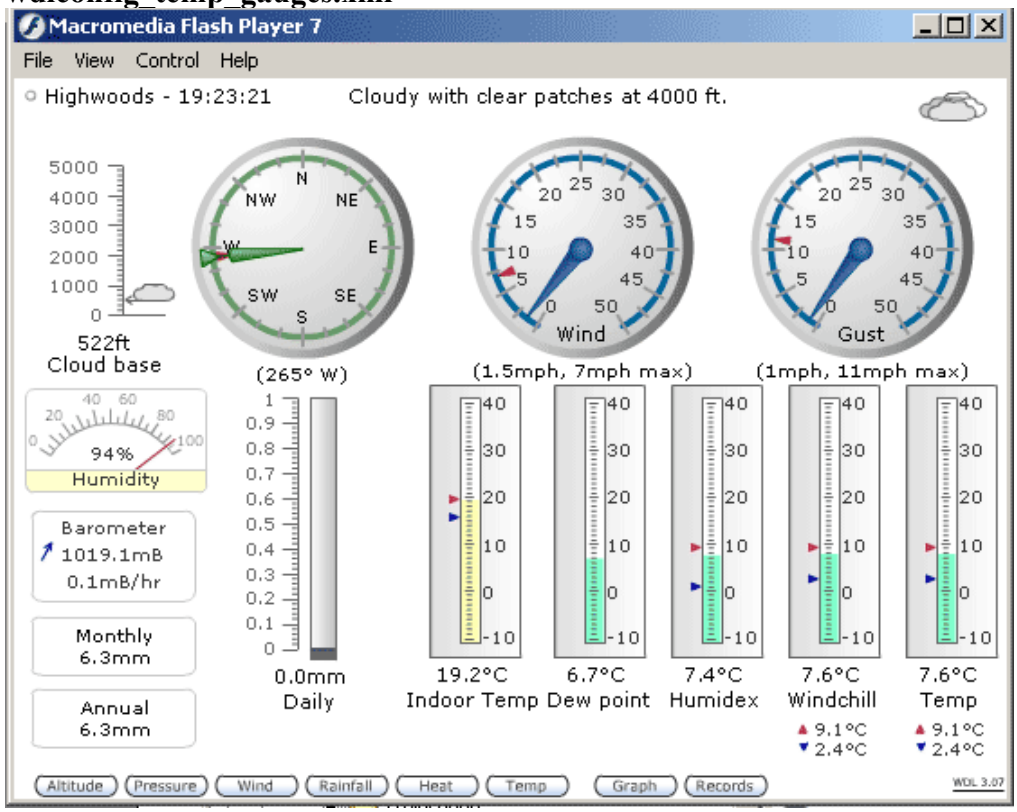
wdlconfig_upside_down.xml



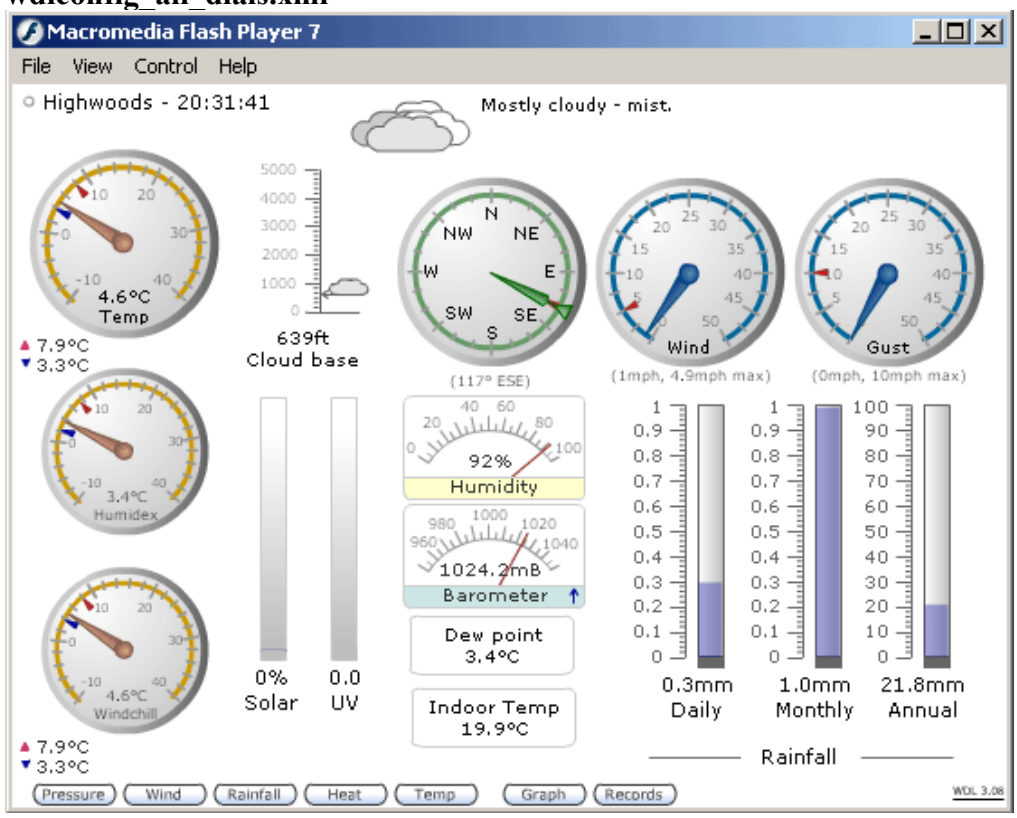
wdlconfig_meters_dew.xml



wdlconfig_temp_gauges.xml

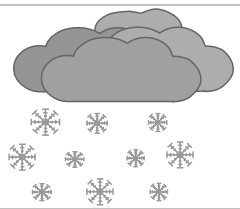
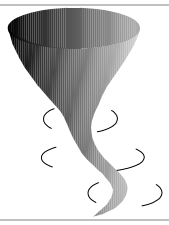
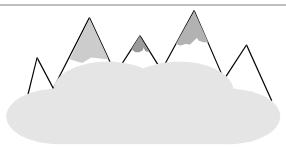
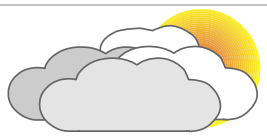
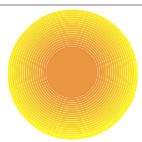
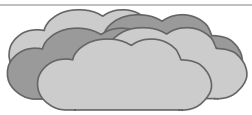


wdlconfig_all_dials.xml



Icons

The following icons are displayed in Weather Display Live. Which icon is displayed depends upon whether you have sync icons enabled within Weather Display and/or the presence of keywords found in the current conditions text.

			
Clear Night	Partly Cloudy Night	Windy	Snow
			
Tornado (animated)	Lightning (animated)	Thunder	Fog
			
Haze	Partly Cloudy	Sunshine	Mist
			
Rain (animated)	Drizzle or showers (animated)	Cloudy	Overcast

Checking for correct version of Flash

Weather Display Live v3 and later requires visitors to your website to use Flash Player v7 or later otherwise it will not load or display incorrectly. The download package includes 3 files which make this easy. The 3 files are –

- flashtest.html
- flashno.html
- flash_detection.swf

The principle is that you make sure all links to your Weather Display Live web page are pointing at flashtest.html. flashtest.html loads a small flash file called flash_detection.swf. If the file detects the correct version of Flash is installed then it redirects the visitor to the main Weather Display Live page (index.html). If the version is incorrect then the visitor is redirected to flashno.html. By default this informs the visitor that they have an incorrect version and how to get the latest. You can customise this page as you wish and indeed you could even display an older version of Weather Display Live which would be compatible with their version.

By default flashtest.html redirects to a webpage called index.html but you can change this easily within the flashtest.html file by altering the **two lines** containing –

```
value="flash_detection.swf?flashContentURL=index.html&altConte
ntURL=flashno.html
```

Future Developments

An area has been setup on the Weather Display forum website for users to share and exchange wdlconfig.xml files they have built.

Other suggestion for improvements and enhancements are always welcome and can be posted on the Weather Display forum at http://www.weather-watch.com/smf/