

## Real Moon Phases Wallpapers

To use this application, a Windows 64Bit OS and a installed [.NET Framework Runtime version 4.8.1 or higher \(optionally with the \[corresponding language pack\]\(#\)\)](#) is required.

**What?! Another Windows wallpaper program for turning your own photos into a slideshow—yawn, how boring... How many more are there going to be?**

**But your own images—incorporating a fully configurable moon depiction featuring the actual live moon phase—as a wallpaper? That has never been done before!**

So, what would you say if you could take your own images—or any images from the web—overlay them with a depiction of the current moon phase (including the correct rotation angle relative to your location), and set these images as your Windows wallpaper?

And what if this moon depiction could be updated directly within your wallpaper—even live in the background, if you so choose?

"Real Moon Phases Wallpapers" makes this possible!

Upon request, the wallpapers generated in this way can also be displayed as a slideshow with freely adjustable transition intervals.

### Sample Images

In the included PDF, "[Real Moon Phases Wallpapers – Sample Images.pdf](#)" (5.24 MB), you can view examples of the diverse design possibilities for creating wallpapers from existing background images featuring a superimposed live moon phase.

## Download the "Real Moon Phases Wallpapers" App

[Real Moon Phases Wallpapers – Setup.exe](#) (165 MB) – Executable setup file

Alternatively:

[Real Moon Phases Wallpapers – Setup.zip](#) (165 MB) – Executable setup file in a ZIP archive

### Wallpaper Collection with 1,500 Pre-configured Wallpapers

**(More than 10 images in the wallpaper archive are available only to holders of a usage license.)**

For users who desire a ready-to-use application, we offer 1,500 wallpapers across all genres—including the corresponding configuration files for the wallpaper and moon depiction settings—available for direct download.

You can download these wallpapers—divided into three ZIP packages—via the following links and save them to your [wallpaper image archive](#):

Bilder: 0001 – 0499 [Download](#) (150 MB)

Bilder: 0500 – 0999 [Download](#) (150 MB)

Bilder: 1000 – 1500 [Download](#) (150 MB)

## Important Settings to Make on Your Windows Computer!

To use this application, the following settings must be configured within your system's Windows display settings—specifically under the "Choose your desktop background" section—to ensure the correct depiction of the moon phase images:

- Background: "Image" (i.e., single image – do *not* select "Slideshow"!)
- Select customization: "Customize"

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## Application Information

Directories created during installation and used by the application:

### Application:

„C:\Program Files\Real Moon Phases Wallpapers“

#### Content:

- The application's program files

### Static Application Data:

„C:\ProgramData\Pi.M-Software\Real Moon Phases Wallpapers\“

#### Content:

- [Folder: "Common Moon Images"](#), containing the 720 moon phase images used by the application.
- **Installation log file: "Real Moon Phases Wallpapers - Setup.log"**, which is created during the installation of the application and contains information about the installation process

### Flexible Application Data:

„C:\Users\%User name%\AppData\Roaming\Pi.M-Software\Real Moon Phases Wallpapers\“

#### Content:

- **Folder: "Temp"**  
This folder stores the currently generated wallpapers that are assigned to the Windows system as the desktop background.  
  
This directory is self-cleaning; consequently, it always contains only the currently displayed Windows wallpaper. Images that have been created but are no longer displayed as the Windows wallpaper are automatically deleted from this folder.
- **File: „Real Moon Phases Wallpapers.log“**  
This file contains the logged information from the application, which is displayed on the ["Activities" page](#).  
  
The creation of this [log file](#) can be enabled or disabled via the application [menu: „Settings“ – "Enable Log File"](#).
- **Application settings: „settings.json“-File** and  
Application settings backup file „**settings.bak**“.

### Working Directory (User Data):

[„C:\Users\%User name%\Documents\Real Moon Phases Wallpapers\“](#)

#### Content:

- **Folder: „Default Moon Image“**, the default moon image is created in this directory
- **Folder: „Wallpaper Image Copy“**, a copy of the current wallpaper is created in this directory
- **Folder: „Wallpaper Image Archive“**, This directory contains at least the ten demo wallpapers included with the application installation (max. resolution 1920x1200 px), along with their corresponding ".json" configuration files.

