

# Klock

## Table of contents

---

Introduction .....	3
Welcome .....	3
About .....	4
Getting Started .....	6
System requirements .....	6
Getting help .....	6
Thingy-ma-bobs .....	7
Fuzzy Time .....	7
Countdown .....	8
Timer .....	9
Events .....	10
Reminder .....	11
Conversion .....	12
Clipboard Monitor .....	13
Sticky Note .....	15
Menu .....	16
File .....	17
Time .....	17
Analogue Klock .....	18
LED Klock .....	19
Binary Klock .....	20
Small Text Klock .....	21
Info .....	22
Sticky Note .....	25
Help .....	26
System Tray .....	27
Status bar .....	28
Options .....	29
Global .....	29
Time .....	31
Other Klocks .....	32
Other Stuff .....	32
Logging .....	33
History .....	35
License .....	73
Credits .....	85

## Introduction

---

# Klock - A clock with a K

A multifunction timing thingy, where some [but not necessary all] of the functions are useful.

The multifunction timing thingy is split into many Thingy-ma-bobs - Fuzzy Time, Countdown, Timer, Event, Reminder & Clipboard Monitor.

Kevin scott

Klock

A Help gubbins for the time thingy. A Clock with a K. Build 64.

Copyright © <2013 - 2018> by <Kevin Scott>. All Rights Reserved.

2.2.2.64



The source can be downloaded from - [Klock Source](#)

please contact me at [Here](#)

---

Created with the Personal Edition of HelpNDoc: [Benefits of a Help Authoring Tool](#)

## Welcome

# Welcome To Klock

Kevin scott

Klock

A Help gubbins for the time thingy. A Clock with a K. Build 64.

Copyright © <2013 - 2018> by <Kevin Scott>. All Rights Reserved.

2.2.2.64



The source can be downloaded from - [Klock Source](#)

please contact me at [Here](#)

---

Created with the Personal Edition of HelpNDoc: [Free Qt Help documentation generator](#)

---

## About

### About Klock

Klock - a clock with a k.

A multifunction timing thingy, where some [but not necessary all] of the things are useful.

The multifunction timing thingy is split into many things;

Fuzzy Time, Countdown, Timer, Event, Reminder, Conversion, Sticky Notes & Clipboard Monitor.

Also, the time can be displayed in several ways - text, digital and analogue and binary klocks,

Klock currently consists of over 8000 lines of Free Pascal[Lazarus] code. Klock serves as a vehicle by which I learn and tinker with programming. Previous versions of Klock have existed in VB.net, Python and Free Basic - and may again.

### Fuzzy Time

Allows the current time to be displayed in a number of different formats.

### Countdown

Implements a simple countdown timer [between 1 and 90 minutes].

The time for the countdown can be either entered directly or the up/down controls can be used. The timer can be paused during countdown and stopped before the end is reached. At the end of the countdown, either a sound can be played, a reminder displayed, a system command [system shut down or re-boot] or a external program can be run - or any combination of the four.

### Timer

Implements a simple timer, with split time function.

The timer can be stopped, paused and resumed.

A split function allows for given time to be remembered.

## Events

This enables for events to set up and notifications displayed to the user.

Today's date is default, but a future date can also be selected. A time can also be added to the reminder date. If no date is added, the reminder will fire at midnight. When the reminder is due either a sound can be played, a reminder displayed, a system command [system shut down or re-boot] or a external program can be run - or any combination of the four.

Note : Setting the time to 00:00, indicates midnight of the previous day so will not enable the set button. To set a reminder for midnight of today, disable the time and pick tomorrow's date. 00:00 indicates zero minutes into the present day.

## Reminder

Implements a reminder option.

This enables for [recurring] Reminders to set up and reminders displayed to the user. A number of pre-defined events types are already set up.

## Conversion

Implements a simple conversion screen.

This allows the conversion between various units of weight, distance and area etc.

## Stick Notes

Implements a simple sticky Note thingy.

This allows for the creation of stick Notes, small independent windows that appear on the screen which can hold memo, reminders etc.

Klock will keep track of the notes and re-display any active notes when Klock is first launched.

The button bar contains three buttons -

help - will display a simple help screen, depending upon the tab being currently viewed [not yet implemented].

Close - Quits the application.

Hide - Switches the application to the system area.

Also, a quick sticky note launch button.

When the program is running in the system area, the following options are available.

If hovered over, the current time will be displayed.

Right clicked on the icon will display a pop up menu.

This will allow the application to be restored, the application can be exited or the current time can be displayed.

If the application is in the task bar, any display messages

[i.e. a reminder becoming due] will be displayed in a notification window [as will errors etc.].

The status bar contains [after the time & date] the legend cns.

The c represents caps lock.

The n represents Num Lock.

The S represents Scroll Lock.

The letter will be upper case if the key is activated, otherwise lower case.

The application also contains a options screen [file / Options] which allows various options to be set.

NB: If the option is checked to start on windows start up, it only operates for the current user.

Program partially tested on Windows 7 & 10 [both 32 & 64 bit].

---

Created with the Personal Edition of HelpNDoc: [Write eBooks for the Kindle](#)

---

## Getting Started

---

Klick on Klock.

---

Created with the Personal Edition of HelpNDoc: [Free EPub producer](#)

---

## System requirements

### System Requirements

Should just about work on any Microsoft Windows machine - if it can run the help, it should run Klock.

Klock has been tested on Windows 7, 10. [Does anybody use anything else, these days.]

Klock needs at least .NET 4.5, get from your favourite Microsoft site.

---

Created with the Personal Edition of HelpNDoc: [News and information about help authoring tools and software](#)

---

## Getting help

### Getting Help

Press help [or press F1] to get this document.

Document also located in the application directory [both chm, html & pdf formats].

---

Created with the Personal Edition of HelpNDoc: [Create cross-platform Qt Help files](#)

---

## Thingy-ma-bobs

---

There are separate thingy-ma-bobs for

- Fuzzy Time
- Countdown
- Timer
- Events
- Reminder
- Conversion
- Clipboard Monitor
- Sticky Notes

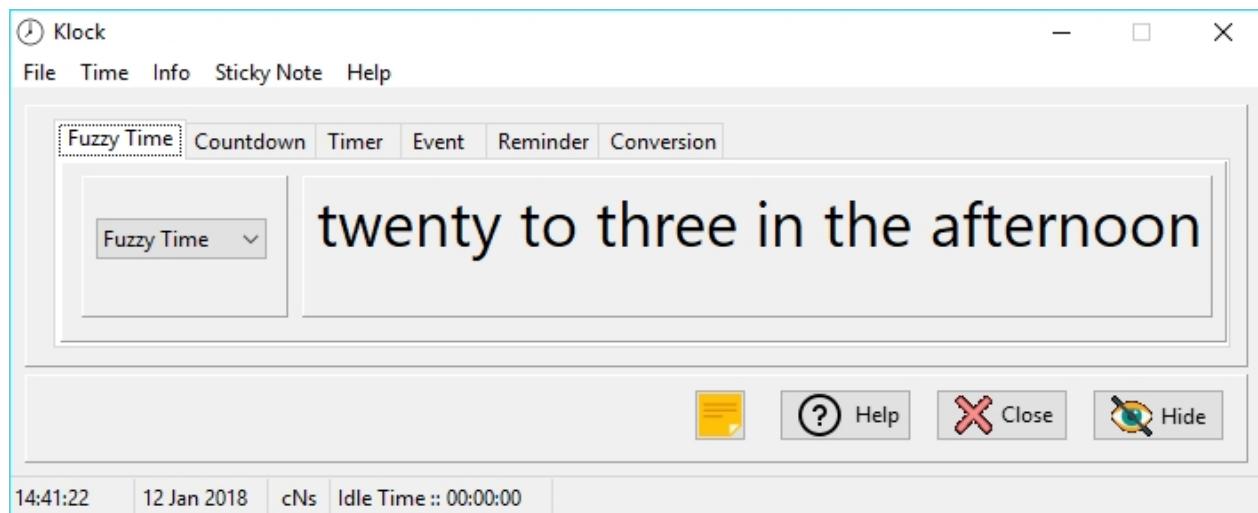
---

Created with the Personal Edition of HelpNDoc: [Easy CHM and documentation editor](#)

---

### Fuzzy Time

#### Fuzzy Time



Allows the current time to be displayed in a number of different formats.

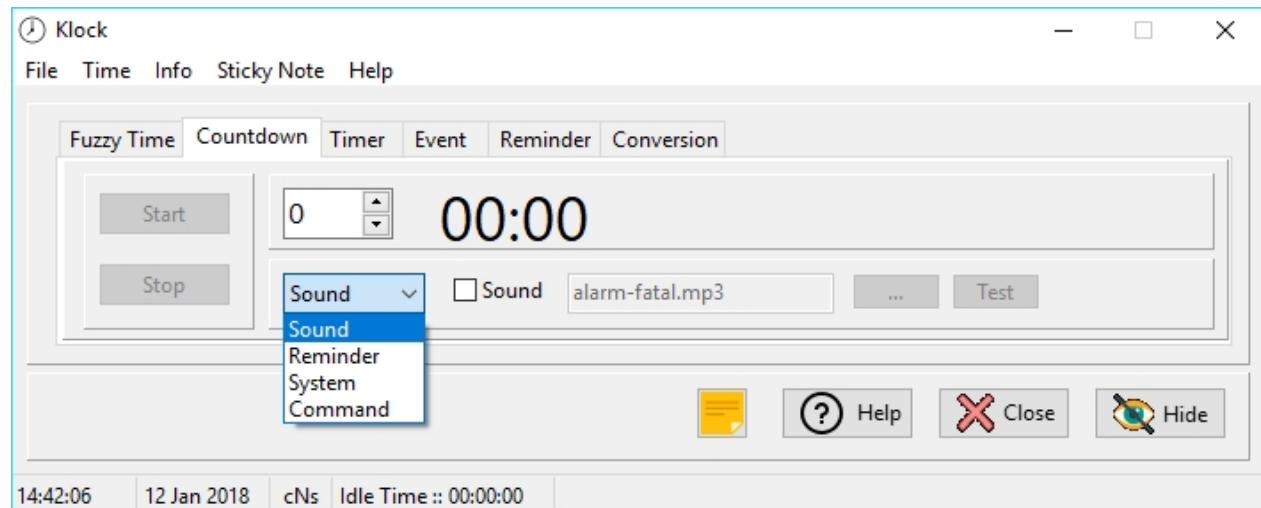
System idle time can also be displayed in the status bar - this is enabled in the time options screens.

See Status Bar for details on the status bar information.

Created with the Personal Edition of HelpNDoc: [Easy to use tool to create HTML Help files and Help web sites](#)

## Countdown

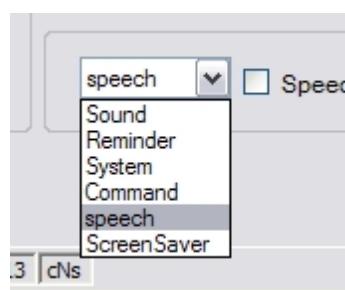
# Countdown



Implements a simple countdown timer thingy [between 1 and 90 minutes].

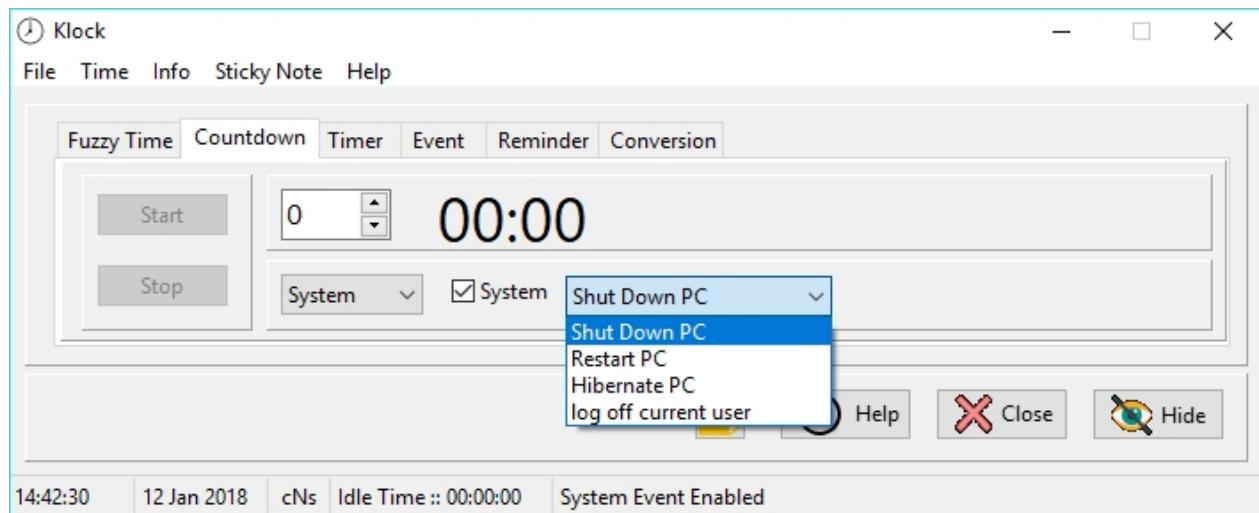
The time for the countdown can be either entered directly or the up/down controls can be used.

The timer can be paused during countdown and stopped before the end is reached.



At the end of the countdown, the following can be selected :-

- A Sound can be played.
- A Reminder can be displayed.
- A System command can be run [System Shut Down, System Re-Start, Log Off current user or the selectable GUI].
- A External Command can be run.



System command menu.

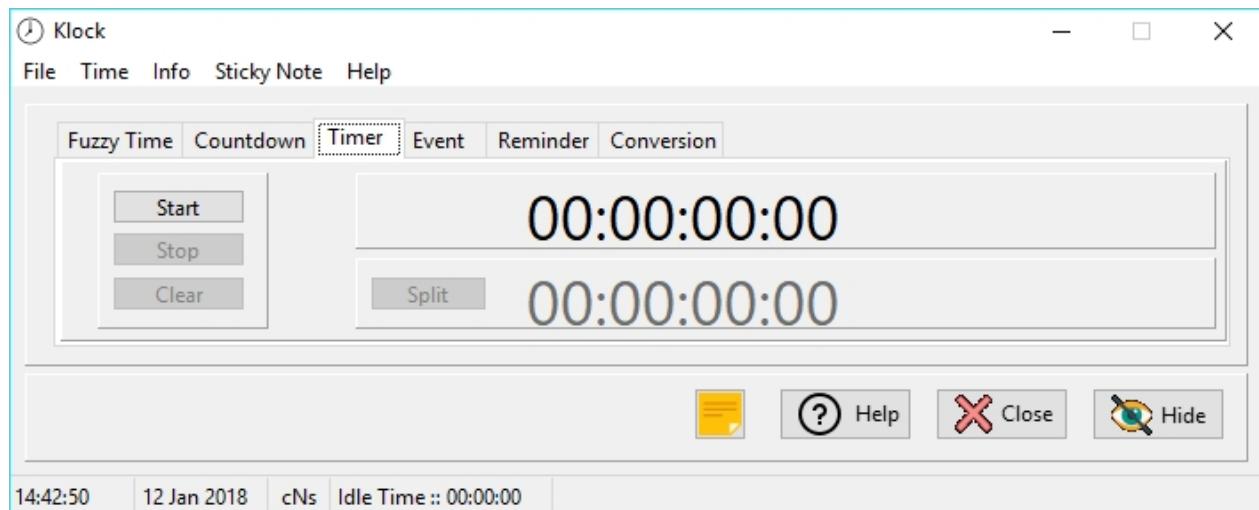
---

Created with the Personal Edition of HelpNDoc: [iPhone web sites made easy](#)

---

## Timer

### Timer



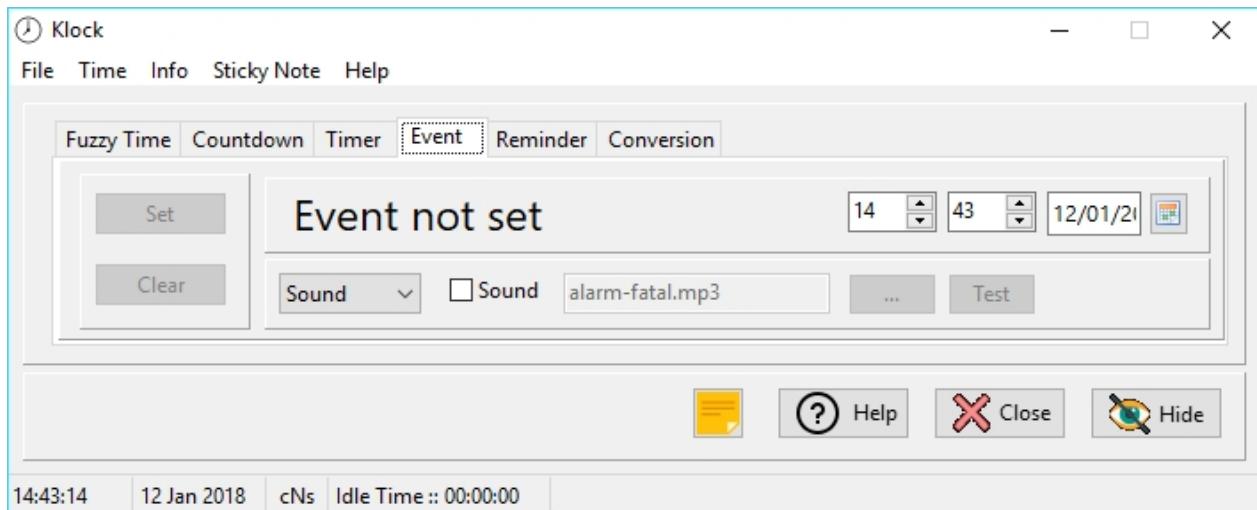
Implements a simple timer thingy, with split time function.

The timer can be stopped, paused and resumed.

A split function allows for a given time to be remembered.

## Events

# Events

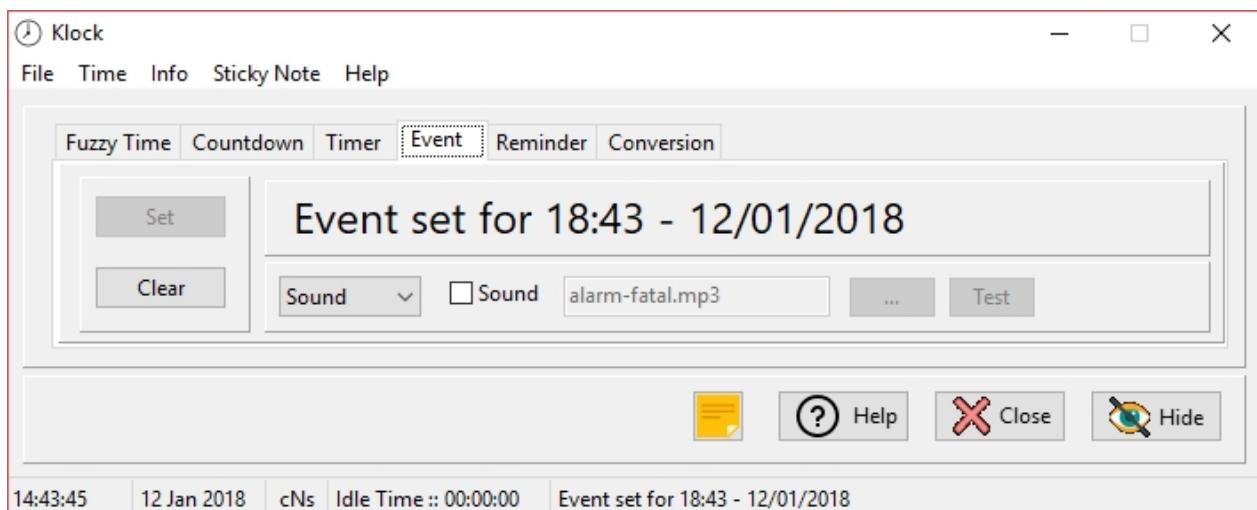


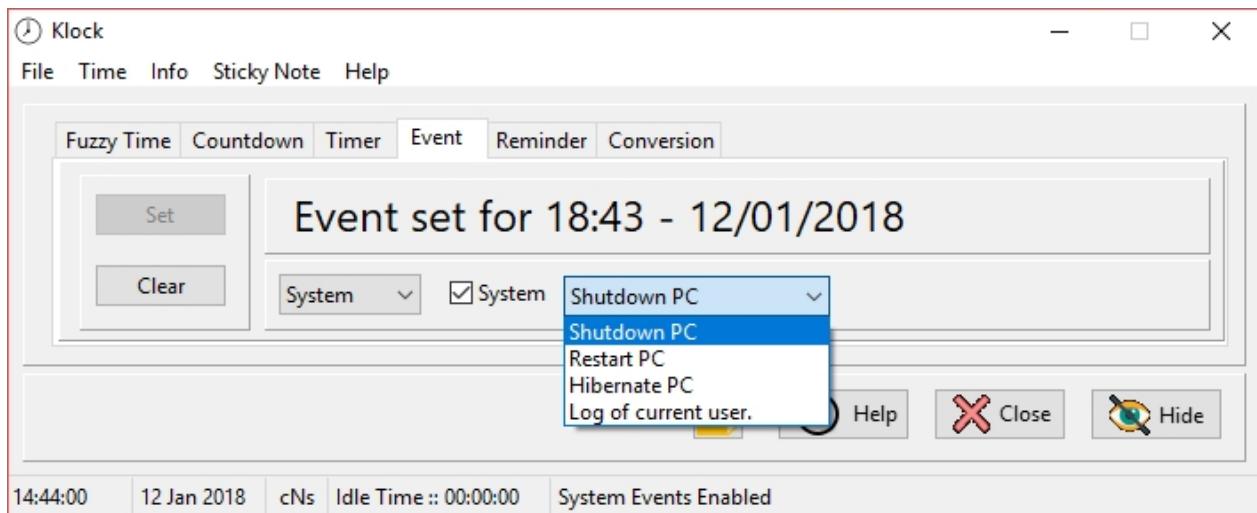
Implements a simple Events database thingy.

This enables for events to set up and notifications displayed to the user.

Today's date is default, but a future date can also be selected. A time can also be added to the reminder date. If no date is added, the reminder will fire at midnight. When the reminder is due either a sound can be played, a reminder displayed, a system command [system shut down or re-boot] or a external program can be run - or any combination of the four.

Note : Setting the time to 00:00, indicates midnight of the previous day so will not enable the set button. To set a reminder for midnight of today, disable the time and pick tomorrow's date. 00:00 indicates zero minutes into the present day.

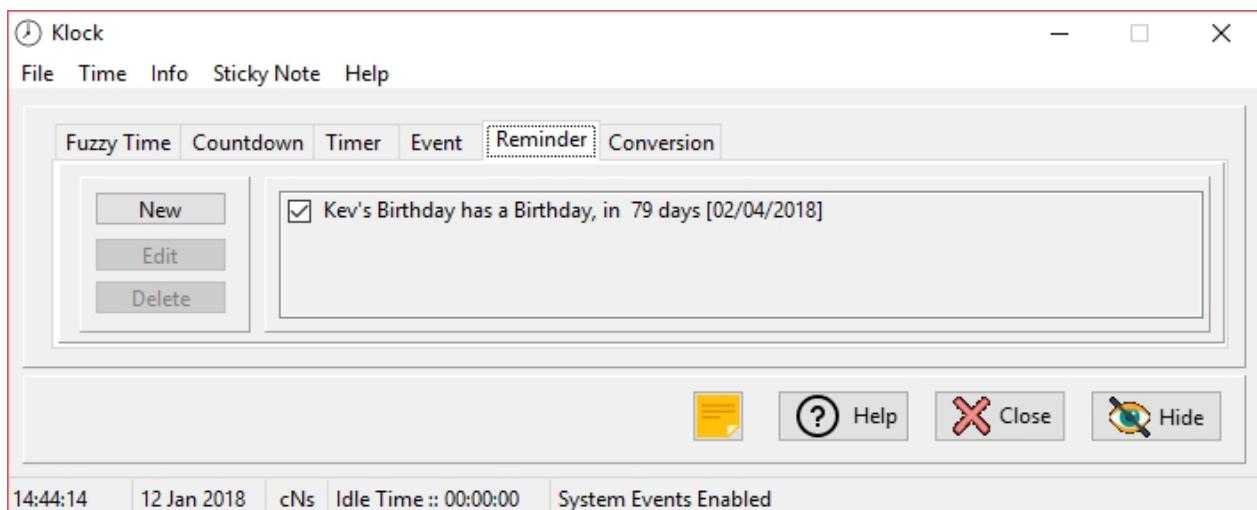




Created with the Personal Edition of HelpNDoc: [Easy CHM and documentation editor](#)

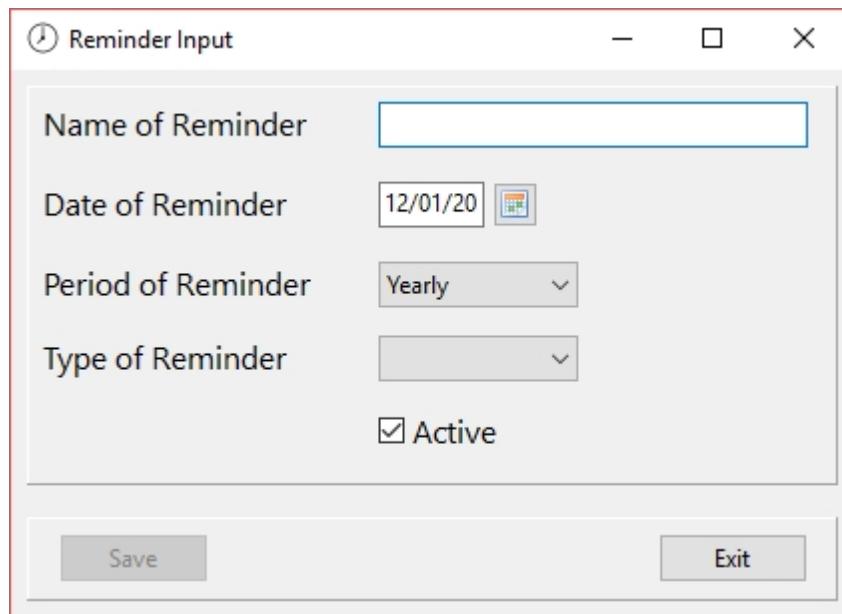
## Reminder

### Reminder



Implements a reminder option thingy.

This enables for [recurring] Reminders to set up and reminders displayed to the user. A number of pre-defined events types are already set up.



The Reminder add screen.

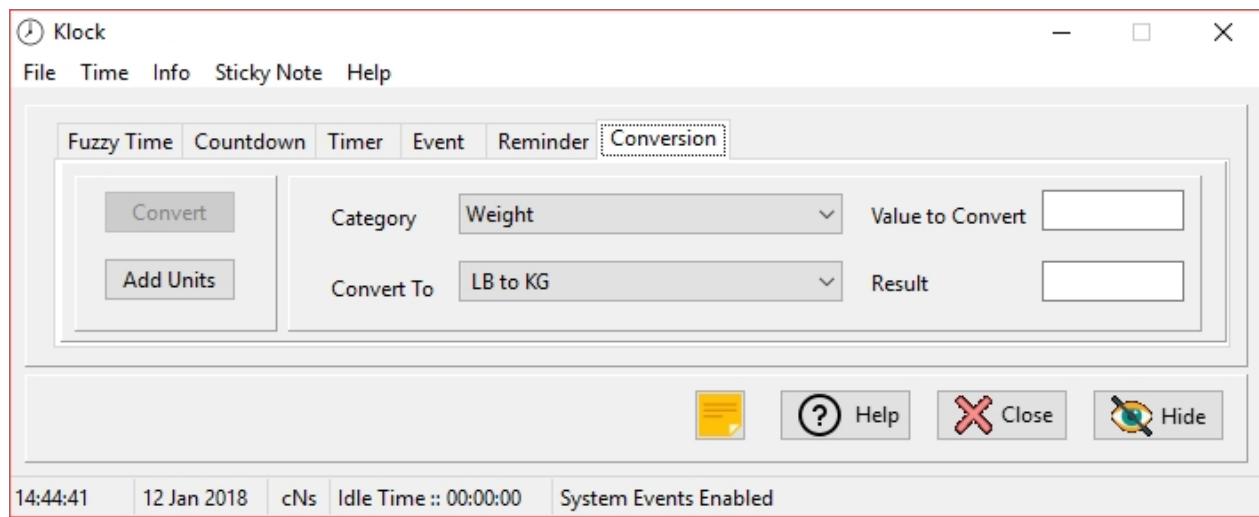
---

Created with the Personal Edition of HelpNDoc: [Free help authoring environment](#)

---

## Conversion

### Conversion



Implements a simple Conversion thingy.

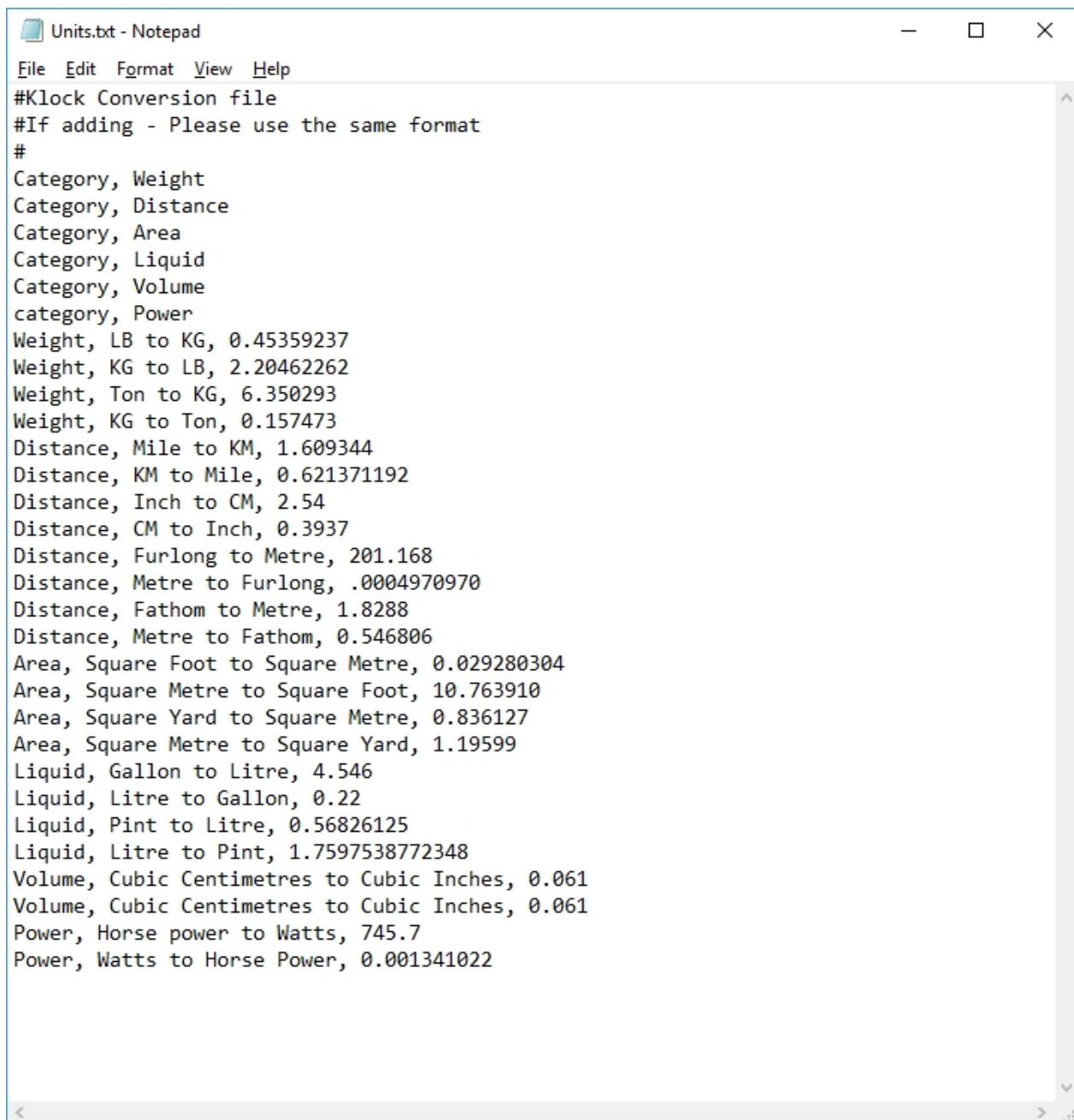
Chose the desired category - Weight, Distance, area, Liquid or Volume.  
 Then choose the required conversion i.e. LB to KG to convert pounds to Kilograms.  
 Enter the value to convert. If this numerical, then the convert button will be enabled.  
 Click on Convert to carry out the conversion.

The Categories, Units etc. are held in a simple text file, which will be created if it does not exist in the users

data area [same as options file].

This file is loaded into notepad if the Add Units buttons is clicked - this allows for more conversion to be added.

Note - the format of the text file must be adhered to.



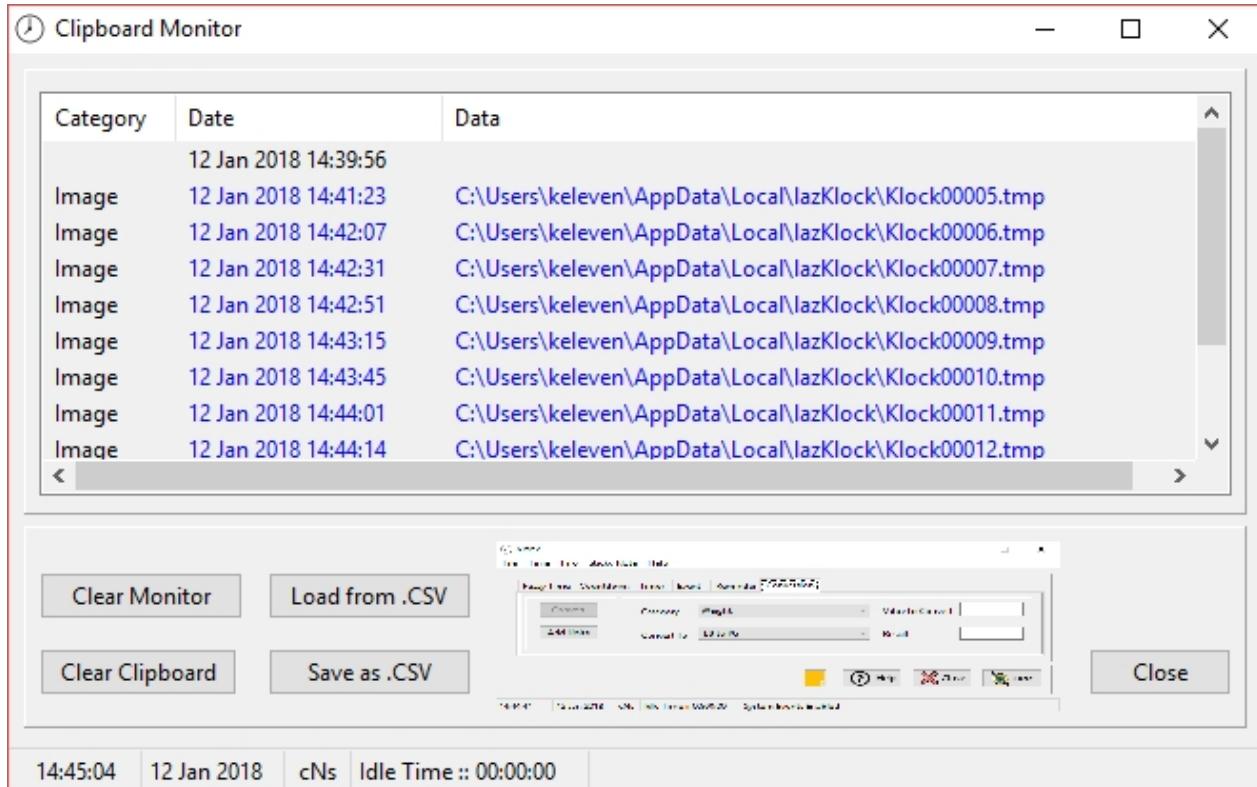
The screenshot shows a Windows Notepad window with the title bar 'Units.txt - Notepad'. The menu bar includes File, Edit, Format, View, and Help. The main content area contains a series of conversion factors, each consisting of a category and a conversion pair. The categories include Weight, Distance, Area, Liquid, Volume, and Power. The conversion pairs are as follows:

- Weight, LB to KG, 0.45359237
- Weight, KG to LB, 2.20462262
- Weight, Ton to KG, 6.350293
- Weight, KG to Ton, 0.157473
- Distance, Mile to KM, 1.609344
- Distance, KM to Mile, 0.621371192
- Distance, Inch to CM, 2.54
- Distance, CM to Inch, 0.3937
- Distance, Furlong to Metre, 201.168
- Distance, Metre to Furlong, .0004970970
- Distance, Fathom to Metre, 1.8288
- Distance, Metre to Fathom, 0.546806
- Area, Square Foot to Square Metre, 0.029280304
- Area, Square Metre to Square Foot, 10.763910
- Area, Square Yard to Square Metre, 0.836127
- Area, Square Metre to Square Yard, 1.19599
- Liquid, Gallon to Litre, 4.546
- Liquid, Litre to Gallon, 0.22
- Liquid, Pint to Litre, 0.56826125
- Liquid, Litre to Pint, 1.7597538772348
- Volume, Cubic Centimetres to Cubic Inches, 0.061
- Volume, Cubic Centimetres to Cubic Inches, 0.061
- Power, Horse power to Watts, 745.7
- Power, Watts to Horse Power, 0.001341022

# Clipboard Monitor

Implements a simple Clipboard Monitor Thingy.

There is not a klock tab for the clipboard monitor, when enabled in options / Global, the below form will be displayed whenever anything is copied to the clipboard.



The Clipboard manager remembers all things copied to the clipboard, remembers the history of the clipboard.

The options are thus.

- |                 |  |
|-----------------|--|
| Clear Clipboard | - clears the system clipboard.                                   |
| Close           | - Closes the clipboard, but not stop the clipboard monitor.      |
| Save            | - Save the clipboard history to a file [Not yet implemented].    |
| Load            | - Loads the clipboard history from a file [Not yet implemented]. |

Once something has been copied back to the clipboard it can then be pasted into any open application.

Selecting a row with the mouse copied the data to the clipboard.

The clipboard history can be either save as CSV or Binary format, this is selected in user options. If saved as CSV format the file can be edited [amended] easily. In CSV format multiple commas should be okay but line endings could cause a problems. In Binary mode, the file can not be easily edited so should be more secure. Also, in Binary mode multiple commas and line ending are handled better.

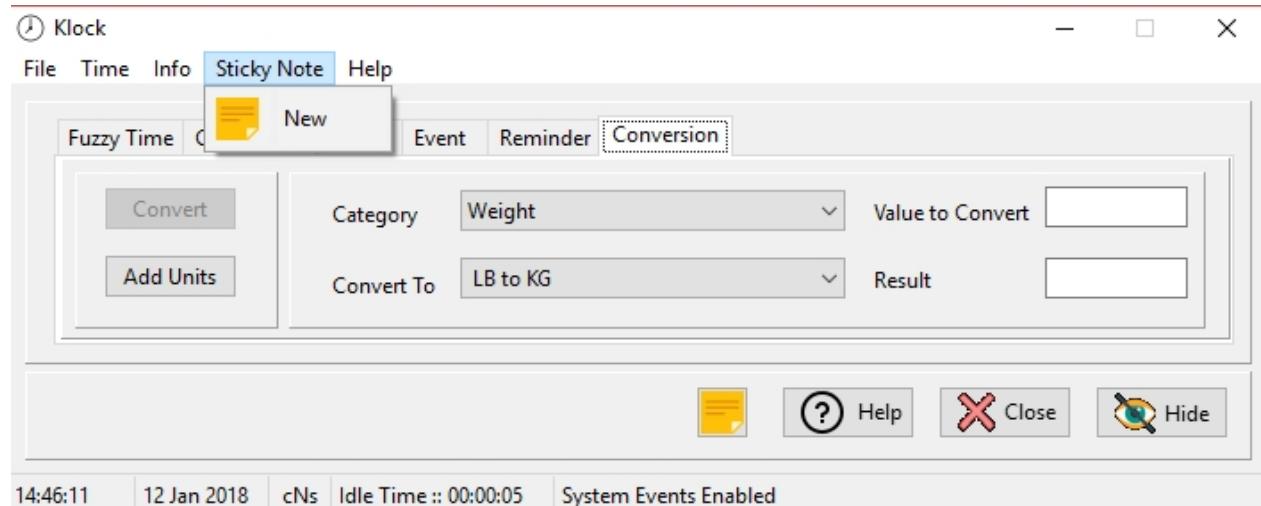
NOTE : there seems to be an issue with saving images to the clipboard, the clipboard does not know where the image came from i.e. no file location. This means there is a problem retrieving the image from the clipboard history. One solution is to make a temporary copy of the image for late retrieval. The temporary image is saved in the user applications directory within the users data area. Also the image is saved in the .jpg format at the moment, will change when I can determine a way on detecting the format of the original image :-)

When Klock starts it scans all such tmp files and deletes all older than 10 days.

Created with the Personal Edition of HelpNDoc: [Free help authoring tool](#)

## Sticky Note

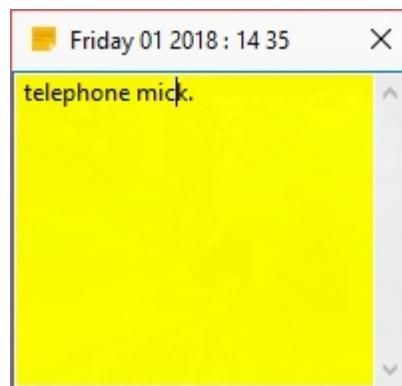
### Sticky Note



A Sticky Note can be created in either one of two ways.

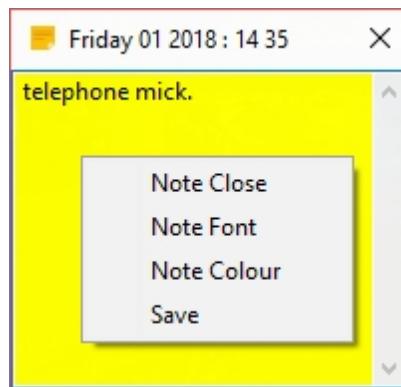
- From the menu option.
- From the quick launch button on the lower main screen.

Both of these methods create the following -



Which can then have the desired text added.

The Note can further be customised by accessing the pop up menu, right click on the Sticky Note.



This gives the following options.

- Note Close - The closes the Sticky Note.
- Note Font - This changes the font for the complete Sticky note. The font colour is also amended using this option.
- Note Colour - This changes the background colour of the sticky Note.
- Note Save - This save the Sticky Note [in fact all visible Sticky notes] information to a data file.

All visible Sticky Note information is saved to the data file every hour or when Klock closes, but can be forced by the above menu option. So when klock is first launched all active Stick Notes from the last session will be auto created.

Each active sticky Note will fade into the desktop, but will re-appear when the mouse moves across the Sticky Note.

---

Created with the Personal Edition of HelpNDoc: [Free CHM Help documentation generator](#)

---

## Menu

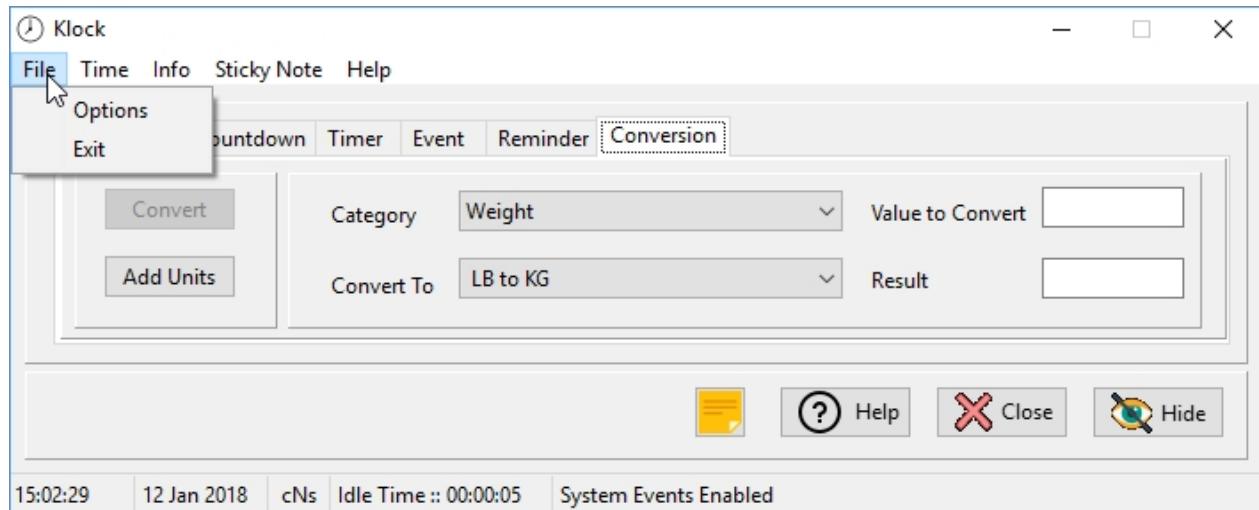
---

There are separate Menus for

- File
- Time
- Info
- Sticky Note
- Help

## File

### File

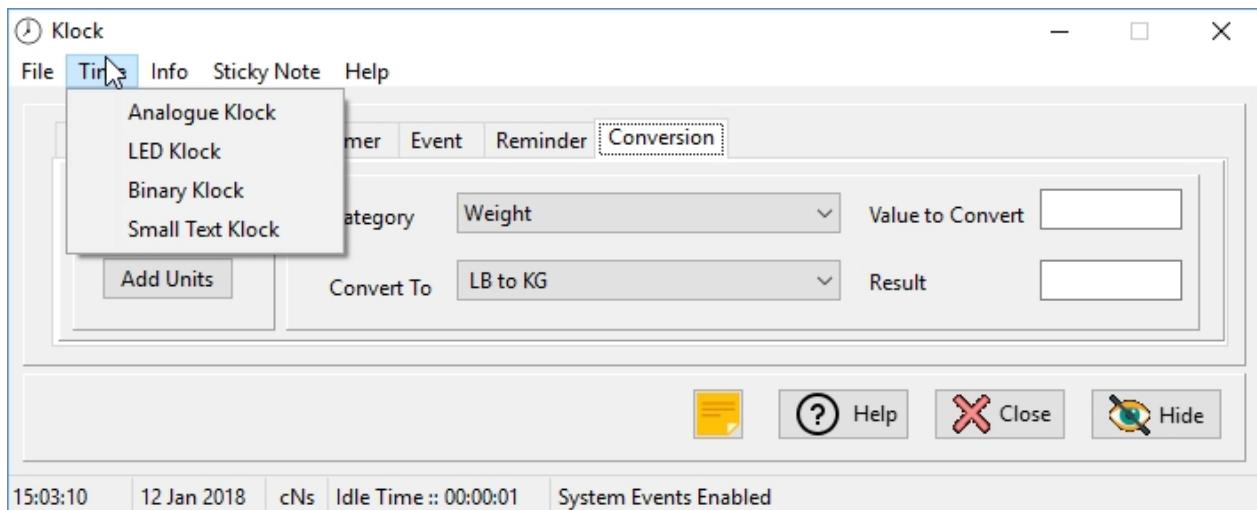


Allows selection of

- Exit - exist Klock.
- Options - loads the options screen.