## Starting and Using the Application

The application is launched via a so-called launcher—“Real Moon Phases Wallpapers – Launcher.exe”—to enable switching directly from within the application between running it with standard user privileges and running it with administrator privileges.

Administrator privileges are strictly required if you wish to use or modify the following parameters of the integrated “**Task Timer**” (an entry in the Windows Task Scheduler).

- Task Timer: Enable/Disable
- Task Timer: Change Execution Interval
- [Wallpaper Image Archive](#): Change Folder Assignment

If you enable or disable the “**Task Timer**” within the application, or modify the trigger interval for the “**Task Timer**”, but the application is currently running with only standard user privileges, you will be prompted to restart the application with administrator privileges in order to apply the desired changes.

Since the Task Timer accesses images within the [Wallpaper Image Archive](#), the assigned “Wallpaper Image Archive” folder can only be changed with administrator privileges while the Task Timer is active; this is because the Task Timer task within the Task Scheduler must be recreated following the folder change.

Once you have made the intended configuration changes as an “Administrator,” you can resume using the application with normal user privileges by deactivating the [menu item „Settings“ – “Run as Administrator”](#). In this instance as well, you will be prompted to restart the application.

## Changing settings that are not accessible via the GUI

In the application's JSON settings file:

```
„C:\Users\%User name%\AppData\Roaming\Pi.M-Software\Real Moon Phases Wallpapers\settings.json“
```

Experienced users can manually modify the contents of variables—specifically those not configurable via the GUI—using a text editor (“Editor,” “Notepad+,” “Pilot Edit,” etc.) while the application is closed.

**Warning! Incorrect modifications to these variable values may lead to malfunctions in the application!**

Therefore, please be sure to consult the [appendix “Using JSON Settings – Variables Not Configurable via GUI”](#) before manually modifying these variables.

## Why Real Moon Phases Wallpapers?

This application was developed with the aim of creating a convenient way—within an easy-to-use yet comprehensive [graphical user interface \(GUI\)](#)—to display the current and exact moon phase, including location-specific lunar rotation, directly on the Windows desktop background at all times.

Naturally, this had to be realized in an aesthetically pleasing form—one that is not only logical but also enjoyable to use—and which, through its extensive configuration options, injects fun and individuality into the monotony of the workday, bringing a welcome change of pace to the (sometimes inevitable) tedium of daily computer use.

**We are convinced that we have achieved this goal with "Real Moon Phases Wallpapers"!**

But judge for yourself...

## Function of "Real Moon Phases Wallpapers"

"Real Moon Phases Wallpapers" is an easy-to-use program designed to calculate the current moon phase and location-specific lunar rotation in real time.

Upon request, a small visual depiction of the current moon phase and rotation can be continuously displayed—and kept up to date—within the application icon located in the taskbar or notification area ([system tray](#)).

Additionally, a depiction of the moon—reflecting its current phase—can be integrated into custom background images of your choice; these composite images, featuring an automatically updating moon depiction, can then be set as your Windows desktop wallpaper.

- **Slideshow** (this feature is provided by the application, not by the Windows system):  
You can configure the images contained in your [wallpaper image archive](#)—which serve as the background images for this feature—to rotate as a Windows wallpaper slideshow at any desired time interval; each image will be displayed with its assigned settings and either an integrated static moon depiction or a depiction of the actual current phase of the moon.
- **Single Image:**  
In a statically configured wallpaper, allow a static or current moon visualization—along with the image settings assigned to the single image—to update at arbitrary time intervals.

To achieve this, the application generates a new image at definable time intervals—consisting of the designated background image along with its specific image settings.

Into this image, a depiction of the moon—featuring the current moon phase and rotation—is inserted, complete with its corresponding image settings.

This newly constructed image is then saved and assigned to the system as a wallpaper.

The original background images contained in the [wallpaper image archive](#) remain unchanged in this process.

### Possible wallpaper image settings for each background image:

**Wallpapers:** Horizontal and Vertical Flipping, Brightness, Shadows

**Depiction of the Moon:** Brightness, shadows, moon position within the image, moon size, moon tint, moon age (automatic or manual assignment), and [moon rotation](#) (automatic or manual specification of rotation angle).