## Time

### Time



Allows selection of

- Analogue Klock - display a Analogue Klock [Time & Date] in a separate window, the moving main Klock to the system tray.
- LED Klock - displays aLED Klock in a separate window, moving the main Klock to the system tray.
- Binary Klock - displays a Binary Klock in a separate window, moving the main Klock to the system tray.
- Small Text Klock - display a Text Klock [Time] in a separate window, moving the main Klock to the system tray..

---

Created with the Personal Edition of HelpNDoc: [Full-featured Documentation generator](#)

## [Analogue Klock](#)

### Analogue Klock



Selecting the Analogue Klock option from the Time menu, display the above Analogue Klock.

Right clicking on the Analogue Klock, brings up a context menu.



This will allow the Analogue Klock to be exited to the main klock [main Klock is loaded], or the About screen can be loaded.

---

Created with the Personal Edition of HelpNDoc: [Easily create EPub books](#)

---

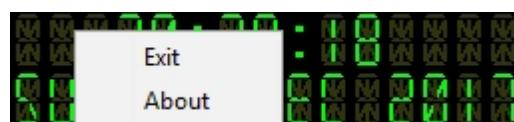
## LED Klock

### Analogue Klock



Selecting the LED Klock option from the Time menu, display the above LED Klock.

Right clicking on the LED Klock, brings up a context menu.



This will allow the LED Klock to be exited to the main klock [main Klock is loaded], or the About screen can be loaded.

Created with the Personal Edition of HelpNDoc: [Produce online help for Qt applications](#)

## **Binary Klock**

### Big Text Klock

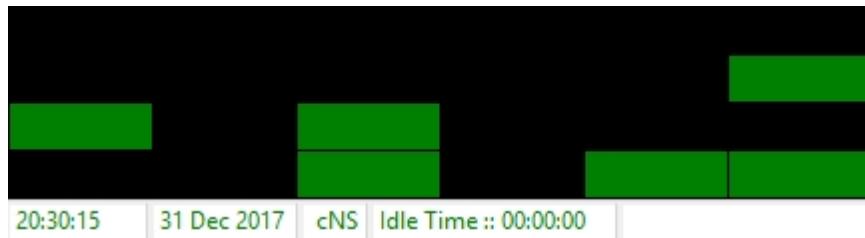
Selecting the Binary Klock option from the Time menu, display the above Binary Klock.

The Binary klock has two modes - BCD or True Binary. This is set in user options

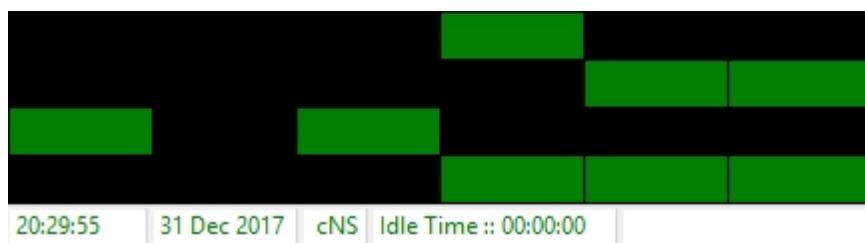
Binary Coded Decimal - takes each two digit number [hours, minutes & seconds] and codes them as two binary strings.

True Binary - takes each two digit number [hours, minutes & seconds] and codes them as a single binary string

#### BCD Klock

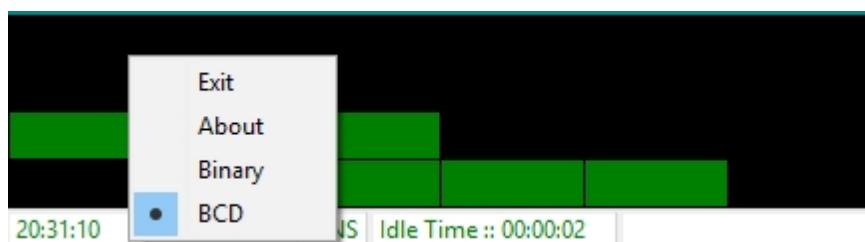


#### True Binary Klock



See Status Bar for details on the status bar information.

Right clicking on the Binary Klock, brings up a context menu.



This will allow the LED Klock to be exited to the main klock [main Klock is loaded], the About screen can be loaded or the Klock can be toggled between Binary and BCD displays.

---

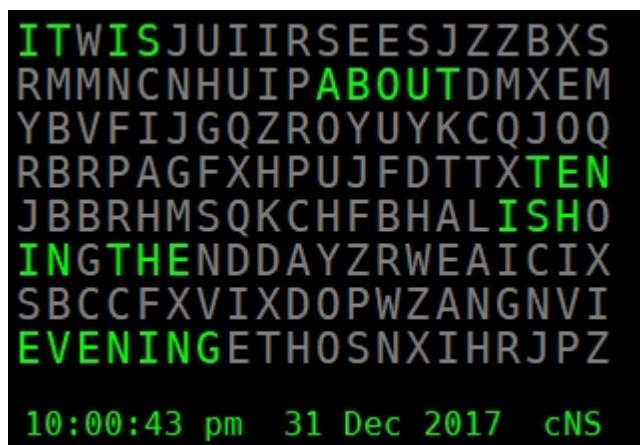
Created with the Personal Edition of HelpNDoc: [Easily create HTML Help documents](#)

---

## Small Text Klock

### Small Text Klock

Selecting the Small Text Klock option from the Time menu, display the above Small Text Klock.



See Status Bar for details on the status bar information.

Right clicking on the Big text Klock, brings up a context menu.



This will allow the Small Text Klock to be exited to the main klock [main Klock is loaded], the About screen can be loaded or the Klock can be toggled between transparent or solid..

Clicking the transparent option.

ITWISJUIIRSEESJZZBXS  
 RMMNCNFIVEABOUTDMXEM  
**PASTIJGQZROYUYKCQJOQ**  
 RBRPAGFXHPUJFDTTXTEN  
 JBBRHMSQKCHFBHALISHO  
**INGTHENDAYZRWEAICIX**  
 SBCCFXVIXDOPWZANGNVI  
**EVENINGETHOSNXIHRJPZ**

10:03:02 pm 31 Dec 2017 cNs

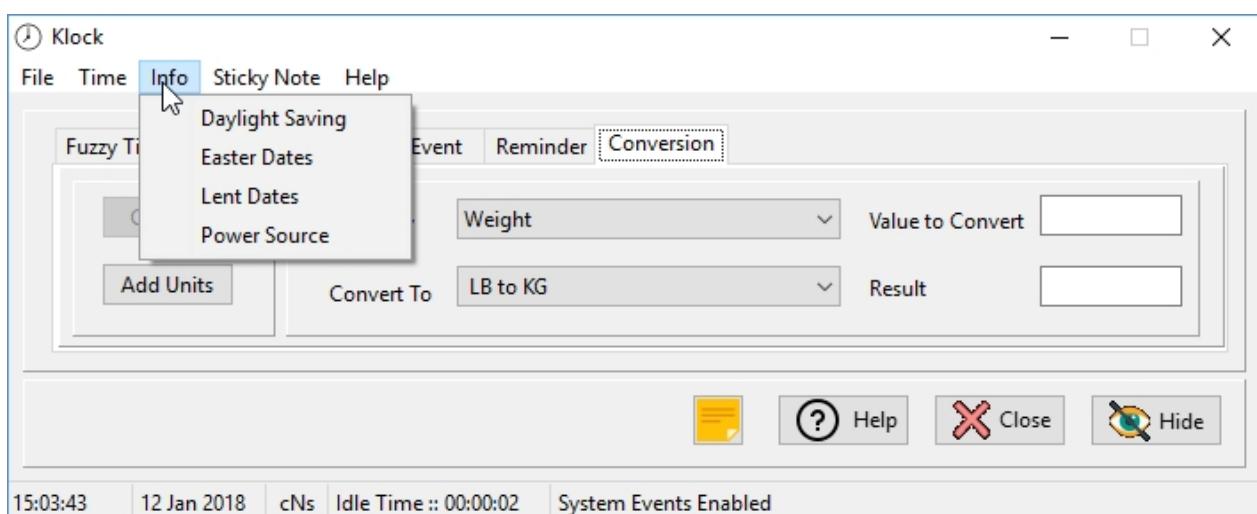
---

Created with the Personal Edition of HelpNDoc: [Free Kindle producer](#)

---

## Info

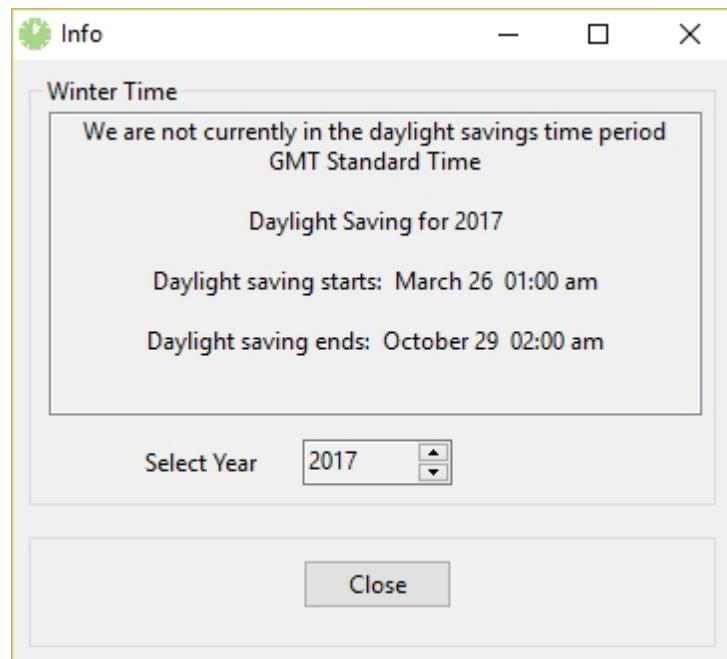
### Info



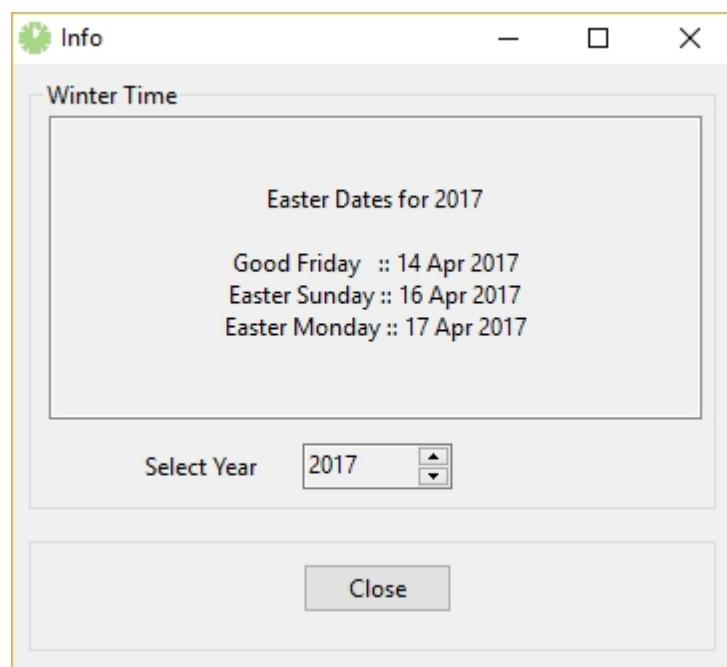
This allows the selection of

- Daylight Saving
- Easter Dates
- Lent Dates
- Power Source

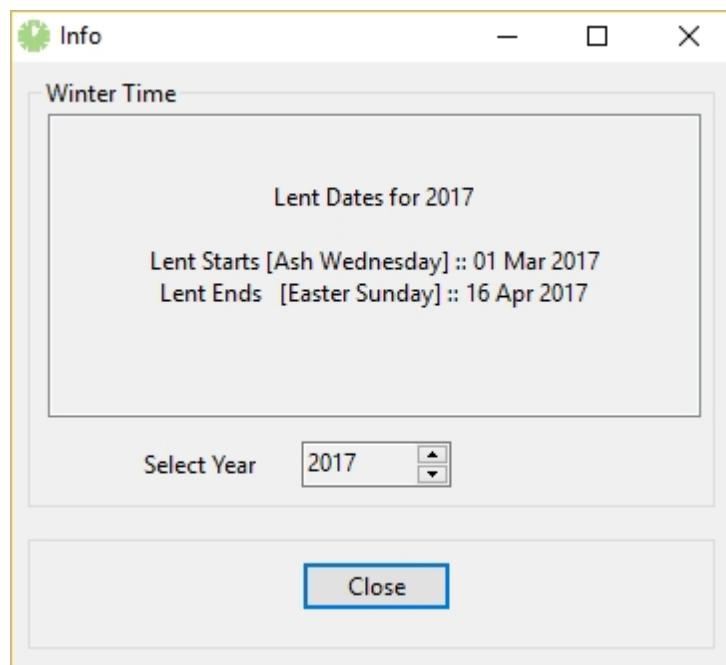
On Daylight Saving, Easter & Lent Dates the year can be changed. This allows the daylight saving, Easter and Lent Dates to be displayed for any year.



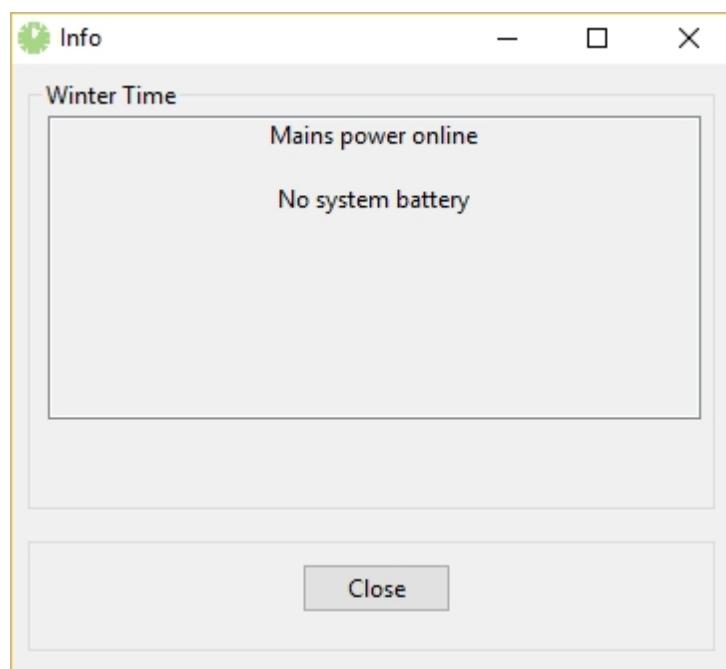
Daylight Saving Information



Easter Dates

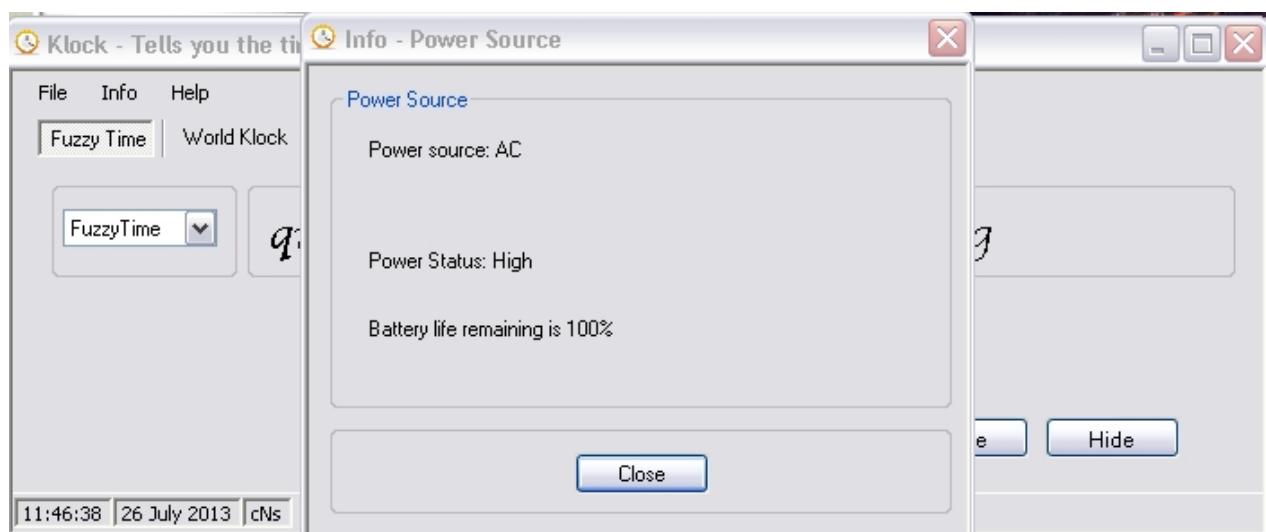


Lent Dates

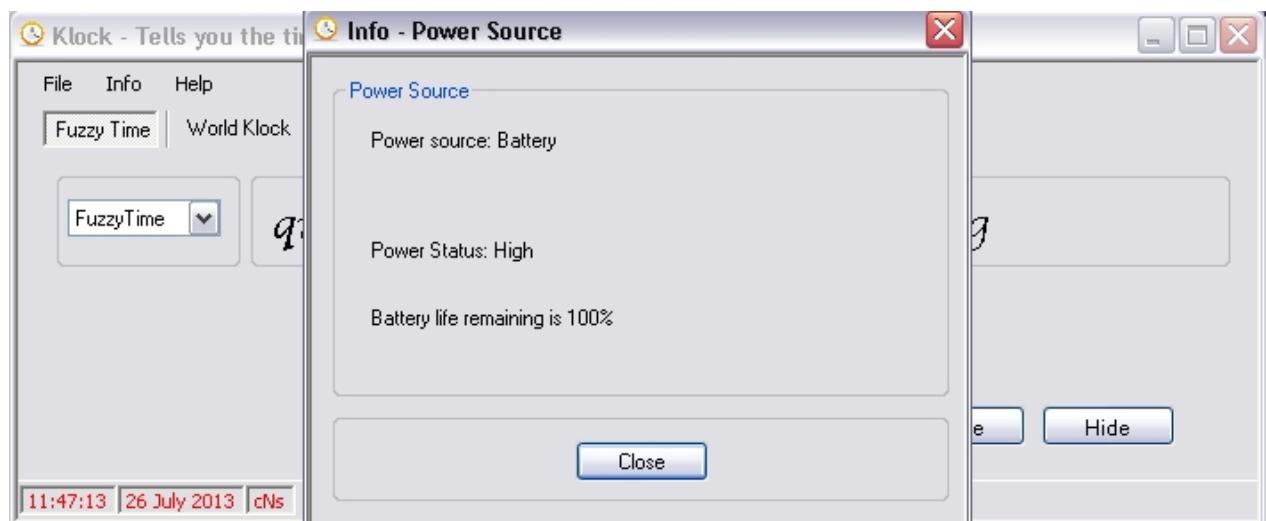


Power Source information [PC running on mains]

## Klock



Power Source Information [laptop running on mains]



Power Source Information [laptop running on battery]  
note : red colour of time & date on main form.

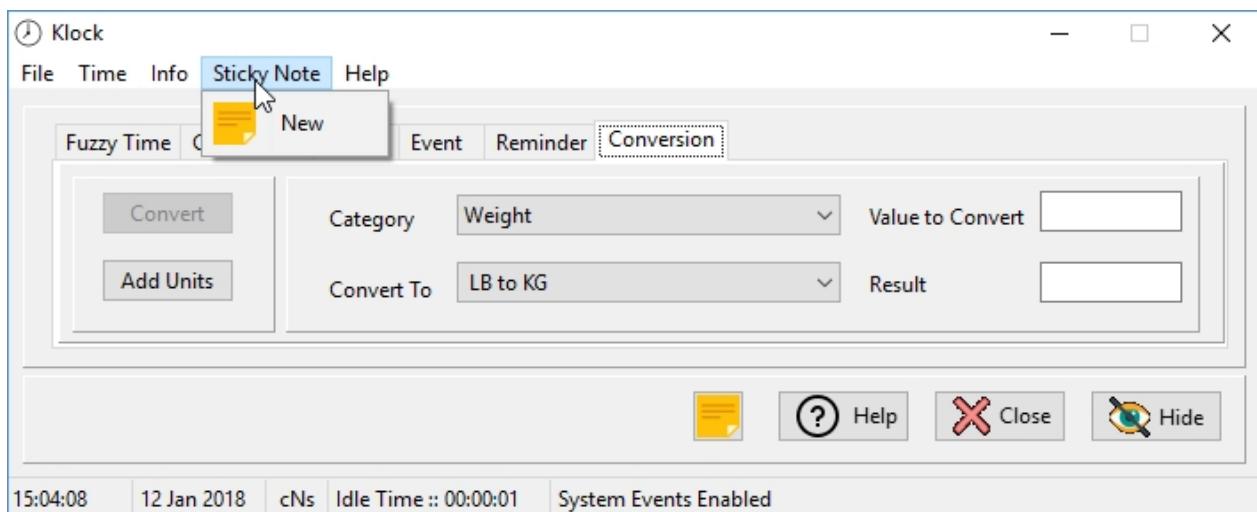
---

Created with the Personal Edition of HelpNDoc: [Create HTML Help, DOC, PDF and print manuals from 1 single source](#)

---

## Sticky Note

### Sticky Note



A Sticky Note can be created in either one of two ways.

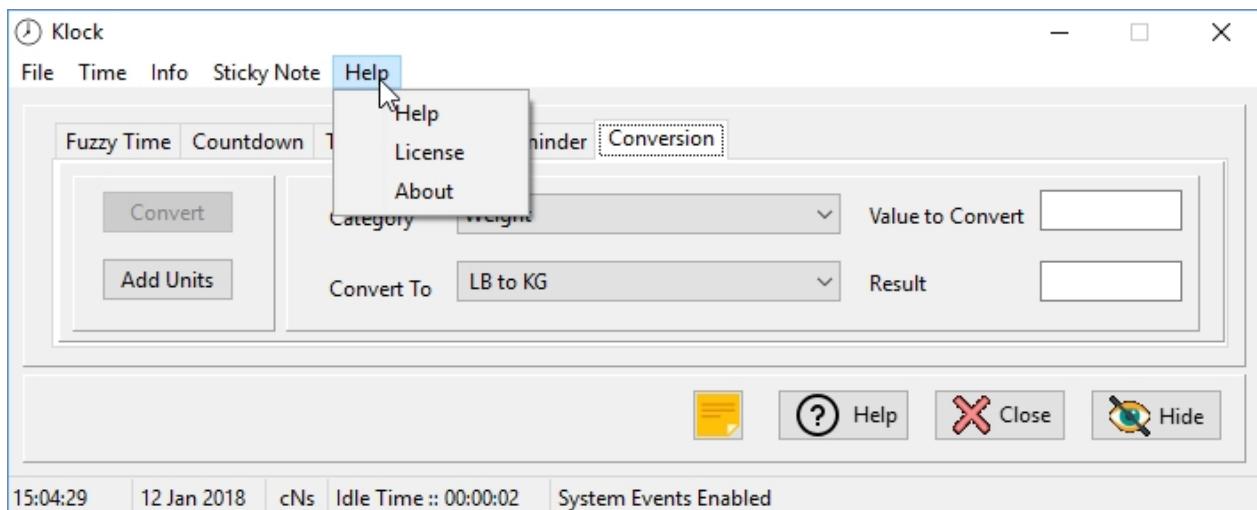
- From the menu option.
- From the quick launch button on the lower main screen.

See [Sticky Note](#) for more information.

Created with the Personal Edition of HelpNDoc: [Single source CHM, PDF, DOC and HTML Help creation](#)

## Help

### Help



This allows the selection of

- Help - Loads this Help document
- Licence - loads the License information [GNU General Public License V3].
- About - Loads About application information i.e. application version.



---

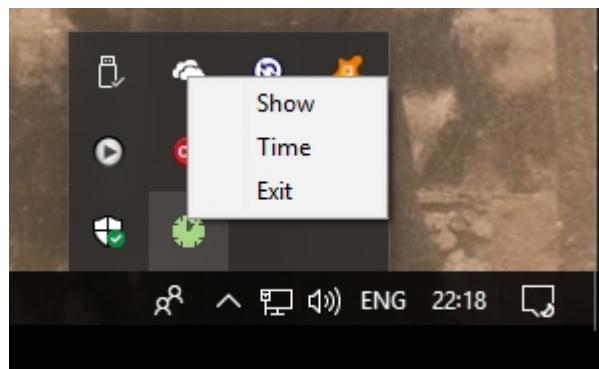
Created with the Personal Edition of HelpNDoc: [Easy EBook and documentation generator](#)

## System Tray

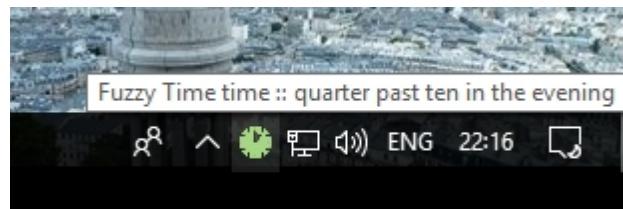
---

### System Tray

When the program is running in the system area, the following options are available.



If hovered over, the current time will be displayed. If two time formats are in use, only time one is used.



Right clicked on the icon will display a pop up menu.

- Show - Restore Klock
- Time - Toggle the display of time
- Exit - Close Klock.

If the application is in the task bar, any display messages [i.e. a reminder becoming due] will be displayed in a notification window [as will errors etc].

Created with the Personal Edition of HelpNDoc: [Generate Kindle eBooks with ease](#)

## Status bar

### Status Bar



The status bar contains [after the the time & date] the legend cns.

The c represents Caps lock.

The n represents Num Lock.

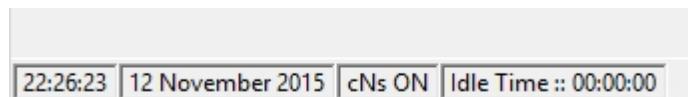
The S represents Scroll Lock.

The ON represents connected to the internet. A OFF would indicate disconnected from the internet.  
The letter will be upper case if the key is activated, otherwise lower case.



If the running PC [Laptop] is running on battery - the colour will turn to red.

If idles time is being displayed -




---

Created with the Personal Edition of HelpNDoc: [Qt Help documentation made easy](#)

## Options

---

The application also contains a options screen [file / Options] which allows various options to be set.

Klock boasts over 90 options to customise klock.

There are separate options for

- Global
- Time
- Other Klocks
- Analogue Klock
- Logging

NB: If the option is checked to start on windows start up [in fact most user options], only operates for the current user.

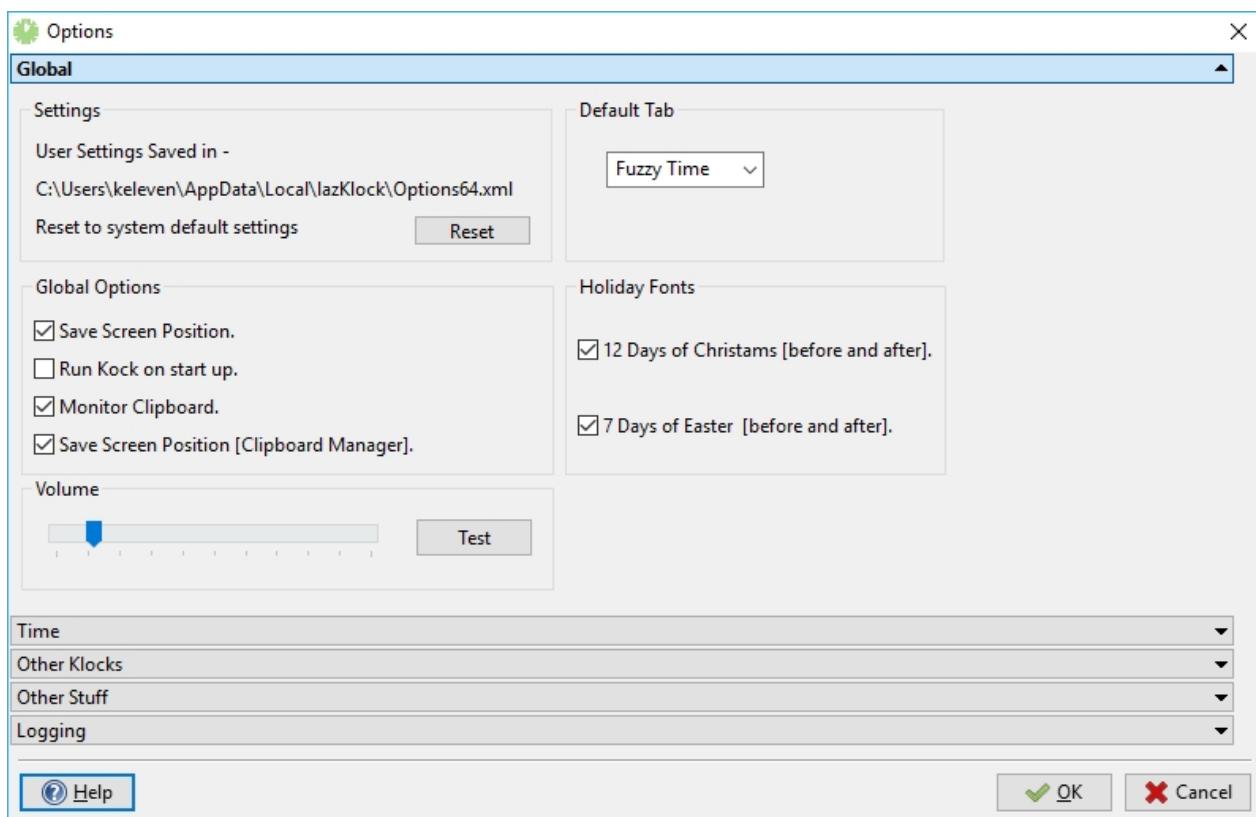
If upgrading from a newer version of Klock the new options should be added to the existing options..

---

Created with the Personal Edition of HelpNDoc: [Create cross-platform Qt Help files](#)

## Global

# Global



The global options are as follows.

## Settings

where the settings file reside - currently Options64.xml [or possibly Option32 for the 32 bit Klock. This can be re-set to the default settings for the application.

## GlobalOptions

Allows klock to remember screen positions on exit.

Will run klock when windows first starts [current user only].

Allows Klock to start in a determined mode. Current modes are Klock, Analogue Klock, Small text Klock or Big text Klock.

## Default Tab

Allows Klock to start with a pre-determine tab.

## Holiday Fonts.

Allows Klock to use special fonts at certain time of the year.

## Volume

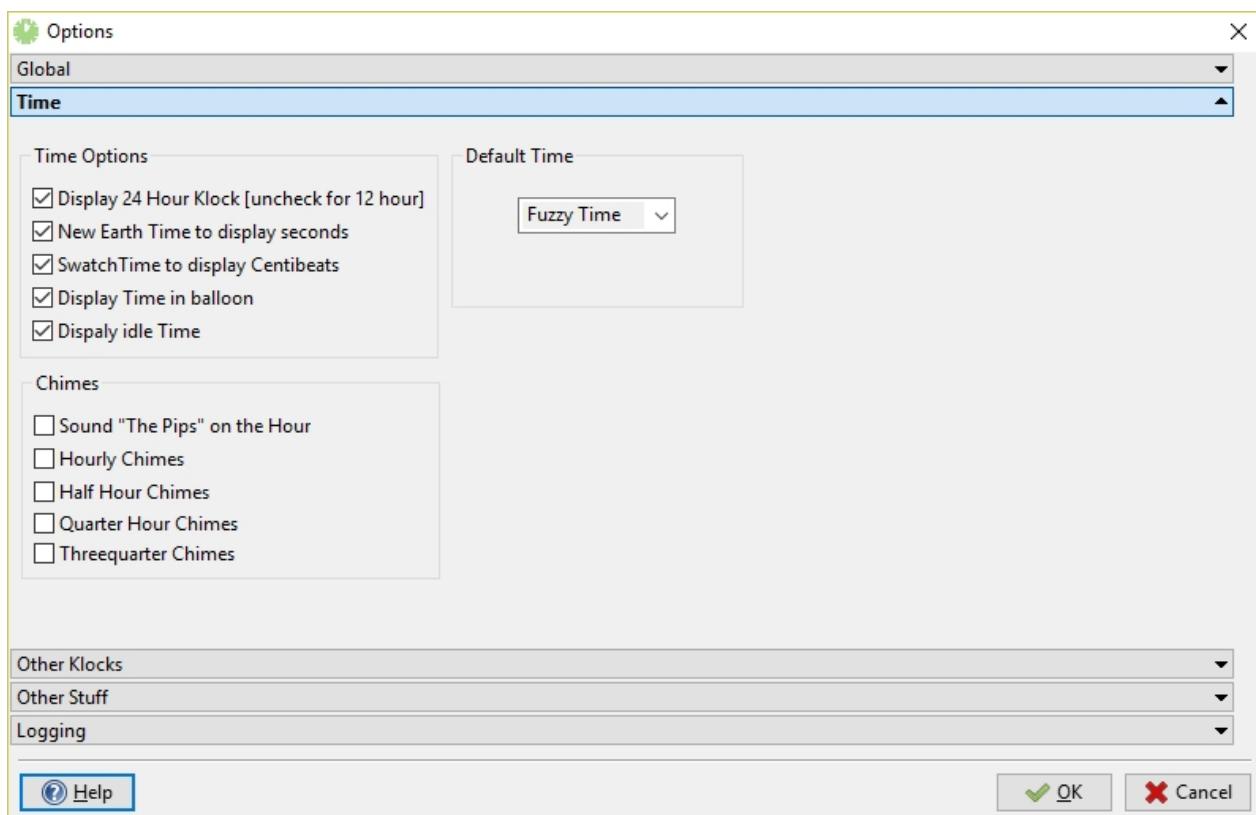
The volume of the sound klock makes.

Pressing OK will save the new settings.

Pressing cancel will not save any changes.

## Time

# Time



The Time options are as follows.

### Settings

#### 12 / 24 Hour

The time in the system tray, time display 1 or time display 2 can all be set to display the time in either 12 or 24 hour format.

NB :: does not affect some of the time formats i.e. Hex time.

The system idle time can be displayed in the status bar.

### Chimes

Klock can either sound the "pips" or chimes on the hour.

If chimes are chosen, chimes can also be selected for the quarter and half hours.

NB : can either have pips or chimes, not both.

Pressing OK will save the new settings.  
Pressing cancel will not save any changes.

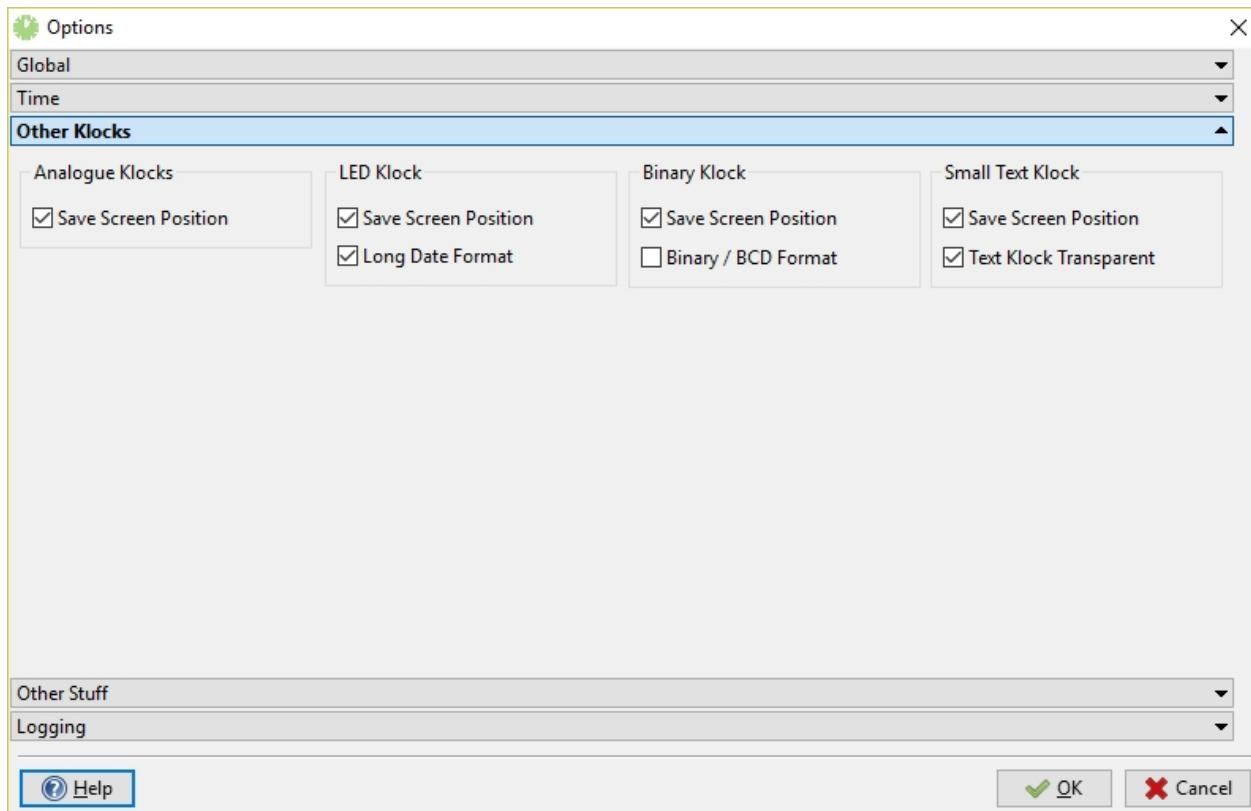
---

Created with the Personal Edition of HelpNDoc: [What is a Help Authoring tool?](#)

---

## Other Klocks

### Text Klock



The Text Klock options are as follows.

Allows all the secondary Klocks to remember screen positions on exit.

The binary klock has two modes - BCD or true Binary.

BinaryCoded Decimal - takes each two digit number [hours, minutes & seconds] and codes them as two binary strings.

True Binary - takes each two digit number [hours, minutes & seconds] and codes them as a single binary string

Pressing OK will save the new settings.  
Pressing cancel will not save any changes.

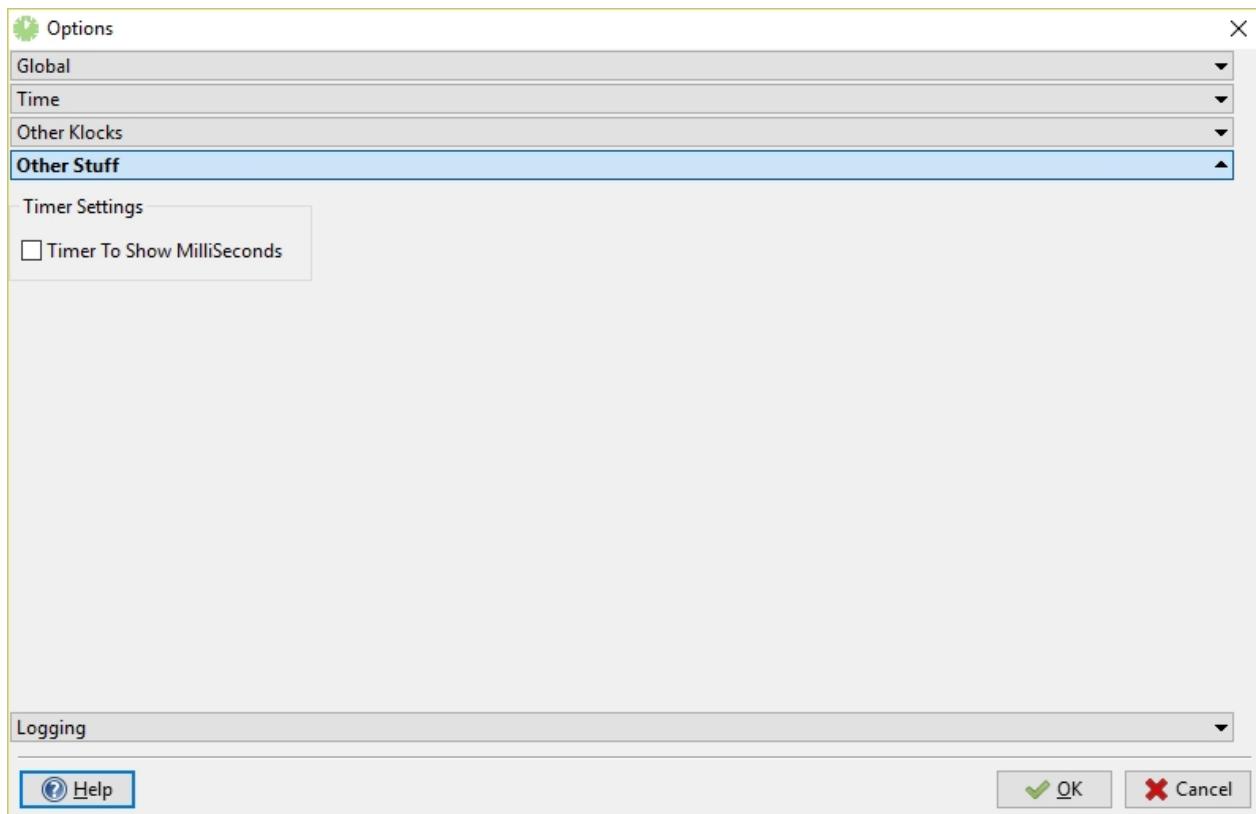
---

Created with the Personal Edition of HelpNDoc: [Free HTML Help documentation generator](#)

---

## Other Stuff

### Other Stuff



The Other stuff options are as follows.

**Timer Settings.**

Time will show milliseconds.

Pressing OK will save the new settings.  
Pressing cancel will not save any changes.

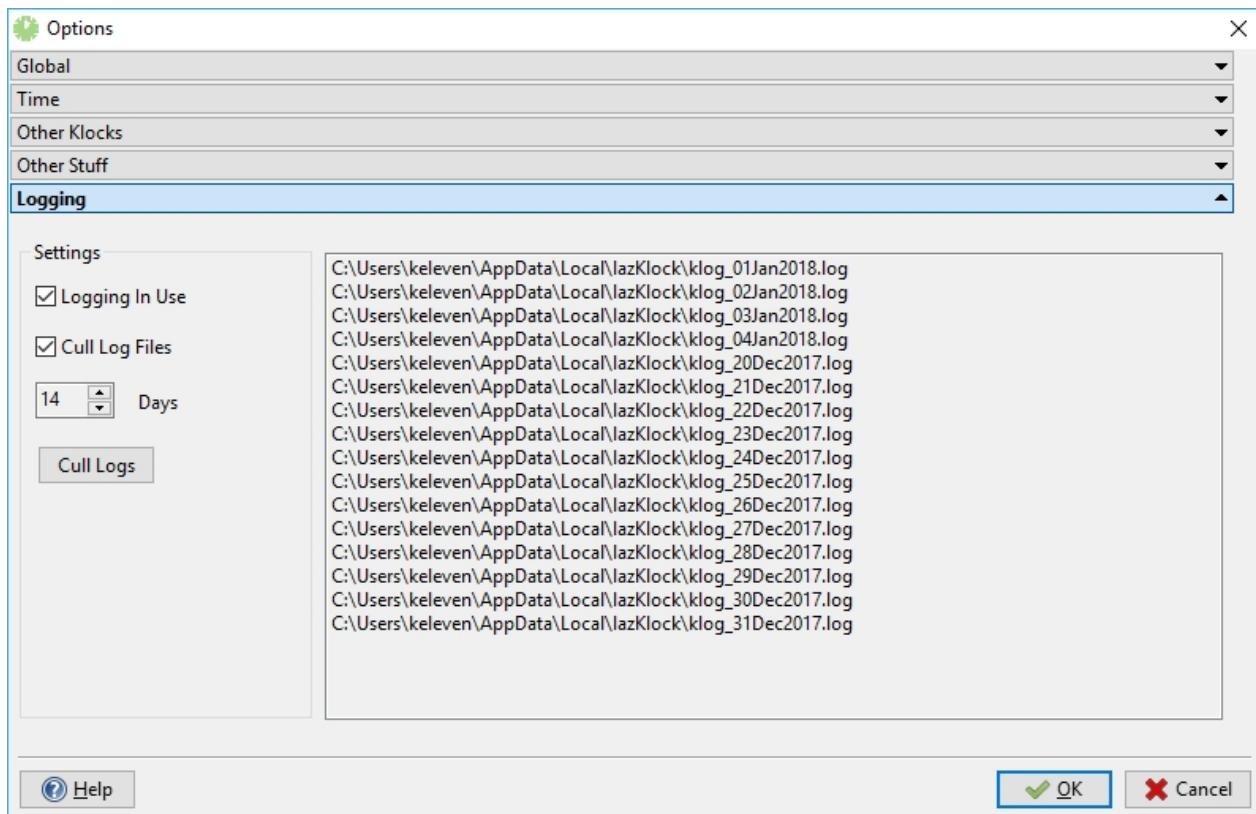
---

Created with the Personal Edition of HelpNDoc: [Create iPhone web-based documentation](#)

---

## Logging

## Logging



Certain errors and message can be logged to text file for further reading. This facility can be disabled. If enabled, the log files are displayed.

The number of days to keep the log files can be specified, default is 14. After this time, the Klock will delete the older log files.

A clean up of log files can be completed by clicking the button.