Image settings are managed in image settings files, which are stored alongside the background images in the wallpaper image archive and are assigned the same filename as their corresponding background images, but with the file extension ".json".

## Background images

You can add any background images to the application's wallpaper image archive and assign the appropriate wallpaper configuration settings for each image directly within the application.

You may use images in the following formats as background images:

**".jpg", ".jpeg", ".png", ".bmp", ".gif", ".tif", ".tiff", ".webp"**

## Moon depiction

### Moon Phases

For the construction of the moon visualization, the application incorporates 720 individual images of the various moon phases—each representing a 0.5° change in lunar shading—which are stored in the following folder during the installation process, becoming permanently accessible to all users:

**Folder „Common Moon Images“**

**„C:\ProgramData\Pi.M-Software\Real Moon Phases Wallpapers\Common Moon Images“**

The Moon undergoes a complete 360° change in illumination over the course of exactly 29.530588853 days (a sidereal month). This corresponds to a change in illumination of 12.19° per day.

Which, in turn, results in a change of 0.5° per hour.

With a set of 720 moon phase images, the application therefore provides a distinct image for every single hour, ready to be integrated into the background display.

(720 images / 29.53 days / 24 hours = 1.01 images/hour)

Consequently, the degree of illumination on the moon surface—resulting from the shadow cast by the Earth onto the Moon when the Earth is positioned between the Sun and the Moon—changes continuously.

However, even experienced observers of the Moon would struggle to actually detect a change in illumination of just 0.5° within a single hour without the aid of optical instruments.

Thus, this application displays the moon phase with greater precision than the human eye is capable of discerning in reality.

### Lunar Rotation

The apparent rotation of the Moon (the rotation of the visible moon surface—and, consequently, of the Earth's shadow cast upon it) depends on the exact location of the observer on Earth.

For instance, if you are located in Paris (France), you will observe the Moon with a completely different orientation than a person viewing it at the exact same moment in Sydney (Australia).

This location-specific lunar rotation (the perceived clockwise or counter-clockwise turning of the Moon) can change at very short intervals (less than one minute), yet may also remain unchanged for periods of up to 15 minutes.

This phenomenon is governed by the actual mechanics of the celestial sphere.

To accurately calculate the lunar rotation, it is absolutely essential to enter the [coordinates of the desired location](#), as—as previously described—the perceived rotation of the Moon is contingent upon the observer's position on Earth.

## Automatic Wallpaper Changer

In the application, you have two options for automatically updating the wallpapers and the moon depiction displayed within them:

### Continuous updating of the Windows wallpaper by the application

The **"Activate App Timer"** function allows the image generated by the application to be set as a self-changing wallpaper for the Windows desktop.

When the "App Timer" is triggered at the configured time intervals:

- Calculates the current moon phase and rotation
- Inserts the calculated moon rendering—in memory—into a copy of the selected background image, utilizing the JSON image settings associated with that background (including the moon rendering settings contained therein)
- Saves the resulting image to the "Temp" directory
- Assigns the newly created image from the "Temp" directory as the system wallpaper

However, for the "App-Timer" to function continuously, the "Real Moon Phases Wallpapers" application must run permanently in the background. Therefore, if you wish to use this feature, a shortcut to this application should be placed in your system's startup folder.

Or

### Continuously Updating the Windows Wallpaper via a Task Scheduler Task

**(Enable/Disable only with administrator privileges)**

Alternatively, once the desired paths have been configured within the program, the application can also be launched as a scheduled task in the Windows Task Scheduler—complete with a time-based trigger—by utilizing the ["Activate Task Timer"](#) function.

When the application is invoked with the startup parameter `"/task"` via the corresponding task created in the Task Scheduler, the following actions are performed at the configured time intervals:

- launching the application invisibly in the background
- calculated the current moon phase and rotation
- insert the calculated moon rendering—using the JSON image settings of the selected background image (and the lunar rendering settings contained therein)—into a copy of that background image within memory
- save the resulting image to the "Temp" directory
- assigned the newly created image from the "Temp" directory as the system wallpaper
- closing the application again

When using this function, the application does not need to remain open.

**To manually modify the "Task Timer" triggers, please refer to the [appendix "Using Json-Settings – Variables Not Configurable via GUI"](#).**

## Recommended Timer Setting

To ensure the most current and accurate depiction of the Moon's rotation in your custom wallpapers, we recommend setting the Moon depiction update interval to approximately 2—or a maximum of 10—minutes.

If precise accuracy regarding the Moon's rotation is not a critical priority for you, an alternative update interval of 30 to 60 minutes will suffice to accurately display the Moon's phase within your wallpapers.

## The Program Interface (GUI)

On the three application pages described below, you can configure all settings for the application, the creation of your own wallpapers, and the wallpaper slideshow:

### Generally

#### Button „Close“

Closes the application.

## The Application Pages

### [Page „Application“](#)

On this page, you configure all settings relevant to the use of the application.

You can make specific settings in the JSON application settings file.

**However, please be sure to consult the [appendix "Using JSON Settings – Variables Not Configurable via GUI"](#) before manually modifying these variables..**

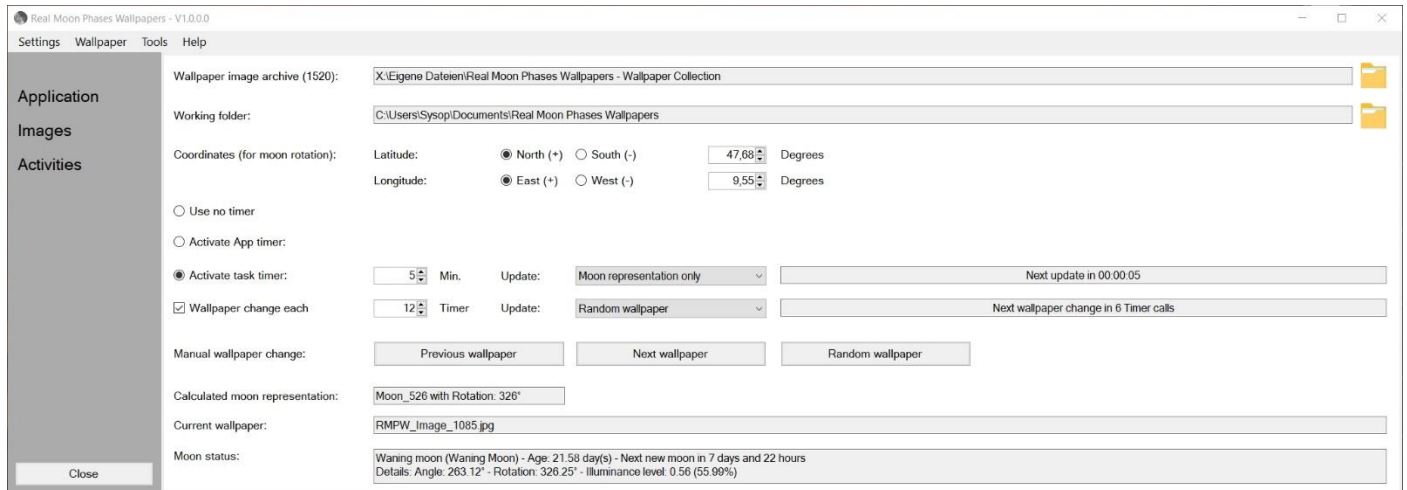
### [Page „Images“](#)

On this page, you can adjust the image settings for all the wallpapers in your archive, position moon illustrations of your desired size onto them, and thus design your own wallpapers exactly to your liking.

### [Page „Activities“](#)

On this page, you will find a list of the logged application actions.

Page „Application“



Wallpaper Image Archive

 Selection of the Wallpaper Image Archive Folder

**If the Task Timer is enabled, a different image archive folder can only be selected with administrator privileges, as this folder is utilized by the active Task Timer task, and the task must therefore be recreated.**

The folder selected here must have write permissions, as the image configuration files are stored within it.

This directory serves as the [Wallpaper image archive](#)—containing the images that you can display as desktop backgrounds or use in a slideshow for wallpaper creation, complete with integrated moon phase display.