Clicking the entry for the log file, should log the log file into the default text editor.

```

1 31Dec2017 104005 : Log Created
2 31Dec2017 104005 :
3 31Dec2017 104005 : lazclock
4 31Dec2017 104005 : User : keleven
5 31Dec2017 104005 : PC : KELEVEN
6 31Dec2017 104005 : OS : Microsoft Windows [Version 10.0.16299.125]
7 31Dec2017 104005 : lazClock Build :: 58
8 31Dec2017 104005 : lazClock Version :: 2.1.4.58
9 31Dec2017 104005 : Built with 64 bit Lazarus Version :: 1.8.0.6
10 31Dec2017 104005 : App Dir : C:\Program Files\keleven\lazClock\
11 31Dec2017 104005 :
12 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\fuzzytime_19Dec2017.log with age 11 19 Dec 2017
13 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_15Dec2017.log with age 15 16 Dec 2017
14 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_16Dec2017.log with age 14 16 Dec 2017
15 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_17Dec2017.log with age 13 18 Dec 2017
16 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_18Dec2017.log with age 12 19 Dec 2017
17 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_19Dec2017.log with age 11 19 Dec 2017
18 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_20Dec2017.log with age 10 20 Dec 2017
19 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_21Dec2017.log with age 9 21 Dec 2017
20 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_22Dec2017.log with age 8 23 Dec 2017
21 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_23Dec2017.log with age 7 24 Dec 2017
22 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_24Dec2017.log with age 6 25 Dec 2017
23 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_25Dec2017.log with age 5 25 Dec 2017
24 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_26Dec2017.log with age 4 27 Dec 2017
25 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_27Dec2017.log with age 3 27 Dec 2017
26 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_28Dec2017.log with age 2 28 Dec 2017
27 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_29Dec2017.log with age 1 30 Dec 2017
28 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_30Dec2017.log with age 0 31 Dec 2017
29 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\klog_31Dec2017.log with age 0 31 Dec 2017
30 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00000.tmp with age 13 17 Dec 2017
31 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00001.tmp with age 12 18 Dec 2017
32 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00002.tmp with age 11 19 Dec 2017
33 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00003.tmp with age 11 19 Dec 2017
34 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00004.tmp with age 10 20 Dec 2017
35 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00005.tmp with age 3 27 Dec 2017
36 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00006.tmp with age 3 27 Dec 2017
37 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00007.tmp with age 0 30 Dec 2017
38 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00008.tmp with age 0 30 Dec 2017
39 31Dec2017 104005 : C:\Users\keleven\AppData\Local\lazClock\Klock00009.tmp with age 0 30 Dec 2017
40 31Dec2017 104005 : Adding C:\Program Files\keleven\lazClock\fonts\Barcode39.ttf
41 31Dec2017 104005 : Adding C:\Program Files\keleven\lazClock\fonts\NancyBlackett.ttf
42 31Dec2017 104005 : Adding C:\Program Files\keleven\lazClock\fonts\BrailleLatin.ttf
43 31Dec2017 104005 : Adding C:\Program Files\keleven\lazClock\fonts\Semaphore.ttf
44 31Dec2017 104005 : Adding C:\Program Files\keleven\lazClock\fonts\Christmas.ttf
45 31Dec2017 104005 : Adding C:\Program Files\keleven\lazClock\fonts\Hack.ttf
46 31Dec2017 104005 : FormOptions Create
47 31Dec2017 104005 : FormAbout Create
48 31Dec2017 104006 : FormHelp Create
49 31Dec2017 104006 : FormLicense Create
50 31Dec2017 104006 : FormReminderInput Create
51 31Dec2017 104006 : FormAnalogueKlock Create
52 31Dec2017 104006 : formClipboard Create
53 31Dec2017 104006 : FormLEDKlock Klock Create
54 31Dec2017 104006 : FormBinaryKlock Klock Create
55 31Dec2017 104006 : Binary Klock
56 31Dec2017 104006 : formSmallTextKlock Klock Create
57 31Dec2017 104006 : FormKlock Showing
58 31Dec2017 104006 : FormKlock SetDefaults
59

```

## History

### Build 1

commit a3539dd01031498d3c25c9a5ca3a454e18748aa6  
 Author: Kevin Scott <lazClock@keleven.co.uk>

Date: Thu Sep 29 20:50:37 2016 +0100

Initial Import.

Most of the GUI structure is complete.

Countdown page complete.

```
.gitignore      | 33 ++
GNU GENERAL PUBLIC LICENSE.txt | 674 ++++++
blue-letters/!.ico    | Bin 0 -> 119149 bytes
blue-letters/A.ico   | Bin 0 -> 133106 bytes
blue-letters/B.ico   | Bin 0 -> 130770 bytes
blue-letters/C.ico   | Bin 0 -> 136698 bytes
blue-letters/D.ico   | Bin 0 -> 129097 bytes
blue-letters/Dot.ico | Bin 0 -> 118524 bytes
blue-letters/E.ico   | Bin 0 -> 124688 bytes
blue-letters/F.ico   | Bin 0 -> 124147 bytes
blue-letters/G.ico   | Bin 0 -> 135767 bytes
blue-letters/H.ico   | Bin 0 -> 126025 bytes
blue-letters/I.ico   | Bin 0 -> 120077 bytes
blue-letters/J.ico   | Bin 0 -> 126758 bytes
blue-letters/K.ico   | Bin 0 -> 132202 bytes
blue-letters/L.ico   | Bin 0 -> 123843 bytes
blue-letters/M.ico   | Bin 0 -> 132420 bytes
blue-letters/N.ico   | Bin 0 -> 128936 bytes
blue-letters/O.ico   | Bin 0 -> 135070 bytes
blue-letters/P.ico   | Bin 0 -> 127568 bytes
blue-letters/Q.ico   | Bin 0 -> 138504 bytes
blue-letters/Question.ico | Bin 0 -> 122752 bytes
blue-letters/R.ico   | Bin 0 -> 131815 bytes
blue-letters/S.ico   | Bin 0 -> 138950 bytes
blue-letters/T.ico   | Bin 0 -> 123861 bytes
blue-letters/U.ico   | Bin 0 -> 126431 bytes
blue-letters/V.ico   | Bin 0 -> 133394 bytes
blue-letters/W.ico   | Bin 0 -> 137393 bytes
blue-letters/X.ico   | Bin 0 -> 133641 bytes
blue-letters/Y.ico   | Bin 0 -> 130920 bytes
blue-letters/Z.ico   | Bin 0 -> 129292 bytes
blue-letters/readme.txt | 26 ++
blue-letters/sA.ico  | Bin 0 -> 894 bytes
blue-letters/sB.ico  | Bin 0 -> 894 bytes
blue-letters/sC.ico  | Bin 0 -> 894 bytes
blue-letters/sD.ico  | Bin 0 -> 894 bytes
info.txt      | 15 +
klock.ico     | Bin 0 -> 3262 bytes
klock.lpi      | 268 ++++++
klock.lpr      | 22 ++
random/random1.ico | Bin 0 -> 151787 bytes
random/random10.ico | Bin 0 -> 161228 bytes
random/random11.ico | Bin 0 -> 179933 bytes
random/random12.ico | Bin 0 -> 173332 bytes
random/random2.ico | Bin 0 -> 161370 bytes
random/random3.ico | Bin 0 -> 154710 bytes
random/random4.ico | Bin 0 -> 176679 bytes
random/random5.ico | Bin 0 -> 132648 bytes
random/random6.ico | Bin 0 -> 149826 bytes
random/random7.ico | Bin 0 -> 155776 bytes
random/random8.ico | Bin 0 -> 156516 bytes
random/random9.ico | Bin 0 -> 151106 bytes
```

```

random/readme.txt      | 17 ++
sounds/alarm-fatal.wav | Bin 0 -> 1359604 bytes
sounds/chimes.wav     | Bin 0 -> 55776 bytes
sounds/chord.wav      | Bin 0 -> 97016 bytes
sounds/ding.wav       | Bin 0 -> 80856 bytes
sounds/notify.wav     | Bin 0 -> 119384 bytes
sounds/recycle.wav    | Bin 0 -> 25434 bytes
sounds/ringin.wav     | Bin 0 -> 10026 bytes
sounds/ringout.wav    | Bin 0 -> 5212 bytes
sounds/start.wav      | Bin 0 -> 1192 bytes
sounds/tada.wav       | Bin 0 -> 171100 bytes
uabout.lfm            | 204 ++++++
uabout.pas            | 62 +++
uhelp.lfm             | 159 ++++++
uhelp.pas             | 68 +++
uklock.lfm            | 376 ++++++
uklock.pas            | 295 ++++++
uoptions.lfm          | 42 ++
uoptions.pas          | 47 ++
71 files changed, 2308 insertions(+)

```

## Build 2

commit dc39233aeaa2191988890a6964d7d721e78d3bf0  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 20:56:56 2016 +0100

Nearly completed timer page - just an issue with the pause/resume.

Changed icon to clock.ico

Changed message to popup notification.

```

blue-letters/!.ico      | Bin 119149 -> 0 bytes
blue-letters/A.ico      | Bin 133106 -> 0 bytes
blue-letters/B.ico      | Bin 130770 -> 0 bytes
blue-letters/C.ico      | Bin 136698 -> 0 bytes
blue-letters/D.ico      | Bin 129097 -> 0 bytes
blue-letters/Dot.ico    | Bin 118524 -> 0 bytes
blue-letters/E.ico      | Bin 124688 -> 0 bytes
blue-letters/F.ico      | Bin 124147 -> 0 bytes
blue-letters/G.ico      | Bin 135767 -> 0 bytes
blue-letters/H.ico      | Bin 126025 -> 0 bytes
blue-letters/I.ico      | Bin 120077 -> 0 bytes
blue-letters/J.ico      | Bin 126758 -> 0 bytes
blue-letters/K.ico      | Bin 132202 -> 0 bytes
blue-letters/L.ico      | Bin 123843 -> 0 bytes
blue-letters/M.ico      | Bin 132420 -> 0 bytes
blue-letters/N.ico      | Bin 128936 -> 0 bytes
blue-letters/O.ico      | Bin 135070 -> 0 bytes
blue-letters/P.ico      | Bin 127568 -> 0 bytes
blue-letters/Q.ico      | Bin 138504 -> 0 bytes
blue-letters/Question.ico | Bin 122752 -> 0 bytes
blue-letters/R.ico      | Bin 131815 -> 0 bytes
blue-letters/S.ico      | Bin 138950 -> 0 bytes
blue-letters/T.ico      | Bin 123861 -> 0 bytes
blue-letters/U.ico      | Bin 126431 -> 0 bytes
blue-letters/V.ico      | Bin 133394 -> 0 bytes
blue-letters/W.ico      | Bin 137393 -> 0 bytes
blue-letters/X.ico      | Bin 133641 -> 0 bytes

```

```

blue-letters/Y.ico      | Bin 130920 -> 0 bytes
blue-letters/Z.ico      | Bin 129292 -> 0 bytes
blue-letters/readme.txt | 26 -
blue-letters/sA.ico     | Bin 894 -> 0 bytes
blue-letters/sB.ico     | Bin 894 -> 0 bytes
blue-letters/sC.ico     | Bin 894 -> 0 bytes
blue-letters/sD.ico     | Bin 894 -> 0 bytes
clock.ico               | Bin 0 -> 67646 bytes
info.txt                | 10 ++
klock.ico               | Bin 3262 -> 67646 bytes
klock.lpi                | 129 +++
random/random1.ico     | Bin 151787 -> 0 bytes
random/random10.ico    | Bin 161228 -> 0 bytes
random/random11.ico    | Bin 179933 -> 0 bytes
random/random12.ico    | Bin 173332 -> 0 bytes
random/random2.ico     | Bin 161370 -> 0 bytes
random/random3.ico     | Bin 154710 -> 0 bytes
random/random4.ico     | Bin 176679 -> 0 bytes
random/random5.ico     | Bin 132648 -> 0 bytes
random/random6.ico     | Bin 149826 -> 0 bytes
random/random7.ico     | Bin 155776 -> 0 bytes
random/random8.ico     | Bin 156516 -> 0 bytes
random/random9.ico     | Bin 151106 -> 0 bytes
random/readme.txt       | 17 -
uabout.lfm              | 30 ++
uabout.pas              | 2 ++
uhelp.lfm               | 6 ++
uhelp.pas              | 2 ++
uklock.lfm              | 2268 ++++++-----+
uklock.pas              | 92 ++
57 files changed, 2361 insertions(+), 221 deletions(-)

```

## Build 3

commit d16134c3bd9b03fee717a13f51b75ca79be2ed4d

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 21:12:48 2016 +0100

Timer page completed.

Reminder page started.

```
klock.lpi | 91 ++++++-----+
```

```
uklock.lfm | 66 ++++++-----+
```

```
uklock.pas | 62 ++++++-----+
```

3 files changed, 163 insertions(+), 56 deletions(-)

## Build 4

commit 2bb295ab57abacd842d99879a21a46feeeec62d8c

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 21:15:59 2016 +0100

Fuzzy time page completed.

Still working on reminder page.

```
klock.lpi | 100 ++++++-----+
```

```
klock.lpr | 2 +-
```

```
ufuzzytime.pas | 153 ++++++-----+
```

```
uklock.lfm | 161 ++++++-----+
uklock.pas | 64 ++++++-----+
5 files changed, 386 insertions(+), 94 deletions(-)
```

## Build 5

commit 012c8dcaa5ef6569b178c9263e8553b0208f46aa

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 21:22:06 2016 +0100

All four pages [fuzzy, countdown, time & reminder] are all complete.

Added logic to change status bar on page change.

Tidied up code.

```
info.txt | 6 +-+
klock.ipi | 99 ++++++-----+
uabout.lfm | 10 +-+
uabout.pas | 2 +-+
uhelp.lfm | 9 +-+
uhelp.pas | 8 +-+
uklock.lfm | 41 +++++-
uklock.pas | 417 ++++++-----+
uoptions.lfm | 4 +-+
9 files changed, 352 insertions(+), 244 deletions(-)
```

## Build 6

commit 04bbd3f4d9c7fbff3d493f570177b9c422f8fbbd

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 21:26:21 2016 +0100

All four pages now work - maybe an issue with reminders.

Added option record, that is passed between option form and the main form.

Added first option - colour of the main labels.

```
history.txt | 37 ++++++-----+
klock.iss | 54 ++++++-----+
klock.ipi | 152 ++++++-----+
klock.lpr | 2 +-+
uabout.lfm | 4 +-+
uhelp.lfm | 4 +-+
uklock.lfm | 59 ++++++-----+
uklock.pas | 38 ++++++-----+
uoptions.lfm | 69 ++++++-----+
uoptions.pas | 71 ++++++-----+
uoptionsrecord.pas | 32 ++++++-----+
11 files changed, 399 insertions(+), 123 deletions(-)
```

## Build 7

commit 3a979b66d0e3fad03dfb79aef2b207025db3784f

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 21:29:35 2016 +0100

Added NET & UNIX time to fuzzypage.

Added extra buttons to the radio group.

```

info.txt      |  6 +-
klock.lpi     | 160 ++++++-----+
klock.lpr     |  2 +-+
uabout.pas    |  2 +-+
ufuzzytime.pas | 66 ++++++-----+
uhelp.lfm     |  4 +-+
uhelp.pas     |  5 +-+
uklock.lfm    | 30 ++++++-----+
uklock.pas    | 35 ++++++-----+
uoptions.lfm   |  4 +-+
uoptions.pas   |  2 +-+
11 files changed, 191 insertions(+), 125 deletions(-)

```

## Build 8

commit fd88525ca99a09df732c03859b5e963c91c4679f  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 21:32:24 2016 +0100

Corrected bugs in fuzzytime & net time.

Added UTC time.

```

klock.iss      |  4 +-+
klock.lpi     | 140 ++++++-----+
uabout.lfm    |  4 +-+
ufuzzytime.pas | 19 ++++++---+
uhelp.lfm     |  4 +-+
uklock.lfm    | 11 +---+
uklock.pas    |  4 ++
uoptions.lfm   |  4 +-+
8 files changed, 104 insertions(+), 86 deletions(-)

```

## Build 9

commit 2aad4c41fb6f0410f6ff7f69c952e660a5c96f2d  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 21:35:59 2016 +0100

Changed the way to select the time format from a radio group to a combo box.

Added Swatch time.

```

history.txt    | 54 ++++++-----+
info.txt       |  6 +-
klock.lpi     | 116 ++++++-----+
uabout.pas    |  2 +-+
ufuzzytime.pas | 42 ++++++-----+
uhelp.pas     |  2 +-+
uklock.lfm    | 37 ++++++-----+
uklock.pas    | 22 ++++++-----+
uoptions.lfm   |  4 +-+
uoptions.pas   |  2 +-+
10 files changed, 164 insertions(+), 123 deletions(-)

```

## Build 10

commit 53193a6c8825b941b4b2d9648e40eb1552d8a87b  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 21:38:26 2016 +0100

Changed the data input on the reminder page from spin edits [one for hours and one for minutes] to a floating spin edit to handle both hours and minutes. Still working on the logic to make it work in 24 hours and 60 minutes.

Also added a date picker to the reminder page.

```
info.txt | 6 +--  
klock.lpi | 126 ++++++-----  
uabout.lfm | 28 +++++---  
uabout.pas | 2 +-  
ufuzzytime.pas | 21 +++++++  
uhelp.lfm | 4 +-  
uhelp.pas | 2 +-  
uklock.lfm | 134 ++++++-----  
uklock.pas | 73 ++++++-----  
9 files changed, 218 insertions(+), 178 deletions(-)
```

Build 11

commit e1da1e2a4a2bdb103668b2bab9a084b2bb8df54d

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 21:42:20 2016 +0100

More work done on the reminder page.

Finally decided to use two normal spin edits for the hours and mins.

Not too pretty, but simple and it works.

Also added a date picker and added the date into the reminder logic.

Added a clear button to the reminder page, to cancel the running reminder.

```
info.txt | 6 +--  
klock.lpi | 120 ++++++-----  
uabout.pas | 2 +-  
uhelp.pas | 2 +-  
uklock.lfm | 96 ++++++-----  
uklock.pas | 129 ++++++-----  
6 files changed, 201 insertions(+), 154 deletions(-)
```

Build 12

commit 00b786ab517dc5c7833ace39a7cb35187d9fa811

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 21:59:53 2016 +0100

Tidied up the code for the radio group - select time.

```
info.txt | 6 +----  
klock.lpi | 20 ++++++-----  
uabout.pas | 2 +-  
uhelp.pas | 2 +-  
uklock.pas | 48 ++++++-----  
5 files changed, 29 insertions(+), 49 deletions(-)
```

Build 13

commit 9cdc03d6cb236ae91a3b997d203371a6849910a6

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Thu Sep 29 22:02:36 2016 +0100

Reduced the height of most of the components, to make the overall application more sleek - I think it looks better.

Added a new form for the license [same as the help form], hangs off the help menu. Help & Licence forms now load their text from text files.

```
help.txt | 71 ++++++-----+
info.txt | 6 +-+
klock.lpi | 126 ++++++-----+
klock.lpr | 4 +-+
uabout.pas | 2 +-+
uhelp.lfm | 4 +-+
uhelp.pas | 18 +----+
uklock.lfm | 175 ++++++-----+
uklock.pas | 22 ++++++-
ulicense.lfm | 53 ++++++-----+
ulicense.pas | 54 ++++++-----+
11 files changed, 373 insertions(+), 162 deletions(-)
```

#### Build 14

```
commit daaa17da01956208064528a5eaad527547f31994
Author: Kevin Scott <lazKlock@keleven.co.uk>
Date: Thu Sep 29 22:06:24 2016 +0100
```

Added split time button to time page.

Removed the function ItoS, which converted integer to two digit strings and use internal format functions instead.

```
help.txt | 38 ++++++-----+
history.txt | 38 ++++++-----+
info.txt | 6 +---+
klock.lpi | 113 ++++++-----+
uabout.lfm | 6 +---+
uabout.pas | 6 +---+
uhelp.pas | 2 +-+
uklock.lfm | 44 ++++++-----+
uklock.pas | 66 ++++++-----+
ulicense.pas | 2 +-+
10 files changed, 211 insertions(+), 110 deletions(-)
```

#### Build 15

```
commit f69334f878d9b7451b21fb5811aaa45203ea1a8d
Author: Kevin Scott <lazKlock@keleven.co.uk>
Date: Thu Sep 29 22:25:08 2016 +0100
```

Added try..except clause to all file operations.

Another attempt to fix noon bug in fuzzytime.

```
help.txt | 32 ++++++-----+
info.txt | 8 +---+
klock.lpi | 97 ++++++-----+
uabout.lfm | 6 +---+
uabout.pas | 2 +-+
ufuzzytime.pas | 11 +----+
uhelp.lfm | 6 +---+
```

```
uhelp.pas | 14 ++++++-
uklock.lfm | 16 ++++++-
ulicense.lfm | 6 +++
ulicense.pas | 14 ++++++-
uoptions.lfm | 9 +----
12 files changed, 134 insertions(+), 87 deletions(-)
```

## Build 16

commit b2a0dc26bb2192179201688d36afd76500aedb9f  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Thu Sep 29 22:27:24 2016 +0100

Recompiled to check for Lazarus 0.9.30.4

```
history.txt | 12 ++++++-----
info.txt | 8 +++++-
klock.iss | 8 +++++-
klock.lpi | 10 +++++-
uabout.lfm | 26 ++++++-----+
uabout.pas | 2 ++
uhelp.lfm | 2 ++
uhelp.pas | 2 ++
ulicense.lfm | 2 ++
ulicense.pas | 2 ++
10 files changed, 43 insertions(+), 31 deletions(-)
```

## Build 17

commit 7d528975e17fb50a1b14fc38e5a585c25bcd2a38  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Thu Sep 29 22:28:56 2016 +0100

Licence window made read only - thanks Zach.  
 Reminders can now not be set in the past - thanks Zach.

Start of code for saving options in a .ini file.

```
info.txt | 9 +-
klock.ini | 21 +++++
klock.lpi | 172 ++++++-----+
uabout.lfm | 24 +----+
uabout.pas | 2 ++
uhelp.pas | 2 ++
uklock.lfm | 11 +-
uklock.pas | 49 ++++++-----
ulicense.lfm | 1 +
ulicense.pas | 2 ++
uoptions.lfm | 222 ++++++-----+
uoptions.pas | 153 ++++++-----+
12 files changed, 500 insertions(+), 168 deletions(-)
```

## Build 18

commit eb8bb66d933973ec2915c68f5be9a78ac921a6c1  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Thu Sep 29 22:38:52 2016 +0100

Further work completed on the .ini file

Extended the GUI on the options screen.

```
klock.ini | 3 +-  
klock.lpi | 94 ++++++-----  
uklock.lfm | 72 ++++++-----  
uklock.pas | 6 +-  
uoptions.lfm | 259 ++++++-----  
uoptions.pas | 70 ++++++-----  
6 files changed, 280 insertions(+), 224 deletions(-)
```

## Build 19

```
commit 6258d4478adef926ad45e166503e3a9e47b46bb4  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 22:41:08 2016 +0100
```

Further work on the ini file stuff.

Timer can now run either second / milli seconds.  
Default page control can now be set.  
Both saved to ini file.

```
info.txt | 6 +-  
klock.ini | 11 +---  
klock.lpi | 140 ++++++-----  
uabout.pas | 4 +-  
uhelp.pas | 2 +-  
uklock.lfm | 46 ++++++-----  
uklock.pas | 47 ++++++-----  
ulicense.pas | 2 +-  
uoptions.lfm | 25 ++++++-----  
uoptions.pas | 127 ++++++-----  
10 files changed, 232 insertions(+), 178 deletions(-)
```

## Build 20

```
commit d6208a7f77b04de861eac0154dc886be990c34b4  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 22:43:24 2016 +0100
```

All modules now load version info from options record.

```
info.txt | 6 +-  
klock.lpi | 120 ++++++-----  
uhelp.pas | 4 +-  
ulicense.pas | 4 +-  
uoptions.pas | 11 +----  
5 files changed, 73 insertions(+), 72 deletions(-)
```

## Build 21

```
commit 9f04e9dd7a8ad1106d10310a6f9933d40b297faa  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 22:46:44 2016 +0100
```

Added unit uOptionsUtils.pas, which contains the functions StringToFont & FontToString - enables font information to be saved to the ini file.

Added code to save and load fonts from the ini file - to be tested.

```
klock.ini | 7 +++
klock.lpi | 153 ++++++-----+
klock.lpr | 2 ++
uklock.pas | 31 ++++++-
uoptions.lfm | 38 ++++++-
uoptions.pas | 177 ++++++-----+
uoptionutils.pas | 164 ++++++-----+
7 files changed, 466 insertions(+), 106 deletions(-)
```

## Build 22

commit d74e9710c48371a8e92a440c372b15ae673e6119  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 22:50:15 2016 +0100

Further work on font options.

Removal of colour buttons in the options screen. The colour can be changed in the font page, so making these buttons redundant.

```
klock.ini | 22 ++++++-
klock.lpi | 115 ++++++-----+
uoptions.lfm | 34 ++++++-
uoptions.pas | 57 ++++++-----+
4 files changed, 134 insertions(+), 94 deletions(-)
```

## Build 23

commit 2f4a695fc917e80fa463ee1726e62eb95c253ac0  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 23:01:23 2016 +0100

Removed colour buttons, duplicated in font dialogue screen.