By default, this folder—named "Wallpaper Images Archive"—is assigned as a subdirectory of the [working directory](#) described below.

This wallpaper archive directory can also be assigned to a different folder located outside the working directory.

Working Directory

 Selection of the Wallpaper Working Directory

The selected "working directory" must necessarily possess write permissions, as this folder is where—among other things—the images generated by the application are stored.

The folder "c:\program files" typically lacks such write permissions; therefore, to utilize this folder, a subdirectory—for instance, within "Documents" or "My Documents"—must be used instead.

To this end, during installation, the application creates a directory within your "Documents" folder to serve as the working directory.

During the application's installation, the following default subdirectory and file structure is created within this working directory:

**Working Directory Structure:**

„C:\Users\%User name%\Dokuments\Real Moon Phases Wallpapers\“

[\Default Moon Image](#)

[\Wallpaper Image Copy](#)

[\Wallpaper Images Archive](#)

### "Default Moon Image" Subdirectory (Folder for Default Moon Image)

This applies to the default moon image to be generated—a file that always bears the same filename (by default: "Default Moon Image.bmp") and is overwritten whenever the image is regenerated.

By default, this image displays a full-frame depiction of the moon set against a cosmic background; it can be utilized by other applications that specifically expect a file with this exact filename.

The generation of this image can be enabled or disabled via the application [menu under „Settings“ > "Also create default moon images with same name"](#).

If the generation of this image is enabled, it will always be updated simultaneously with the actual Windows wallpaper.

You can, for example, assign this "Default Moon Image" to your lock screen; this ensures that a wallpaper displaying the current phase of the moon is always displayed on your lock screen.

**To manually adjust the properties of the Default Moon Image, please refer to the [appendix "Using JSON Settings – Variables Not Configurable via the GUI"](#).**

### "Wallpaper Image Copy" Subdirectory (Folder for a copy of the current wallpaper)

This option creates a copy of the current wallpaper—which always retains the same filename (Default: "Wallpaper Image Copy.bmp") and is overwritten whenever the image is regenerated.

This image can also be utilized in other applications that expect a file with a consistent, unchanging filename.

The creation of this image can be enabled or disabled via the application [menu: „Settings“ – "Also create wallpaper image copies with the same name"](#).

When enabled, this image is always updated simultaneously with the actual Windows wallpaper.

You can, for example, assign this "Wallpaper Image Copy" file as the background "Picture" for your Lock Screen; this ensures that your Lock Screen always displays a wallpaper featuring the current moon phase.

**For manual adjustment of folder or file names, please refer to the [appendix "Using Json-Settings – Variables Not Configurable via GUI"](#).**

### "Wallpaper Images Archive" Subdirectory

The default directory for the [wallpaper image archive](#)—containing the images that you can display as background pictures or as a slideshow for wallpaper creation, complete with an integrated moon depiction.

This folder must have write permissions, as the image configuration files are stored within it.

The application's setup package includes ten demo wallpapers ("RMPW\_Image\_001" – "RMPW\_Image\_010," with a maximum resolution of 1920x1200 pixels), along with their corresponding JSON configuration files; these are saved to this folder during the application's installation.

The label preceding the text box—which displays the selected path for the wallpaper image archive—shows, in parentheses, the total number of image files currently located within that chosen directory.

## „Coordinates (for lunar Rotation)“

The visible rotation of the Moon (the rotation of the visible moon surface) depends on the exact location of the observer. Therefore, you can specify the location here for which the currently displayed lunar rotation should be calculated.

You can easily find the coordinates for your desired location at:

<https://google.de/maps>

*determine by simply right-clicking on the desired location on this webpage. In the popup menu that appears, you will then find the coordinates of the location, which you can enter into the application.*

## Timer – Selection Buttons

### "No Timer" Selection Button

If you enable this option, neither the moon depiction nor the background wallpaper will be updated.

### Selection Button "[Activate App Timer](#)" or "[Activate Task Timer](#)"

Upon activating one of these timers, the following additional controls are displayed, allowing you to configure the respective timer.

#### [Up/Down box time interval \("Min"\)](#)

Here, you select the execution interval for the respective timer.

**(Administrator privileges are required to change the execution interval of the "Task Timer".)**

### Update Selection Box

#### "Moon-only display" selection

Checks and—if necessary—replaces only the current moon depiction within the selected wallpaper.

#### Selection: "Additionally, Previous Wallpaper"

Checks and changes the current moon phase display within the selected wallpaper, and additionally switches the wallpaper to the previous background image in the [wallpaper image archive](#).

#### Selection: "Additionally, next Wallpaper"

Checks and changes the current moon phase display within the selected wallpaper, and additionally switches the wallpaper to the next background image in the [wallpaper image archive](#).

#### Selection "Additional Random Wallpaper"

Checks and updates the current moon phase display within the selected wallpaper, and additionally switches the wallpaper to a randomly selected image from the [wallpaper image archive](#).

### [„Change wallpaper every x seconds“](#)

If you have selected the "Moon depiction Only" option within the respective "Update" selection box while the "**App Timer**" or "**Task Timer**" is active, you can use this setting to configure the interval at which a wallpaper change should occur—in addition to the moon depiction updates already configured within that specific timer.

For example, if you have set a "Moon depiction Only" update interval of "5" minutes in the corresponding "**Min**" up/down box within an active "**App Timer**" or "**Task Timer**", and you subsequently select the value "12" in the "**Timer**" up/down box—with the "**Change Wallpaper Every**" checkbox enabled—the moon depiction on the selected wallpaper will update every 5 minutes, and, additionally, the wallpaper itself will change once every hour (5 minutes x 12 = 60 minutes).

### Update Selection Box

In this box, you can select which type of wallpaper change should be executed whenever every Xth timer is triggered.

#### Selection "Previous Wallpaper"

Switches the wallpaper to the previous wallpaper located in the [wallpaper image archive](#).

#### Selection "Next Wallpaper"

Switches the wallpaper to the next image in the [wallpaper image archive](#).

#### Selection "Random Wallpaper"

Switches the wallpaper to a randomly selected image from the [wallpaper image archive](#).

## Manual Wallpaper Change

### Button „Previous Wallpaper“

Clicking this button manually switches the wallpaper to the previous background image in the [Wallpaper Image Archive](#). This function can also be invoked while the application is running using the **global hotkey "Ctrl + Alt + Numpad 7"**. Additionally, this function can be accessed via the pop-up menu of the application's [system tray icon](#).

### Button „Next Wallpaper“

Clicking this button manually switches the wallpaper to the next background image in the [Wallpaper Image Archive](#). This function can also be invoked while the application is running using the **global hotkey "Ctrl + Alt + Numpad 8"**. Additionally, this function can be accessed via the pop-up menu of the application's [system tray icon](#).

### Button „Random Wallpaper“

Clicking this button manually switches the wallpaper to a randomly selected image from the [Wallpaper Image Archive](#). This function can also be invoked while the application is running using the **global hotkey "Ctrl + Alt + Numpad 9"**. Additionally, this function can be accessed via the pop-up menu of the application's [system tray icon](#).

**To manually modify the hotkeys described above, please refer to the [appendix "Using Json-Settings – Variables Not Configurable via GUI"](#).**

## Display "Calculated Moon depiction"

Here, the application displays the currently used moon phase image (the first number represents the moon's age in hours), as well as the current rotation angle in degrees used to construct the moon visualization and integrate it into the current wallpaper.

## Display "Current Wallpaper"

Here, the application displays the filename of the background image used to construct the currently displayed wallpaper.