Finished font stuff.

Will save screen position if desired.

```
info.txt | 12 +---
klock.ini | 22 ++++++-
klock.iss | 7 +-
klock.lpi | 117 ++++++-----+
uhelp.lfm | 4 +-
uklock.lfm | 47 ++++++-
uklock.pas | 53 ++++++-
uoptions.lfm | 164 ++++++-----+
uoptions.pas | 179 ++++++-----+
uoptionutils.pas | 15 +---+
10 files changed, 255 insertions(+), 365 deletions(-)
```

## Build 24

commit 0d76e07735779d51ae2e12853badf8d9ca57a8d5  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Thu Sep 29 23:04:34 2016 +0100

Added option for net time to count in 1 or 15 seconds.

[15 seconds net time = i second real time]

Added option for Swatch time to display centibeats.

Added option for default time display.  
 Changed both default time & tab to be drop down lists.

Added option for countdown to trigger sound, event command or pop up message.  
 event is a system event i.e. PC shut down or reboot.  
 command is the ability to run an external application.

```
info.txt      | 14 +--  
klock.ini    | 11 +--  
klock.lpi    | 146 ++++++-----  
uabout.lfm   | 35 +++++--  
uabout.pas   | 1 +  
ufuzzytime.pas | 28 +++++--  
uhelp.pas    | 1 +  
uklock.lfm   | 160 ++++++-----  
uklock.pas   | 246 ++++++-----  
ulicense.pas | 1 +  
uoptions.lfm | 213 ++++++-----  
uoptions.pas | 180 ++++++-----  
12 files changed, 757 insertions(+), 279 deletions(-)
```

## Build 25

commit 35b26cb97e749407f6b120ca4c0bcc4c853e4a2e  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Fri Sep 30 21:34:21 2016 +0100

Over 1000 lines of meaningless code :0)

Renamed UOptionsUtils.pas to UKlockUtils.pas - a more general utils unit.  
 Moved doSystemEvent & doCommand procedures into this unit.

Corrected several bugs with the countdown event procedures.

Change AProcess.CommandLine [deprecated] to AProcess.Executable & Aprocess.Parameters.

Corrected bug; screen would reset to saved screen co-ordinates, even though  
 the screen saved not clicked in options. Now checks option when resets main form.

Options; changed around the NET time and Swatch time to be a common  
 checkbox list, instead of two check boxes.

Finally got around to the case statement, converted most nested IF statements.

Added Julian Time - needs checking.

```
help.txt       |  2 +-  
info.txt      |  8 +-  
klock.ini     | 10 +-  
klock.lpi     | 141 +++++--  
klock.lpr     |  2 +-  
ufuzzytime.pas | 108 +----  
uklock.lfm    | 228 ++++++-----  
uklock.pas    | 551 ++++++-----  
uooptionutils.pas => uklockutils.pas | 101 +----  
uooptions.lfm | 128 +----  
uooptions.pas |  39 +-  
11 files changed, 842 insertions(+), 476 deletions(-)
```

## Build 26

commit 730ffd5076edbf3267f54ae52616ca06a94a043  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Fri Sep 30 21:50:20 2016 +0100

Added Julian time.  
 Added Decimal Time.  
 Added Hexadecimal Time.  
 Added Binary Time.

```
info.txt      |  9 +---  

klock.lpi     | 143 ++++++-----  

ufuzzytime.pas | 116 ++++++-----  

uklock.lfm    |  41 ++++++-----  

uoptions.lfm   |  42 ++++++-----  

uoptions.pas    |  2 +-  

6 files changed, 222 insertions(+), 131 deletions(-)
```

## Build 27

commit 82242ff21bab25c4919463bdde34d3f8c335f4d2  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Fri Sep 30 21:55:00 2016 +0100

Bug with the ini file, could not create in Windows 7. Not enough permissions, I think.  
 Use GetAppConfigDir, it retrieves the correct place to store the ini file.  
 Store in something like c:\Users\user\AppData\local\kloc\ in Windows 7.  
 And c:\D&S\usr\Local Settings\Application Data\Klock\ on Windows XP.

```
history.txt | 93 ++++++-----  

info.txt     |  6 +---  

klock.ini    |  4 +-  

klock.iss    |  7 +---  

klock.lpi     | 32 ++++++-----  

uoptions.pas   |  8 +----  

6 files changed, 126 insertions(+), 24 deletions(-)
```

## Build 28

commit 1c4daa3d9c873b3bf2feeaa83630b46e4e9ef2ee3  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Fri Sep 30 21:58:57 2016 +0100

Removed local Klock.ini, not now needed - will create on start up.

Problem with the screen position of main form after options screen closed  
 - Corrected [thanks Zach].

```
info.txt      | 10 +---  

klock.ini    | 25 -----  

klock.lpi     | 146 ++++++-----  

ufuzzytime.pas | 18 +----  

uklock.lfm    | 83 ++++++-----  

uklock.pas    | 25 ++++++-----  

uoptions.lfm   | 36 ++++++-----  

uoptions.pas    |  2 +-  

8 files changed, 185 insertions(+), 160 deletions(-)
```

## Build 29

commit 8453f000a73e627323eef4c51971a9cce65e09d3  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Fri Sep 30 22:03:36 2016 +0100

Corrected bug; Setting the date on the reminder did not enable the set button - the time needed changing as well - [thanks Zach].

```
info.txt | 8 +---  

klock.lpi | 108 ++++++-----  

uklock.lfm | 6 +---  

uklock.pas | 26 ++++++-----  

uoptions.pas | 2 +-  

5 files changed, 75 insertions(+), 75 deletions(-)
```

## Build 30

commit 0e1fc4257b6bdde90a8282545b24531a7e3ea83a  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Fri Sep 30 22:08:30 2016 +0100

Added tray icon to klock.

Added button, that hides the main form to a tray icon.

Added pop-up menu to tray icon, that gives the following options -

- 1 - Show main form.
- 2 - Show current selected time as a pop-up notification.
- 3 - Exit Klock.

Changed the way the pop-up notification is called. Now uses a global array to hold different messages from time, countdown and reminder.

Added some new comments to procedures [which where their all the time ;o)]

```
klock.iss | 46 +-  

klock.lpi | 116 +-  

uklock.lfm | 2226 ++++++-----  

uklock.pas | 276 ++++++-----  

uoptions.lfm | 75 +-  

uoptions.pas | 29 +-  

6 files changed, 2580 insertions(+), 188 deletions(-)
```

## Build 31

commit 1d6bf1d7c014e3575f62223afeb9729d5bcfbe8  
Author: Kevin Scott <lazKlock@keleven.co.uk>  
Date: Fri Sep 30 22:14:03 2016 +0100

Recompiled to check for lazarus 1.0 RC1 [although showing 0.9.31 in about box].

Also turned off generate debugging info GDN in linking options.  
This creates a lot smaller executable.

```
klock.lpi | 18 ++++++-----  

uoptions.lfm | 46 ++++++-----  

uoptions.pas | 2 +-  

3 files changed, 37 insertions(+), 29 deletions(-)
```

## Build 32

commit f73c566840d177dadcd0dc09013bab2422c7ab883

Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Fri Sep 30 22:17:23 2016 +0100

Recompiled to check for Lazarus 1.0 RC2 [now showing 1.0.1.2 in about box].

Tidied up the logic that checks that a reminder has been set in the future date.

If a system shut down is chosen in reminder or countdown and the application is being displayed in the system tray, switch to normal mode - allows the abort button to be selected.

Added a display to the status bar that indicates the status of the cap, numlock & scroll lock [in real time].

```
help.txt | 101 ++++++-----
info.txt | 15 -----
klock.lpi | 144 ++++++-----+
uhelp.lfm | 26 ++++++-
uklock.lfm | 50 ++++++-----
uklock.pas | 156 ++++++-----+
ulicense.lfm | 6 ++
uoptions.lfm | 36 ++++++-----
uoptions.pas | 2 ++
9 files changed, 232 insertions(+), 304 deletions(-)
```

Build 33

commit 03c22837daa680df290ed247314cca7b33ce18a3  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Fri Sep 30 22:22:17 2016 +0100

Ran source through a spell checker - many changes.

Changed reminder tab to event tab.

Changed all existing references of reminder to event.

This is to allow a new reminder tab, which will remind on birthdays, anniversaries etc.

Added new reminder tab.

Added new form to add reminders.

Added logic to save reminders to csv file.

Added logic to load csv file and display date on reminder tab.

There is a bug with ICL, the pop-up notifier timeout does not seem to work.

Added a timer, that will kill the notifier after ten seconds.

```
kReminder.txt | 16 ++
klock.lpi | 201 ++++++-----
klock.lpr | 3 ++
ufuzzytime.pas | 2 ++
uhelp.lfm | 6 ++
uhelp.pas | 2 ++
uklock.lfm | 227 ++++++-----
uklock.pas | 557 ++++++-----+
uklockutils.pas | 252 ++++++-----
ulicense.lfm | 6 ++
uoptions.lfm | 55 +----+
uoptions.pas | 115 ++++++-----
ureminderinput.lfm | 193 ++++++-----
ureminderinput.pas | 175 ++++++-----
14 files changed, 1256 insertions(+), 554 deletions(-)
```

Build 34

commit 0a457f25b2170992c563062f8a5ee4d8084ba82f  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Fri Sep 30 22:57:59 2016 +0100

Converted SVN repository to GIT. Uploaded this to GitHub.

Recompiled to check for Lazarus 1.6 [showing 1.6.0.4 in about box].

```
LICENSE | 479 ++++++-----+
README.md | 76 +++++
history.txt | 981 ++++++-----+
3 files changed, 1344 insertions(+), 192 deletions(-)
```

Build 35

Recompiled to check for Lazarus 1.8.0.4.

Added VI backup files to .gitignore.

Amended klock.iss [inno setup script] to either install 32 or 64 bit executable, depending on target machine.

Increased version number of 35 in uOptions.pas.

Tidied up history.txt

Build 36 [1.0.0.36]

commit c607cf8110893a99bc89120532a1f1f34c6955c  
 Author: Kevin Scott <lazKlock@keleven.co.uk>  
 Date: Thu Sep 7 22:36:38 2017 +0100

Renamed all form files from uxxx.pas to formxxx.pas. i.e. uKlock.pas -> formKlock.pas.

So, all source files that contain GUI elements will start with form.

All none GUI source files will start with u - a unit file.

Currently

2968 lines of source code.

1549 statements

14.6% comments

uabout.lfm => formAbout.lfm	38 +----
uabout.pas => formAbout.pas	4 +-
uhelp.lfm => formHelp.lfm	2 +-
uhelp.pas => formHelp.pas	4 +-
uklock.lfm => formKlock.lfm	0
uklock.pas => formKlock.pas	20 +---
ulicense.lfm => formLicense.lfm	2 +-
uoptions.lfm => formOptions.lfm	4 +-
uoptions.pas => formOptions.pas	2 +-
ulicense.pas => formlicense.pas	4 +-
ureminderinput.lfm => formreminderinput.lfm	39 +----
ureminderinput.pas => formreminderinput.pas	2 +-
klock.lpi	168 +-----
klock.lpr	4 +-
klock.xml	4 +
ufuzzytime.pas	2 +-
uklockutils.pas	2 +-

17 files changed, 133 insertions(+), 168 deletions(-)

\*\*\*\*\* Version 2 \*\*\*\*\*

Build 37 [2.0.0.37]

commit 3d7a9e43522baac7af8adea345307b107d33a228

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Mon Oct 16 22:15:32 2017 +0100

Added config file for SourceMonitor.

Added uOptions.pas, an options record that uses XML files. Hopefully this will replace the existing .ini file based options.

Amended all references in formKlock.pas that used the old .ini options to use the new .xml options record.

NOTE :: formOptions has not been touched yet and still point to the old style options records - this will be stripped out next.

Currently

3450 lines of source code.

1802 statements

15.5% comments

formKlock.lfm	6 +-
formKlock.pas	57 +-
formOptions.lfm	2 +-
formreminderinput.lfm	6 +-
history.txt	1364 ++++++-----
klock.iss	8 +-
klock.lpi	141 +---
klock.lpr	3 +-
lazKlock.smproj	Bin 0 -> 10684 bytes
powered_by_lazarus.png	Bin 0 -> 15189 bytes
uoptions.pas	467 ++++++-----

11 files changed, 1310 insertions(+), 744 deletions(-)

Build 38 [2.0.0.38]

commit c35513fb5200d949b4d7a01cb63240000e00073b

Author: Kevin Scott <lazKlock@keleven.co.uk>

Date: Wed Oct 18 22:18:09 2017 +0100

Amended formLicence, formHelp & formAbout to use new user Options.

Added to formAbout disk size and free space for all disks on the system

Added to formAbout system and application up time.

Added to formAbout to display if compile to either 32 or 64 bit.

Added to formAbout powered by Lazarus logo.

Tidied up formAbout.

Amended klock.iss to use lazKlock instead of Klock - should that be lazKlock.iss.

reloaded licence.txt from web site.

Currently

3567 lines of source code.

1856 statements

16.0% comment

```
GNU GENERAL PUBLIC LICENSE.txt | 880 ++++++-----+
formAbout.lfm | 652 ++++++-----+
formAbout.pas | 114 +++++-
formHelp.lfm | 47 ++
formHelp.pas | 24 ++
formKlock.pas | 44 ++
formLicense.lfm | 64 ++
formlicense.pas | 13 ++
history.txt | 35 ++
klock.iss | 4 ++
klock.lpi | 160 +++++-
lazKlock.smproj | Bin 10684 -> 21721 bytes
12 files changed, 1166 insertions(+), 871 deletions(-)
```

Build 39 [2.0.0.39]

```
commit b9e05ca031036a4a64abf128859f401e10fab5f2
Author: Kevin Scott <lazKlock@keleven.co.uk>
Date: Thu Oct 19 21:21:15 2017 +0100
```

Removed all references to the old .ini in formOptions, fromKlock & ufuzzyTime.

Also removed all non-visual components from formOptions.

We now build the new options screen.

Currently  
 3112 lines of source code.  
 1615 statements  
 16.4% comment

```
clock.ico | Bin 67646 -> 0 bytes
formAbout.pas | 2 ++
formKlock.pas | 21 ++
formOptions.lfm | 319 +-----
formOptions.pas | 465 +-----
formlicense.pas | 2 ++
history.txt | 36 +++++
klock.iss | 10 ++
klock.lpi | 153 ++++++-----
lazKlock.smproj | Bin 21721 -> 32884 bytes
ufuzzytime.pas | 12 ++
uoptions.pas | 11 ++
12 files changed, 149 insertions(+), 882 deletions(-)
```

Build 40 [2.0.0.40]

```
commit 98eeee8d6afdb62fc0bfc23bd0cc52fb703883
Author: Kevin Scott <github@keleven.co.uk>
Date: Fri Oct 27 21:40:30 2017 +0100
```

Started building the new options screens - using an accordion.

Although all options are written to the xml file has strings, amended the Options class so that all options are presented to lazKlock has native type i.e. Integers and Boolean. The conversions are not in the options class and not the main program.

Changed the logic in formOptions, when the options form loads a backup options record is created and this is amended, it is only copied to the main options records if OK is clicked.

If cancel is click the amendments are discarded.

Added the logic to uKlockUtils to amend the registry for starting the app with windows.

Removed self from variable references in uFuzzTime - not sure why they were there.

Currently

3338 lines of source code.

1738 statements

17.4% comment

```
formKlock.lfm      | 17 +--  
formKlock.pas     | 57 ++++++-----  
formOptions.lfm    | 258 ++++++-----  
formOptions.pas    | 167 ++++++-----  
history.txt       | 31 ++++++  
klock.lpi         | 203 ++++++-----  
klock.lpr         | 5 +-  
lazKlock.smproj   | Bin 32884 -> 41764 bytes  
ufuzzytime.pas    | 38 +++++-  
uklockutils.pas   | 42 ++++++-  
options.pas        | 178 ++++++-----  
uoptionsrecord.pas | 32 -----  
12 files changed, 762 insertions(+), 266 deletions(-)
```

Build 41 [2.0.0.41]

commit 57332b6a2300cb489eee6d399318876c9519575e

Author: Kevin Scott <github@keleven.co.uk>

Date: Mon Oct 30 22:14:19 2017 +0000

Added a separate form to house an Analogue Klock - frmAnalogueKlock.pas.

Made this form transparent, just leaving the form.

Added logic to make this draggable, with just the Klock visible.

Added User Options to remember the Analogue Klock screen position.

Added to main Klock to display the idle time.

Added percent Time to FuzzyTime.

```
formKlock.lfm      | 19 +----  
formKlock.pas     | 48 ++++++-----  
formOptions.lfm    | 13 +-  
formanalogueklock.lfm | 78 ++++++-----  
formanalogueklock.pas | 162 ++++++-----  
history.txt       | 45 ++++++-----  
klock.lpi         | 216 ++++++-----  
klock.lpr         | 3 +-  
lazKlock.smproj   | Bin 41764 -> 51298 bytes  
ufuzzytime.pas    | 21 +----  
uoptions.pas       | 61 ++++++-----  
11 files changed, 549 insertions(+), 117 deletions(-)
```

Build 42 [2.0.0.42]

commit 7b3781a898da3a2f69387a5eca5eae372c198112

Author: Kevin Scott <github@keleven.co.uk>

Date: Mon Nov 6 13:39:29 2017 +0000

The shutdown command seems to have changed in windows 10.

Parameters are now preceded with a / and not a -.  
 Also, having problems passing parameter's with spaces, removed for now.

Corrected bug where if no action was selected, an index out of bounds could be created.

```
formAbout.pas | 2 ++
formKlock.lfm | 12 +---
formKlock.pas | 16 +++++-
history.txt | 27 ++++++-----
klock.lpi | 134 ++++++-----+
uklockutils.pas | 52 ++++++-----+
6 files changed, 136 insertions(+), 107 deletions(-)
```

#### Build 43 [2.0.0.43]

commit 92d89f0d1125dd1f4aa33a102f38c94de928ef13  
 Author: Kevin Scott <github@keleven.co.uk>  
 Date: Mon Nov 6 15:03:59 2017 +0000

Passed all source files through a spell checker - mainly for comments.

Passed all source through JEDI source checker.

Bumped up a minor version point.

Currently  
 3693 lines of source code.  
 1874 statements  
 16.7% comment

```
formAbout.pas | 53 ++
formHelp.pas | 12 ++
formKlock.pas | 961 ++++++-----+
formOptions.lfm | 2 ++
formOptions.pas | 53 ++
formanalogueklock.pas | 76 +++
formlicense.pas | 12 ++
formreminderinput.pas | 73 +++
help.txt | 6 ++
klock.lpi | 139 +++++-
klock.lpr | 25 ++
ufuzzytime.pas | 333 ++++++-----+
uklockutils.pas | 115 +++++-
uoptions.pas | 951 ++++++-----+
14 files changed, 1451 insertions(+), 1360 deletions(-)
```

#### Build 44 [2.0.1.44]

commit d0ffe89eb2885a8226c87d2b274fe099ce0684cc  
 Author: Kevin Scott <github@keleven.co.uk>  
 Date: Fri Nov 10 20:15:11 2017 +0000

Added time displayed as barcode, Semaphore, Nancy Blackett Semaphore & Braille. These are achieved my font substitution.

Added a new unit uFont.pas - to load custom fonts.

Added logic to formKlock to use new fonts when required.

Added two new directories fonts & sounds.

Added a number of mp3 files to play the hourly chimes and The pips.

Amended to procedure doPlaySound in uKlockUtils.pas to play all sound files and not just .wav files. Also, made this procedure more robust.  
Also added to this unit to play the hourly chimes.

Added user options for sound volume, sound the pips on the hour or hourly chimes.  
Also added the option for the analogue klock to save screen position.

Currently

4080 lines of source code.

2120 statements

16.4% comment

fonts/BarCode39.ttf	Bin 0 -> 22492 bytes
fonts/BrailleLatin.ttf	Bin 0 -> 30204 bytes
fonts/Hack-Regular.ttf	Bin 0 -> 394336 bytes
fonts/NancyBlackett.ttf	Bin 0 -> 41836 bytes
fonts/Semaphore.ttf	Bin 0 -> 12344 bytes
formKlock.lfm	12 +-
formKlock.pas	240 ++++++-----
formOptions.lfm	158 ++++++-----
formOptions.pas	116 ++++++-----
formanalogueklock.pas	1 +
history.txt	56 ++++++
klock.iss	2 +-
klock.lpi	229 ++++++-----
klock.lpr	2 +-
klock.xml	4 -
lazKlock.smproj	Bin 51298 -> 61875 bytes
sounds/alarm-fatal.mp3	Bin 0 -> 311378 bytes
sounds/alarm-fatal.wav	Bin 1359604 -> 0 bytes
sounds/chimes.wav	Bin 55776 -> 0 bytes
sounds/chord.wav	Bin 97016 -> 0 bytes
sounds/ding.wav	Bin 80856 -> 0 bytes
sounds/eight.mp3	Bin 0 -> 979530 bytes
sounds/eleven.mp3	Bin 0 -> 1162381 bytes
sounds/five.mp3	Bin 0 -> 801223 bytes
sounds/four.mp3	Bin 0 -> 739385 bytes
sounds/halfchime.mp3	Bin 0 -> 319514 bytes
sounds/nine.mp3	Bin 0 -> 1040899 bytes
sounds/notify.wav	Bin 119384 -> 0 bytes
sounds/one.mp3	Bin 0 -> 559035 bytes
sounds/quarterchime.mp3	Bin 0 -> 241462 bytes
sounds/recycle.wav	Bin 25434 -> 0 bytes
sounds/ringin.wav	Bin 10026 -> 0 bytes
sounds/ringout.wav	Bin 5212 -> 0 bytes
sounds/seven.mp3	Bin 0 -> 919940 bytes
sounds/six.mp3	Bin 0 -> 862013 bytes
sounds/start.wav	Bin 1192 -> 0 bytes
sounds/tada.wav	Bin 171100 -> 0 bytes
sounds/ten.mp3	Bin 0 -> 1101951 bytes
sounds/thepipes.mp3	Bin 0 -> 40874 bytes
sounds/three.mp3	Bin 0 -> 679164 bytes
sounds/threequarterchime.mp3	Bin 0 -> 383064 bytes
sounds/twelve.mp3	Bin 0 -> 1223752 bytes
sounds/two.mp3	Bin 0 -> 620614 bytes
ufonts.pas	69 +++++++
ufuzzytime.pas	43 +----

```
uklockutils.pas      | 130 ++++++-----+
uoptions.pas        | 84 ++++++-----+
47 files changed, 843 insertions(+), 303 deletions(-)
```

Build 45 [2.0.1.45]

commit a9296bca47a258c567d6d096bca416709e943c63

Author: Kevin Scott <github@keleven.co.uk>  
Date: Tue Nov 14 14:57:13 2017 +0000

Added the ability for Klock to write Info and Debug information to log files.  
Logging can be enabled / disabled by a user options. Also the ability to delete  
log files older than a certain age. This is also specified by user options.

An extra tab was added to the options form for the logging options, the log  
files are also displayed here.

Added a new unit, uLoggingUtils. The unit contains the helper routines to read and delete log files.

Started to sprinkle debug entries all over.

Cleaned up the calling process for the chimes.

Added doubleTime to uFuzzyTime.

Added a new unit, uOptionsUtils. This unit contains helper routines to read and write XML entries.

Changed the Klock icon.