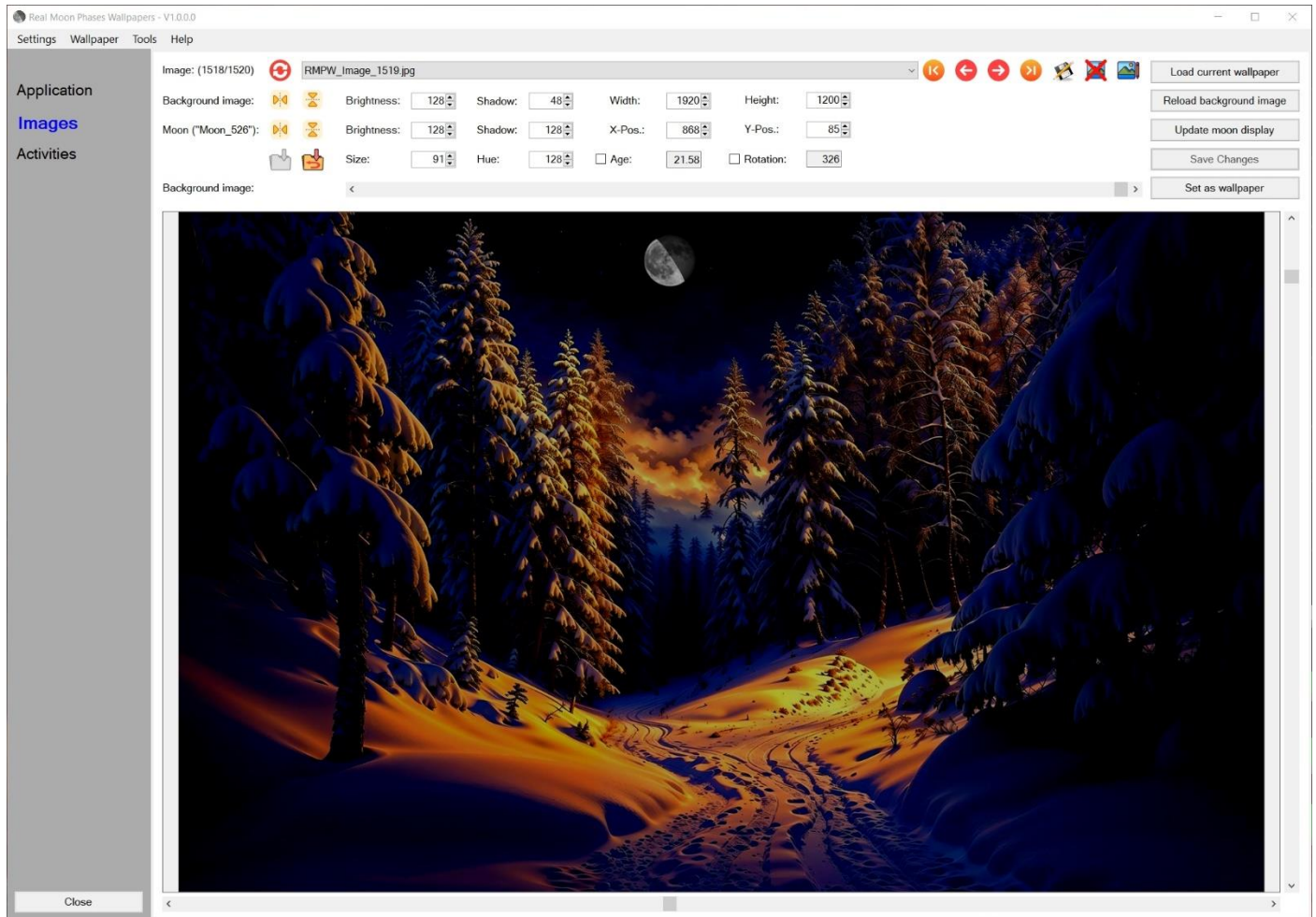
## Display "Moon Status"

Here, the application displays information about the current moon phase:

- Type of the current moon phase
- Name of the current moon phase
- The lunar age (0 – 29.53 days)
- The time remaining until the next Full Moon or New Moon (0 hours – 14 days and 18 hours)
- The current lunar angle (0° – 359.99°)
- The current lunar rotation angle (0° – 359.99°)
- The current illumination level (0 – 1) and as a percentage (0.00% – 100.00%)

If you have enabled "[Minimize to System Tray](#)" in the „[Settings](#)“ menu, minimize the application, and then hover your mouse cursor over the application icon in the system tray, a summary of this information will be displayed as a tooltip for the system tray icon.

## Page „Images“



This page serves to position the moon imagery within the background images in the [wallpaper image archive](#), allowing you to customize the resulting wallpaper according to your preferences.