Currently  
4303 lines of source code.  
2199 statements  
16.7% comment

```
formKlock.lfm      | 5994 ++++++-----+
formKlock.pas      | 78 +-+
formOptions.lfm     | 105 +-+
formOptions.pas     | 58 +-+
formanalogueklock.pas | 1 +
history.txt        | 82 +-+
klock.ico          | Bin 67646 -> 0 bytes
klock.lpi          | 212 +-+
klock.lpr          | 9 +-+
lazKlock.smproj    | Bin 61875 -> 73456 bytes
time-13-128.ico    | Bin 0 -> 67646 bytes
ufuzzytime.pas     | 41 +-+
uklockutils.pas    | 44 +-+
uloggerutils.pas   | 90 +
uoptions.pas       | 374 +-+
uoptionsutils.pas  | 99 +
16 files changed, 2749 insertions(+), 4438 deletions(-)
```

Build 46 [2.0.1.46]

commit 2a0201bd0094f867199523c53545e03695adb89f

Author: Kevin Scott <github@keleven.co.uk>  
Date: Mon Nov 20 14:11:16 2017 +0000

Added formClipboard and uformClipboardUtils which implements a clipboard manager.

Added various options for the clipboard managers to formOptions and uOptions.

```

README.md      | 18 +---
formKlock.lfm | 1 -
formKlock.pas | 13 ++
formOptions.lfm | 50 ++++++-
formOptions.pas | 15 +++
formanalogueklock.lfm | 8 ++
formanalogueklock.pas | 3 ++
formclipboard.lfm | 140 ++++++-----+
formclipboard.pas | 241 ++++++-----+
help.txt       | 43 +++++-+
history.txt   | 55 +++++++-
klock.ico     | Bin 0 -> 67646 bytes
klock.iss     | 5 ++
klock.lpi     | 279 ++++++-----+
klock.lpr     | 5 ++
lazKlock.smproj | Bin 73456 -> 100949 bytes
uformclipboardutils.pas | 244 ++++++-----+
uoptions.pas   | 26 +---+
18 files changed, 966 insertions(+), 180 deletions(-)

```

---

Looks like I have messed up and corrupted the sources somewhere along the line.  
 It would compile but would error when loading with Access Violation.  
 What ever I did, I could not see what I had done wrong. This happened at both 32 & 64 bit.  
 It did happen at the same time as I had tried a new couple of components, maybe I had  
 mixed up the 32 and 64 bit things. Or, more probably, trying to access an object  
 that had not been initialised. I gave up.

Lazarus then released the final V1.8 - So I decided to try and fix it.

The first build that would compile and run was build 41. So branch V2.1 starts from there.

I will try apply the changes gradually and see if I can spot the error[s].

---

### Build 47 [2.1.1.47]

```

commit 6cd165f08dbdf1636c5e595ab623e35d89a5efb4
Author: Kevin Scott <github@keleven.co.uk>
Date: Tue Dec 12 21:22:21 2017 +0000

```

[This is a duplication of build 42]

The shutdown command seems to have changed in windows 10.

Parameters are now preceded with a / and not a -.

Also, having problems passing parameter's with spaces, removed for now.

Corrected bug where if no action was selected, an index out of bounds could be created.

Currently

3611 lines of source code.

1851 statements

17.2% comment

```

formAbout.pas | 2 ++
formKlock.lfm | 2 ++

```

```
formKlock.pas | 16 ++
history.txt | 401 ++++++-----+
klock.iss | 2 ++
klock.lpi | 53 +++++-
uklockutils.pas | 29 +--
7 files changed, 388 insertions(+), 117 deletions(-)
```

#### Build 48 [2.1.2.48]

commit e6d03bec376307cbf63b324ea64f181d8a03867b  
 Author: Kevin Scott <github@keleven.co.uk>  
 Date: Wed Dec 13 10:00:24 2017 +0000

[This is a duplication of build 43]

Passed all source files through a spell checker - mainly for comments.

Passed all source through JEDI source checker.

Bumped up a minor version point.

Currently

3703 lines of source code.

1863 statements

16.7% comment

```
formAbout.pas | 2 ++
formKlock.lfm | 2 ++
formKlock.pas | 16 ++
history.txt | 401 ++++++-----+
klock.iss | 2 ++
klock.lpi | 53 +++++-
uklockutils.pas | 29 +--
7 files changed, 388 insertions(+), 117 deletions(-)
```

#### Build 49 [2.1.3.49]

commit f7b1216f1f682f9a2f28593dffbd45ca84521d0  
 Author: Kevin Scott <github@keleven.co.uk>  
 Date: Wed Dec 13 20:12:19 2017 +0000

[This is a NEARLY duplication of build 43]

Added time displayed as barcode, Semaphore, Nancy Blackett Semaphore & Braille. These are achieved my font substitution.

Added a new unit uFont.pas - to load custom fonts.

Added logic to formKlock to use new fonts when required.

Added two new directories fonts & sounds.

Added a number of mp3 files to play the hourly chimes and The pips.

Amended to procedure doPlaySound in uKlockUtils.pas to play all sound files and not just .wav files. Also, made this procedure more robust. Also added to this unit to play the hourly chimes.

Added user options for sound volume, sound the pips on the hour or hourly chimes. Also added the option for the analogue klock to save screen position.

Currently

4077 lines of source code.

2113 statements

16.4% comment

fonts/BarCode39.ttf	Bin 0 -> 22492 bytes
fonts/BrailleLatin.ttf	Bin 0 -> 30204 bytes
fonts/Hack-Regular.ttf	Bin 0 -> 394336 bytes
fonts/NancyBlackett.ttf	Bin 0 -> 41836 bytes
fonts/Semaphore.ttf	Bin 0 -> 12344 bytes
formHelp.pas	12 +-
formKlock.lfm	7 +-
formKlock.pas	284 ++++++-----
formOptions.lfm	139 ++++++-----
formOptions.pas	125 ++++++-----
formanalogueclock.pas	29 +---
history.txt	53 ++++++
klock.iss	6 +-
klock.lpi	195 ++++++-----
klock.lpr	2 +-
lazKlock.smproj	Bin 61799 -> 83961 bytes
sounds/alarm-fatal.mp3	Bin 0 -> 311378 bytes
sounds/alarm-fatal.wav	Bin 1359604 -> 0 bytes
sounds/chimes.wav	Bin 55776 -> 0 bytes
sounds/chord.wav	Bin 97016 -> 0 bytes
sounds/ding.wav	Bin 80856 -> 0 bytes
sounds/eight.mp3	Bin 0 -> 979530 bytes
sounds/eleven.mp3	Bin 0 -> 1162381 bytes
sounds/five.mp3	Bin 0 -> 801223 bytes
sounds/four.mp3	Bin 0 -> 739385 bytes
sounds/halfchime.mp3	Bin 0 -> 319514 bytes
sounds/nine.mp3	Bin 0 -> 1040899 bytes
sounds/notify.wav	Bin 119384 -> 0 bytes
sounds/one.mp3	Bin 0 -> 559035 bytes
sounds/quarterchime.mp3	Bin 0 -> 241462 bytes
sounds/recycle.wav	Bin 25434 -> 0 bytes
sounds/ringin.wav	Bin 10026 -> 0 bytes
sounds/ringout.wav	Bin 5212 -> 0 bytes
sounds/seven.mp3	Bin 0 -> 919940 bytes
sounds/six.mp3	Bin 0 -> 862013 bytes
sounds/start.wav	Bin 1192 -> 0 bytes
sounds/tada.wav	Bin 171100 -> 0 bytes
sounds/ten.mp3	Bin 0 -> 1101951 bytes
sounds/thepipes.mp3	Bin 0 -> 40874 bytes
sounds/three.mp3	Bin 0 -> 679164 bytes
sounds/threequarterchime.mp3	Bin 0 -> 383064 bytes
sounds/twelve.mp3	Bin 0 -> 1223752 bytes
sounds/two.mp3	Bin 0 -> 620614 bytes
ufonts.pas	78 +++++++
ufuzzytime.pas	42 +----
uklockutils.pas	156 ++++++-----
uoptions.pas	90 ++++++-----

47 files changed, 895 insertions(+), 323 deletions(-)

Build 50 [2.1.3.50]

commit ce387521eca09467d8a50d3617c9b0d79254acd5

Author: Kevin Scott <github@keleven.co.uk>

Date: Wed Dec 13 22:06:13 2017 +0000

[This is a part duplication of build 45 - mainly the options stuff.]  
 Cleaned up the calling process for the chimes.

Added doubleTime to uFuzzyTime.

Added a new unit, uOptionsUtils. This unit contains helper routines to read and write XML entries.

Changed the Klock icon.

Currently

4051 lines of source code.

2051 statements

16.9% comment

```
formAbout.pas | 4 +-
formKlock.lfm | 9364 ++++++-----+
formKlock.pas | 15 +-
formOptions.lfm | 4 ++
formOptions.pas | 7 +-
history.txt | 57 +-
klock.ico | Bin 67646 -> 67646 bytes
klock.iss | 6 +-
klock.lpi | 172 +-
klock.lpr | 2 +-
lazKlock.smproj | Bin 83961 -> 96029 bytes
time-13-128.ico | Bin 0 -> 67646 bytes
ufuzzytime.pas | 38 +-
uklockutils.pas | 39 +-
uoptions.pas | 285 +-
uoptionsutils.pas | 100 +
16 files changed, 5059 insertions(+), 5034 deletions(-)
```

Build 51 [2.1.3.51]

commit 22135ab71701bcf61cedef606c118d34eae6ab28

Author: Kevin Scott <github@keleven.co.uk>

Date: Sat Dec 16 18:56:37 2017 +0000

[This is a part duplication of build 45 - mainly the options stuff.]

Added the ability for Klock to write Info and Debug information to log files.

Logging can be enabled / disabled by a user options. Also the ability to delete log files older than a certain age. This is also specified by user options.

An extra tab was added to the options form for the logging options, the log files are also displayed here.

Added a new unit, uLogging.pas. The unit contains the helper routines to read and delete log files.

Started to sprinkle debug entries all over.

I started to get the Access Violation again, especially in the 32 bit application.

This seemed to be either the logging not being thread safe and a problem in loading the fonts. I changed the method that loads the faults and stopped using TEvent and wrote a simple logging class of my own that just appends to a text file.

[The logging class resides in uLogging.pas]

All seems to be okay.

Added a routine that retrieves the version of Windows, this is displayed in the About form and the header of the log file.

Also removed the option to install the sources from the inno installer, they can download them from GitHub.

Currently  
 4402 lines of source code.  
 2228 statements  
 17.2% comment

```
formAbout.lfm      | 41 ++++++-----  

formAbout.pas      | 44 +-----  

formHelp.pas       | 2 +  

formKlock.pas     | 160 ++++++-----  

formLicense.lfm    | 2 +-  

formOptions.lfm   | 78 ++++++-----  

formOptions.pas    | 55 ++++++-----  

formanalogueklock.pas | 3 +  

formlicense.pas   | 2 +  

formreminderinput.lfm | 2 +-  

formreminderinput.pas | 7 ++  

history.txt        | 73 ++++++-----  

klock.lpi          | 192 ++++++-----  

klock.lpr          | 2 +-  

lazKlock.smproj   | Bin 96029 -> 108871 bytes  

ufonts.pas         | 98 ++++++-----  

uklockutils.pas   | 97 ++++++-----  

ulogging.pas       | 155 ++++++-----  

uoptions.pas       | 93 ++++++-----  

uoptionsutils.pas  | 3 -  

20 files changed, 805 insertions(+), 304 deletions(-)
```

#### Build 52 [2.1.3.52]

commit 955ef8502453ccbc89da6a283ef28ff39acb7f7a  
 Author: Kevin Scott <github@keleven.co.uk>  
 Date: Sun Dec 17 21:37:49 2017 +0000

[This is a NEARLY duplication of build 46]  
 Added formClipboard and uformClipboardUtils which implements a clipboard manager.

Added various options for the clipboard managers to formOptions and uOptions.

Currently  
 4946 lines of source code.  
 2517 statements  
 16.6% comment

```
formAbout.lfm      | 41 ++++++-----  

formAbout.pas      | 44 +-----  

formHelp.pas       | 2 +  

formKlock.pas     | 160 ++++++-----  

formLicense.lfm    | 2 +-  

formOptions.lfm   | 78 ++++++-----  

formOptions.pas    | 55 ++++++-----  

formanalogueklock.pas | 3 +  

formlicense.pas   | 2 +  

formreminderinput.lfm | 2 +-  

formreminderinput.pas | 7 ++  

history.txt        | 73 ++++++-----  

klock.lpi          | 192 ++++++-----  

klock.lpr          | 2 +-  

lazKlock.smproj   | Bin 96029 -> 108871 bytes  

ufonts.pas         | 98 ++++++-----
```

```
uklockutils.pas | 97 ++++++-----+
ulogging.pas | 155 ++++++-----+
uoptions.pas | 93 ++++++-----+
uoptionsutils.pas | 3 -
20 files changed, 805 insertions(+), 304 deletions(-)
```

\*\*\*\*\*

Klock has now caught up to the point before the corruption.

I have done two things differently - the logger and the font loading - see build 51.

Another bump on the minor version.

\*\*\*\*\*

### Build 53 [2.1.4.53]

```
commit a8fcda0f1df54159f605d1241fbcdcc9aed1f45b
Author: Kevin Scott <github@keleven.co.uk>
Date: Mon Dec 18 13:04:20 2017 +0000
```

Added an info screen it display information about Easter & lent dates, Power Source and Daylight Saving. These are called from an Info menu from the main Klock screen.  
ulInfoUtils was added and this contains the routines which do the heavy lifting.

Added Time in words, Morse time and Roman Numerals Time to uFuzzyTime.

Added Application directory to formAbout and log file header.

Currently

5514 lines of source code.

2903 statements

15.8% comment

```
formAbout.lfm | 43 +++++-
formAbout.pas | 2 +
formKlock.lfm | 25 +++++-
formKlock.pas | 67 ++++++-----+
formOptions.lfm | 4 ++
forminfo.lfm | 106 ++++++-----+
forminfo.pas | 118 ++++++-----+
history.txt | 28 +++++-
klock.iss | 2 ++
klock.lpi | 210 ++++++-----+
klock.lpr | 3 ++
ufuzzytime.pas | 233 ++++++-----+
uinfoutils.pas | 245 ++++++-----+
uklockutils.pas | 1 +
14 files changed, 920 insertions(+), 167 deletions(-)
```

### Build 54 [2.1.4.54]

```
commit d4c4e3ef6602799b13f2e93f662ee9d86002df5a
Author: Kevin Scott <github@keleven.co.uk>
Date: Wed Dec 20 20:10:32 2017 +0000
```

Added a Christmas font and an option to automatically use this font for the 12 day of Christmas - 12 days before and 12 days after.

Other holiday fonts will be added when found.

formAbout - Removed info labels and added a listbox to display Klock about stuff.

formKlock - Tidied up the setting of main timer interval when using NET time.

- Added logic to use Christmas font.
- First attempt at auto sizing main fuzzy time label depending upon size.

formOptions - Added checkbox for Christmas font.

formClipboard - Added the start of culling tmp files.

formInfo - Removed info labels and added a listbox to display Info stuff.

uFonts - Added loading and removal of Christmas font.

uFuzzyTime - Added logic for fuzzyTime to write out it's own debug log.  
 - Corrected bug[s] in fuzzyTime.

uKlockUtils - Added getTextWidth & isChristams helper functions.

Currently

5654 lines of source code.

2984 statements

15.7% comment

fonts/Christmas.ttf	Bin 0 -> 57012 bytes
formAbout.lfm	79 +-
formAbout.pas	38 +-
formKlock.lfm	166 +---
formKlock.pas	47 +-
formOptions.lfm	36 +-
formOptions.pas	15 +-
formanalogueklock.pas	7 -
formclipboard.lfm	5 +
formclipboard.pas	26 +-
forminfo.lfm	70 +-
forminfo.pas	58 +-
history.txt	2243 ++++++-----
klock.iss	2 +-
klock.lpi	228 +---
lazKlock.smproj	Bin 123852 -> 140380 bytes
ufonts.pas	6 +-
ufuzzytime.pas	51 +-
uinfoutils.pas	13 +-
uklockutils.pas	35 +-
uoptions.pas	6 +

21 files changed, 1636 insertions(+), 1495 deletions(-)

Build 55 [2.1.4.55]

commit 3721a3e5d078a2ae0c14b5cb17fc7370ed747d51

Author: Kevin Scott <github@keleven.co.uk>

Date: Thu Dec 21 14:12:46 2017 +0000

Added a LED Klock, this hangs off the Time menu on the main Klock.  
 Added formLEDKlock to the project.

formKlock - Added menu item to call the LED Klock.

formOptionss - Added options for LED Klock [save screen position].  
 uOptions - Added above options.

uFuzzyTime - Added Flow Time and Metric Time.

Currently

5917 lines of source code.

3091 statements

15.8% comment

```
formKlock.lfm      |  8 +-
formKlock.pas      | 42 ++++++-
formOptions.lfm     | 43 ++++++-
formOptions.pas     | 29 +-----
formanalogueklock.lfm |  6 +-
formanalogueklock.pas | 12 +-
formclipboard.lfm   |  5 +
formclipboard.pas   | 23 +----
formledklock.lfm    | 45 ++++++++
formledklock.pas    | 146 ++++++-----+
history.txt         | 49 ++++++-
klock.iss           |  2 +-
klock.lpi           | 258 ++++++-----+
klock.lpr           |  3 +-
lazKlock.smproj     | Bin 140380 -> 174874 bytes
ufuzzytime.pas       | 51 ++++++-
uoptions.pas         | 34 +----+
17 files changed, 592 insertions(+), 164 deletions(-)
```

Build 56 [2.1.4.56]

commit 16b49360bd2f6cb5c60385c86662c27817c0829d

Author: Kevin Scott <github@keleven.co.uk>

Date: Tue Dec 26 22:14:24 2017 +0000

Added a Binary Klock, this hangs off the Time menu on the main Klock.

Added formBinaryKlock to the project.

The Klock can display time in either Binary or BCD format.

formKlock - Added menu item to call the Binary Klock.

formOptions - Added options for LED Klock [Use long date format].

- Added options for Binary Klock [save screen position].
- Added options for Binary Klock [Binary/BCD format].

uOptions - Added above options.

formAnalogueKlock - Changed method of moving [dragging] the klock,  
it now mirrors the LED Klock.

formLEDKlock - Added use long date option.

- Fixed a bug in screen save logic.

Currently

6514 lines of source code.

3437 statements

15.4% comment

```
formAbout.pas        |  6 +-
formKlock.lfm        |  8 +-
formKlock.pas        | 10 +-
formOptions.lfm       | 42 +-----
formOptions.pas       | 54 +-----
formanalogueklock.lfm | 16 +-
formanalogueklock.pas | 81 +----+
formbinaryklock.lfm   | 249 ++++++-----+
```

```

formbinaryklock.pas | 472 ++++++-----+
formledklock.lfm   | 16 +-+
formledklock.pas   | 24 ++
history.txt        | 71 ++++++-
klock.iss          | 2 ++
klock.lpi          | 296 ++++++-----
klock.lpr          | 4 ++
lazKlock.smproj    | Bin 174874 -> 193883 bytes
uklockutils.pas    | 16 +-+
uoptions.pas       | 60 ++++++-
uoptionsutils.pas  | 2 ++
19 files changed, 1108 insertions(+), 321 deletions(-)

```

## Build 57 [2.1.4.57]

commit 0c32a35ccb44ae3e11875382adb185a32ec9f074  
Author: Kevin Scott <github@keleven.co.uk>  
Date: Thu Dec 28 13:47:14 2017 +0000

Developing Small Text Klock.

```

fonts/{Hack-Regular.ttf => Hack.ttf} | Bin
formKlock.lfm           | 8 +-+
formKlock.pas            | 8 +-+
formOptions.lfm          | 31 ++
formOptions.pas          | 22 ++
formledklock.lfm         | 4 ++
formsmalltextklock.lfm   | 58 ++
formsmalltextklock.pas   | 1033 ++++++-----+
history.txt              | 25 +
klock.lpi                | 214 ++++++-
klock.lpr                | 3 ++
ufonts.pas               | 2 ++
uklockutils.pas          | 11 ++
uoptions.pas              | 45 ++
14 files changed, 1411 insertions(+), 53 deletions(-)

```

## Build 58 [2.1.4.58]

commit 8c72e195366d5433a2a37e10d3122f7113a1d94b  
Author: Kevin Scott <github@keleven.co.uk>  
Date: Fri Dec 29 22:51:21 2017 +0000

Added a Small Text Klock, this hangs off the Time menu on the main Klock.  
Added formSmallTextKlock to the project.  
The Klock can either have a transparent or solid background.

formKlock - Added menu item to call the Binary Klock.

formOptions - Added options for Binary Klock [save screen position].  
- Added options for Binary Klock [Transparent background].  
uOptions - Added above options.

Renamed hack-Regular.ttf to Hack.ttf.  
uFonts - Added loading of hack.ttf.

Currently  
7636 lines of source code.  
4140 statements  
14.1% comment

```

formKlock.lfm      | 4 ++
formOptions.lfm    | 4 ++
formbinaryklock.lfm | 8 ++
formledklock.lfm   | 4 ++
formsmalltextklock.lfm | 23 ++++++-
formsmalltextklock.pas | 23 ++++++++
klock.lpi          | 132 ++++++-----+
7 files changed, 116 insertions(+), 82 deletions(-)

```

Build 58 [2.1.4.58]

```

commit 76c6308ba019b6fcab6df701040e99fb393f91a2
Author: Kevin Scott <github@keleven.co.uk>
Date: Mon Jan 1 20:08:48 2018 +0000

```

Added A [proper] help file in .chm, .pdf and .html format.  
This was created using HelpNDoc V5, a help.hdn file has been added to the source.  
A new sub directory called help was created to hold all the files.

The old style formHelp has been deleted from the project.

The new style help [.chm] is now loaded from both the help button on the main form,  
the help menu and the help button on the options screen.

Currently  
7600 lines of source code.  
4116 statements  
14.2% comment

```

README.md           | 14 ++
formHelp.lfm        | 185 --
formHelp.pas         | 72 -
formKlock.pas       | 17 ++
formOptions.lfm      | 5 ++
formOptions.pas      | 18 ++
help.txt            | 42 ++
help/Klock.chm      | Bin 0 -> 864090 bytes
help/Klock.pdf       | Bin 0 -> 4115286 bytes
help/html/About.html | 338 +////
help/html/AnalogueKlock.html | 282 +++
help/html/BinaryKlock.html | 290 +++
help/html/ClipboardMonitor.html | 285 +++
help/html/Countdown.html | 292 +++
help/html/Credits.html | 298 +++
help/html/Events.html | 278 +++
help/html/Events1.html | 268 +++
help/html/ExtraKlock.html | 284 +++
help/html/File.html | 278 +++
help/html/FuzzyTime.html | 278 +++
help/html/GettingStarted.html | 269 +++
help/html/Gettinghelp.html | 272 +++
help/html/Global.html | 294 +++
help/html/Help.html | 282 +++
help/html/History.html | 2075 ++++++-----+
help/html/Info.html | 298 +++
help/html/Introduction.html | 296 +++
help/html/Klock.html | 296 +++
help/html/LEDKlock.html | 283 +++
help/html/License.html | 749 ++++++

```

help/html/Logging.html	274 +++
help/html/Menu.html	277 +++
help/html/Options.html	284 +++
help/html/OtherKlocks.html	279 +++
help/html/OtherStuff.html	282 +++
help/html/Reminder.html	279 +++
help/html/SmallTextKlock.html	284 +++
help/html/Statusbar.html	289 +++
help/html/SystemTray.html	289 +++
help/html/Systemrequirements.html	273 +++
help/html/Thingymabobs.html	278 +++
help/html/Time.html	290 +++
help/html/Time1.html	278 +++
help/html/Timer.html	277 +++
help/html/Welcome.html	289 +++
help/html/WorldKlock.html	276 +++
help/html/_keywords.json	1 +
help/html/_toc.json	1 +
help/html/_translations.js	11 +
help/html/css/effects.min.css	5 +
help/html/css/hnd.content.css	183 ++
help/html/css/layout.min.css	5 +
help/html/css/print.min.css	5 +
help/html/css/theme-dark-blue.min.css	5 +
help/html/css/theme-dark-green.min.css	5 +
help/html/css/theme-dark-orange.min.css	5 +
help/html/css/theme-dark-purple.min.css	5 +
help/html/css/theme-light-blue.min.css	5 +
help/html/css/theme-light-green.min.css	5 +
help/html/css/theme-light-orange.min.css	5 +
help/html/css/theme-light-purple.min.css	5 +
help/html/js/app.min.js	6 +
help/html/js/hndsd.min.js	1 +
help/html/js/hndse.min.js	6 +
.../bootstrap-3.3.6/css/bootstrap-theme.min.css	5 +
.../vendors/bootstrap-3.3.6/css/bootstrap.min.css	5 +
.../css/ie10-viewport-bug-workaround.css	15 +
.../fonts/glyphicons-halflings-regular.eot	Bin 0 -> 20127 bytes
.../fonts/glyphicons-halflings-regular.svg	288 +++
.../fonts/glyphicons-halflings-regular.ttf	Bin 0 -> 45404 bytes
.../fonts/glyphicons-halflings-regular.woff	Bin 0 -> 23424 bytes
.../fonts/glyphicons-halflings-regular.woff2	Bin 0 -> 18028 bytes
.../vendors/bootstrap-3.3.6/js/bootstrap.min.js	7 +
.../js/ie10-viewport-bug-workaround.js	23 +
help/html/vendors/fastclick-1.0.6/fastclick.min.js	11 +
help/html/vendors/headroom-0.9.3/headroom.min.js	7 +
.../vendors/headroom-0.9.3/jquery.headroom.min.js	7 +
help/html/vendors/helpndoc-5/icons/0.png	Bin 0 -> 291 bytes
help/html/vendors/helpndoc-5/icons/1.png	Bin 0 -> 266 bytes
help/html/vendors/helpndoc-5/icons/10.png	Bin 0 -> 244 bytes
help/html/vendors/helpndoc-5/icons/11.png	Bin 0 -> 262 bytes
help/html/vendors/helpndoc-5/icons/12.png	Bin 0 -> 328 bytes
help/html/vendors/helpndoc-5/icons/13.png	Bin 0 -> 327 bytes
help/html/vendors/helpndoc-5/icons/14.png	Bin 0 -> 343 bytes
help/html/vendors/helpndoc-5/icons/15.png	Bin 0 -> 344 bytes
help/html/vendors/helpndoc-5/icons/16.png	Bin 0 -> 261 bytes
help/html/vendors/helpndoc-5/icons/17.png	Bin 0 -> 277 bytes
help/html/vendors/helpndoc-5/icons/18.png	Bin 0 -> 250 bytes
help/html/vendors/helpndoc-5/icons/19.png	Bin 0 -> 275 bytes
help/html/vendors/helpndoc-5/icons/2.png	Bin 0 -> 332 bytes

```

help/html/vendors/helpndoc-5/icons/20.png | Bin 0 -> 249 bytes
help/html/vendors/helpndoc-5/icons/21.png | Bin 0 -> 276 bytes
help/html/vendors/helpndoc-5/icons/22.png | Bin 0 -> 299 bytes
help/html/vendors/helpndoc-5/icons/23.png | Bin 0 -> 293 bytes
help/html/vendors/helpndoc-5/icons/24.png | Bin 0 -> 286 bytes
help/html/vendors/helpndoc-5/icons/25.png | Bin 0 -> 313 bytes
help/html/vendors/helpndoc-5/icons/26.png | Bin 0 -> 296 bytes
help/html/vendors/helpndoc-5/icons/27.png | Bin 0 -> 304 bytes
help/html/vendors/helpndoc-5/icons/28.png | Bin 0 -> 309 bytes
help/html/vendors/helpndoc-5/icons/29.png | Bin 0 -> 329 bytes
help/html/vendors/helpndoc-5/icons/3.png | Bin 0 -> 283 bytes
help/html/vendors/helpndoc-5/icons/30.png | Bin 0 -> 338 bytes
help/html/vendors/helpndoc-5/icons/31.png | Bin 0 -> 363 bytes
help/html/vendors/helpndoc-5/icons/32.png | Bin 0 -> 288 bytes
help/html/vendors/helpndoc-5/icons/33.png | Bin 0 -> 310 bytes
help/html/vendors/helpndoc-5/icons/34.png | Bin 0 -> 256 bytes
help/html/vendors/helpndoc-5/icons/35.png | Bin 0 -> 294 bytes
help/html/vendors/helpndoc-5/icons/36.png | Bin 0 -> 314 bytes
help/html/vendors/helpndoc-5/icons/37.png | Bin 0 -> 304 bytes
help/html/vendors/helpndoc-5/icons/38.png | Bin 0 -> 285 bytes
help/html/vendors/helpndoc-5/icons/39.png | Bin 0 -> 319 bytes
help/html/vendors/helpndoc-5/icons/4.png | Bin 0 -> 211 bytes
help/html/vendors/helpndoc-5/icons/40.png | Bin 0 -> 320 bytes
help/html/vendors/helpndoc-5/icons/41.png | Bin 0 -> 335 bytes
help/html/vendors/helpndoc-5/icons/5.png | Bin 0 -> 255 bytes
help/html/vendors/helpndoc-5/icons/6.png | Bin 0 -> 229 bytes
help/html/vendors/helpndoc-5/icons/7.png | Bin 0 -> 273 bytes
help/html/vendors/helpndoc-5/icons/8.png | Bin 0 -> 242 bytes
help/html/vendors/helpndoc-5/icons/9.png | Bin 0 -> 266 bytes
help/html/vendors/html5shiv-3.7.2/html5shiv.min.js | 4 +
help/html/vendors/jquery-1.11.3/jquery.min.js | 6 +
help/html/vendors/jstree-3.3.2/jstree.min.js | 6 +
.../jstree-3.3.2/themes/default-dark/32px.png | Bin 0 -> 1562 bytes
.../jstree-3.3.2/themes/default-dark/40px.png | Bin 0 -> 5717 bytes
.../jstree-3.3.2/themes/default-dark/style.css | 1112 ++++++++
.../jstree-3.3.2/themes/default-dark/style.min.css | 1 +
.../jstree-3.3.2/themes/default-dark/throbber.gif | Bin 0 -> 1720 bytes
.../vendors/jstree-3.3.2/themes/default/32px.png | Bin 0 -> 3121 bytes
.../vendors/jstree-3.3.2/themes/default/40px.png | Bin 0 -> 1880 bytes
.../vendors/jstree-3.3.2/themes/default/style.css | 1068 ++++++++
.../jstree-3.3.2/themes/default/style.min.css | 1 +
.../jstree-3.3.2/themes/default/throbber.gif | Bin 0 -> 1720 bytes
help/html/vendors/markjs-8.8.3/jquery.mark.min.js | 7 +
help/html/vendors/respond-1.4.2/respond.min.js | 5 +
help/html/vendors/uri-1.18.9/uri.min.js | 114 ++
help/klock.hnd | Bin 0 -> 49463296 bytes
history.txt | 69 ++
klock.iss | 20 ++
klock.lpi | 206 ++
klock.lpr | 3 ++
lazKlock.smproj | Bin 193883 -> 215570 bytes
uklockutils.pas | 28 ++
uoptions.pas | 13 ++
143 files changed, 16008 insertions(+), 423 deletions(-)

```

Build 59 [2.2.0.59]

commit a0ad6ae5e5e9530dd159b19ad3010dc5c7b597e5  
Author: Kevin Scott <github@keleven.co.uk>

Date: Wed Jan 3 15:06:05 2018 +0000

Changes to history.txt and lazKlock.smproj hanging over from last commit.

Also, did some git admin. Since the master branch was corrupt and all the recent work had been done in branch V2.1, it was time to clean up. This was achieved with the following.

```
git branch -m master master-old          # rename master on local
git push -f origin :master              # delete master on remote
git push origin master-old             # create master-old on remote
git checkout -b master V2.1            # create a new local master on top of V2.1
git push origin master                # create master on remote
```

I now have a current and good master and a working copy at V2.1.

I also deleted branches v1 and v2. I will delete branches master-old and v2.1 when happy is all is okay.

This also becomes V2.2 and will create a working branch of v2.

```
history.txt | 186 ++++++-----+-----+-----+-----+-----+-----+
lazKlock.smproj | Bin 215570 -> 237081 bytes
2 files changed, 186 insertions(+)
```

Build 60 [2.2.0.60]

commit c98469c78125b59aa4c0cbb8733024250a402f47

Author: Kevin Scott <github@keleven.co.uk>

Date: Thu Jan 4 17:05:51 2018 +0000

Added Easter font and option to use this font at the Easter weekend.

formOptions - Added logic to cull [delete] log files over a certain age.

This can be configured in options.

formClipboard - Added logic to cull [delete] tmp files over a certain age.

The age is currently hard coded to be 10 days..

formBinaryKlock - changed the status bar for a panel.

This can have the background colour changed without leaving ugly lines as the status bar does.

Currently

7742 lines of source code.

4185 statements

14.6% comment

```
fonts/rmbunny.ttf      | Bin 0 -> 150424 bytes
formKlock.pas         | 33 +---+
formOptions.lfm        | 28 +---+
formOptions.pas        | 33 +---+
formbinaryklock.lfm    | 60 +-----+
formbinaryklock.pas    | 148 +-----+-----+
formclipboard.lfm       | 2 +
formclipboard.pas      | 49 +-----+
forminfo.pas           | 1 -
formsmalltextklock.pas | 26 +--+
help/Klock.chm         | Bin 864090 -> 870264 bytes
```

```

help/Klock.pdf      | Bin 4115286 -> 4112582 bytes
help/html/About.html | 2 ++
help/html/ClipboardMonitor.html | 2 +
help/html/Credits.html | 2 ++
help/html/Gettinghelp.html | 2 ++
help/html/Global.html | 2 ++
help/html/History.html | 214 ++++++-----+
help/html/Introduction.html | 4 ++
help/html/Klock.html | 4 ++
help/html/Logging.html | 3 ++
help/html/Welcome.html | 4 ++
help/html/js/hndsd.min.js | 2 ++
help/klock.hnd      | Bin 49463296 -> 49524736 bytes
history.txt        | 24 +++
klock.iss          | 2 ++
klock.lpi          | 272 +-----+
lazKlock.smproj    | Bin 237081 -> 258836 bytes
ufonts.pas         | 6 ++
ufuzzytime.pas    | 4 ++
uklockutils.pas   | 54 ++++++-+
ulogging.pas       | 12 ++
uoptions.pas       | 14 ++
33 files changed, 704 insertions(+), 305 deletions(-)

```

### Build 61 [2.2.1.61]

commit fd4886c7d4a8aafd195e5c57bc3762cda5e055fe

Author: Kevin Scott <github@keleven.co.uk>

Date: Sun Jan 7 17:07:08 2018 +0000

Added a new tab to Klock for Conversions. This allows the conversion between several units i.e. weight and distance etc. A new file uConversion was added, this holds the helper functions for the conversion tab.

Also removed a lot of old image files from the help file - reduced the size a lot.

Merged branch V2 back into master branch.

#### Currently

8021 lines of source code.

4339 statements

14.9% comment

```

README.md           | 27 ++
formKlock.lfm      | 139 +-----+
formKlock.pas      | 110 +-----+
help/Klock.chm     | Bin 870264 -> 914620 bytes
help/Klock.pdf     | Bin 4112582 -> 4475682 bytes
help/html/About.html | 17 ++
help/html/AnalogueKlock.html | 2 ++
help/html/BinaryKlock.html | 2 ++
help/html/ClipboardMonitor.html | 4 ++
help/html/{WorldKlock.html => Conversion.html} | 42 +++
help/html/Countdown.html | 4 ++
help/html/Credits.html | 2 ++
help/html/Events.html | 4 ++
help/html/Events1.html | 268 -----
help/html/ExtraKlock.html | 284 -----
help/html/File.html | 2 ++

```

```

help/html/FuzzyTime.html      |  4 ++
help/html/GettingStarted.html |  2 ++
help/html/Gettinghelp.html   |  2 ++
help/html/Global.html        |  2 ++
help/html/Help.html          |  2 ++
help/html/History.html       | 83 ++++++-
help/html/Info.html          |  2 ++
help/html/Introduction.html  | 18 ++
help/html/Klock.html         | 20 ++
help/html/LEDKlock.html      |  2 ++
help/html/License.html       |  2 ++
help/html/Logging.html       |  2 ++
help/html/Menu.html          |  2 ++
help/html/Options.html       |  2 ++
help/html/OtherKlocks.html   |  2 ++
help/html/OtherStuff.html    |  2 ++
help/html/Reminder.html      |  6 ++
help/html/SmallTextKlock.html|  2 ++
help/html/Statusbar.html     |  2 ++
help/html/SystemTray.html    |  2 ++
help/html/Systemrequirements.html|  2 ++
help/html/Thingymabobs.html  |  2 ++
help/html/Time.html          |  2 ++
help/html/Time1.html         |  2 ++
help/html/Timer.html         |  4 ++
help/html/Welcome.html       | 14 ++
help/html/_toc.json          |  2 ++
help/html/css/hnd.content.css| 16 ++
help/html/js/hndsd.min.js    |  2 ++
help/klock.hnd               | Bin 49524736 -> 1839104 bytes
history.txt                 | 55 +++++
klock.iss                   | 20 ++
klock.lpi                   | 288 ++++++-----+
klock.lpr                   |  2 ++
lazKlock.smproj              | Bin 258836 -> 281546 bytes
uconversion.pas              | 184 ++++++-----
uklockutils.pas              |  8 ++
ulogging.pas                 |  1 -
54 files changed, 823 insertions(+), 849 deletions(-)

```

## Build 62 [2.2.1.62]

commit fa152df41daf92f75bf9d74b5b69e1b9efa4942e  
Author: Kevin Scott <github@keleven.co.uk>  
Date: Sun Jan 7 23:05:10 2018 +0000

Made the xml [options] reading routines more robust.  
If an entry is missing, the default values for that entry is  
now used instead of an error being generated.  
This then cures the problem of new options being added, up to  
now if the old options file was not deleted and error was generated.

Also, removed uOptinsUtils and moved the helper routines into  
the main options class.

```

formKlock.lfm      |  9 ++
formKlock.pas      |  1 -
history.txt        | 103 ++++++-----+
klock.lpi          | 172 ++++++-----+

```

```
klock.lpr | 6 ++
iformclipboardutils.pas | 4 ++
uoptions.pas | 276 ++++++-----+
uoptionsutils.pas | 97 -----
8 files changed, 406 insertions(+), 262 deletions(-)
```

## Build 63 [2.2.2.63]

commit c964c7287aa66205cd3f014015fca519daefc92f

Author: Kevin Scott <github@keleven.co.uk>

Date: Thu Jan 11 22:07:21 2018 +0000

Added a Sticky note option.

This compromises of two classes [uStickNote and UStickNotes] and one form [formStickNote].

The uStickNote holds the info for one stick Note and uStickyNotes handles creation and storage of all the stick Notes.

A menu option was added to Klock to create a new Sticky Note.

Needs some testing yet.

Currently

8762 lines of source code.

4777 statements

15.4% comment

```
formKlock.lfm | 7 ++
formKlock.pas | 27 +----+
formOptions.lfm | 6 ++
formOptions.pas | 1 +
formbinaryklock.pas | 4 ++
formledklock.pas | 4 ++
formstickynote.lfm | 82 ++++++-----+
formstickynote.pas | 105 ++++++-----+
history.txt | 33 ++++++
klock.iss | 4 ++
klock.lpi | 229 ++++++-----+
klock.lpr | 3 ++
lazKlock.smproj | Bin 281546 -> 305920 bytes
ustickynote.pas | 297 ++++++-----+
ustickynotes.pas | 251 ++++++-----+
15 files changed, 946 insertions(+), 107 deletions(-)
```

## Build 64 [2.2.2.64]

Changed all the icon [again] - now from <https://icons8.com/>

Removed the button bar from the main Klock screen and added individual buttons, with their own icons.

Added a sub menu option to save the Sticky Notes to each Sticky Note.

Added Binary and BCD time to uFuzzyTime.

Currently

8863 lines of source code.

4830 statements

15.3% comment

## License

---

# License

GNU GENERAL PUBLIC LICENSE  
Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

### Preamble

The GNU General Public License is a free, copyleft license for software and other kinds of works.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users. We, the Free Software Foundation, use the GNU General Public License for most of our software; it applies also to any other work released this way by its authors. You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

To protect your rights, we need to prevent others from denying you these rights or asking you to surrender the rights.

Therefore, you have certain responsibilities if you distribute copies of the software, or if you modify it: responsibilities to respect the freedom of others.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must pass on to the recipients the same freedoms that you received. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

Developers that use the GNU GPL protect your rights with two steps:

- (1) assert copyright on the software, and
- (2) offer you this License giving you legal permission to copy, distribute and/or modify it.

For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software.

For both users' and authors' sake, the GPL requires that modified versions be marked as changed, so that their problems will not be attributed erroneously to authors of previous versions.

Some devices are designed to deny users access to install or run modified versions of the software inside them, although the manufacturer can do so. This is fundamentally incompatible with the aim of protecting users' freedom to change the software. The systematic pattern of such abuse occurs in the area of products for individuals to use, which is precisely where it is most unacceptable. Therefore, we have designed this version of the GPL to prohibit the practice for those products. If such problems arise substantially in other domains, we stand ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

## TERMS AND CONDITIONS

### 0. Definitions.

"This License" refers to version 3 of the GNU General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you".

"Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy.

Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the

work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

## 1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

## 2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

### 3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

### 4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

### 5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

- a) The work must carry prominent notices stating that you modified it, and giving a relevant date.
  - b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".
  - c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy.
- This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the

work,

and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any

other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program

has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an "aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

## 6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium),

accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium),

accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or

customer support for that product model, to give anyone who possesses the object code either (1) a copy of the

Corresponding Source for all the software in the product that is covered by this License, on a durable physical

medium customarily used for software interchange, for a price no more than your reasonable cost of physically

performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source.

This alternative is allowed only occasionally and non commercially, and only if you received the object code with

such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent

access to the Corresponding Source in the same way through the same place at no further charge. You need not

require recipients to copy the Corresponding Source along with the object code. If the place to copy the object

code is a network server, the Corresponding Source may be on a different server (operated by you or a third party)

that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying

where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and

Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library,  
need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used

for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling.

In

determining whether a product is a consumer product, doubtful cases shall be resolved in favour of coverage.

For a

particular product received by a particular user, "normally used" refers to a typical or common use of that class of

product, regardless of the status of the particular user or of the way in which the particular user actually uses, or

expects or is expected to use, the product. A product is a consumer product regardless of whether the product has

substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of

the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information

required to install and execute modified versions of a covered work in that User Product from a modified version of its

Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code

is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the

conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to

the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding

Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not

apply if neither you nor any third party retains the ability to install modified object code on the User Product (for

example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support

service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product

in which it has been modified or installed. Access to a network may be denied when the modification itself materially

and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format

that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

## 7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

- a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or
- b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or
- c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or
- d) Limiting the use for publicity purposes of names of licensors or authors of the material; or
- e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or
- f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits re licensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such re licensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a

statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

#### 8. Termination.

You may not propagate or modify a covered work except as expressly provided under this License. Any attempt otherwise

to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated

(a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and  
(b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you

of the violation by some reasonable means, this is the first time you have received notice of violation of this License

(for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or

rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not

qualify to receive new licenses for the same material under section 10.

#### 9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of

a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not

require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered

work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a

covered work, you indicate your acceptance of this License to do so.

#### 10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run,

modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third

parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or

subdividing an organization, or merging organizations. If propagation of a covered work results from an entity

transaction, each party to that transaction who receives a copy of the work also receives whatever licenses

to the work  
 the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the  
 Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

## 11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sub licenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement).

To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients.

"Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License.

You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defences to infringement that may otherwise be available to you under applicable patent law.

## 12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

## 13. Use with the GNU Affero General Public License.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU Affero General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the special requirements of the GNU Affero General Public License, section 13, concerning interaction through a network will apply to the combination as such.

## 14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or

concerns.

Each version is given a distinguishing version number. If the Program specifies that a certain numbered version of the  
GNU General Public License "or any later version" applies to it, you have the option of following the terms and  
conditions either of that numbered version or of any later version published by the Free Software Foundation.  
If the  
Program does not specify a version number of the GNU General Public License, you may choose any  
version ever published  
by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU General Public License  
can be used,  
that proxy's public statement of acceptance of a version permanently authorizes you to choose that version  
for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations  
are  
imposed on any author or copyright holder as a result of your choosing to follow a later version.

#### 15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  
EXCEPT WHEN OTHERWISE STATED IN  
WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS"  
WITHOUT WARRANTY OF ANY KIND, EITHER  
EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF  
MERCHANTABILITY AND FITNESS FOR A  
PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE  
PROGRAM IS WITH YOU. SHOULD THE PROGRAM  
PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR  
CORRECTION.

#### 16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY  
COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO  
MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR  
DAMAGES, INCLUDING ANY GENERAL, SPECIAL,  
INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE  
PROGRAM (INCLUDING BUT NOT LIMITED TO  
LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR  
THIRD PARTIES OR A FAILURE OF THE PROGRAM  
TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN  
ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### 17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect  
according to  
their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all  
civil  
liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of  
the Program  
in return for a fee.

### END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve  
this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to  
most effectively state the exclusion of warranty; and each file should have at least the "copyright" line and a pointer  
to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>

This program is free software: you can redistribute it and/or modify it  
under the terms of the GNU General Public License as published by  
the Free Software Foundation, either version 3 of the License, or  
(at your option) any later version.

This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
GNU General Public License for more details.

You should have received a copy of the GNU General Public License  
along with this program. If not, see <<http://www.gnu.org/licenses/>>.

Also add information on how to contact you by electronic and paper mail.

If the program does terminal interaction, make it output a short notice like this when it starts in an interactive mode:

<program> Copyright (C) <year> <name of author>  
This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License.

Of course, your program's commands might be different; for a GUI interface, you would use an "about box".

You should also get your employer (if you work as a programmer) or school, if any, to sign a "copyright disclaimer"  
for the program, if necessary. For more information on this, and how to apply and follow the GNU GPL, see  
<<http://www.gnu.org/licenses/>>.

The GNU General Public License does not permit incorporating your program into proprietary programs.  
If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with  
the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.  
But first, please read  
<<http://www.gnu.org/philosophy/why-not-lgpl.html>>.

## Credits

---

### Credits

- Convert based on article in <http://www.dreamincode.net/forums/topic/121316-an-updatable-unit-conversion-calculator/>
- Most of the time formats where found on the internet - clever minds then me out there
- Nancy Blackett Semaphore Font curtesy of ©2006 Roland B. Harris
- [www.allthingsransome.net/downloads/nbsemaphore.html](http://www.allthingsransome.net/downloads/nbsemaphore.html)
- Christmas, Easter, Semaphore & BrailleLatin font curtesy of [www.creamundo.com/en](http://www.creamundo.com/en)
- Font for the Text Klock etc., Hack - <http://sourcefoundry.org/hack/>
- Images from <https://icons8.com/>