## Possibilities of settings

To do this, you can select the desired background image from the selection box and, for it:

- Adjust the brightness of the light and dark areas of the selected background image
- Mirror the background image horizontally and vertically
- Position the moon rendering within the image
- Mirror the image coordinates of the moon rendering horizontally and vertically
- Adjust the brightness of the light and dark areas of the moon rendering
- Set the size of the moon rendering
- Select the desired color tone for the moon rendering
- Statically set the moon age and rotation to be used in the wallpaper, or have them automatically calculated in real time

These settings are stored in image settings files—bearing the filename of the assigned background image and the file extension ".json"—within the [wallpaper image archive](#), alongside the background images themselves.

## Label „Image (xxxx/yyyy)“

This label displays the list index (1 – total number of images in the wallpaper archive) of the currently displayed wallpaper, as well as the total number of images contained in the [wallpaper image archive](#).

## Label „Moon (,Moon\_xxx‘“

This label displays the moon phase image currently used in the preview image (000 – 720).  
The number shown here represents the age of the moon in hours.

## Up/Down-Boxes

With the Up/Down boxes, you can adjust the settings for:

- Background Image – Brightness
- Background Image – Shadows
- Background Image – Width: Required for distortion-free moon depiction  
(this setting applies to all background images – however, this setting usually does not need to be changed)
- Background Image – Height: Required for distortion-free moon depiction  
(this setting applies to all background images – however, this setting usually does not need to be changed)
- Moon depiction – Brightness
- Moon depiction – Shadows
- Moon depiction – X-Position
- Moon depiction – Y-Position
- Moon depiction – Size
- Moon depiction – Hue
- Moon depiction – Age
- Moon depiction – Rotation

and adapt to your wishes

## Checkboxes: Moon depiction – Age and Moon depiction – Rotation

With the checkboxes:

- Moon depiction – Age
- Moon depiction – Rotation

Choose whether these values should be calculated automatically, or whether the generated wallpaper should use fixed settings for these parameters.

- **Unchecked:**  
Conversely, if the checkboxes are unchecked, automatically calculated values will be used; in this case, the wallpaper will display the moon visualization using actual, real-time values by means of timers.
- **Checked:**  
If the checkboxes are checked, manually configured values will be used.

## Quick Settings Scrollbar

To facilitate the selection of an image from the image selection box and the adjustment of the Up/Down boxes, a Quick-Adjustment Scrollbar is available to you; this scrollbar always mirrors the setting of the active Up/Down box or image selection box, or sets its value.

To activate the image selection function within the Quick-Adjustment Scrollbar, you can either left-click on the background image in the preview box, click on the label "Image (xxxx/yyyy)," or click directly on the selection box.

To manually modify the step sizes of the described Quick-Settings scrollbar, please refer to the [appendix: "Using JSON Settings – Variables Not Configurable via GUI"](#).

## Scrollbars to the right of and below the displayed background image

These serve to quickly adjust the moon depiction coordinates within the background image.

To manually modify the step sizes of the two scrollbars for the described moon depiction coordinates, please refer to the [appendix "Using JSON Settings – Variables Not Configurable via GUI"](#).

## Operation and Control

Additionally, the following functions are available to you on this "Images" page:

### General Functions

Right-click on the background image in the preview box.

Opens a color selection dialog to select the desired background color for the preview box.

### Button "Update Image List in Selection Box"



While in use, the application monitors the [wallpaper image archive](#) for changes made by third-party applications and—typically—automatically updates the contents of the image selection box whenever images are added to, removed from, or renamed within the archive.

Should the automatic update fail, you can manually trigger the update of the list within the [image selection box](#).

### Image Selection Box

The Image Selection Box lists the names of all available images contained in the [wallpaper image archive](#). From this list, you can select the desired background image to be displayed and view it in the Preview Box.

### Button "Load current wallpaper"

Loads the background image currently assigned to the Windows wallpaper within the application from the [wallpaper image archive](#) into the preview image box, and displays this image using its saved image and moon depiction settings.

### Button "Reload Background Image"

The background image displayed in the preview image box is continuously monitored for changes made by third-party applications.

If such changes occur, you will be prompted to reload the modified background image into the preview image box.

Should this image monitoring fail, you can manually reload the background image into the preview window by clicking this button.

### Button "Update Moon depiction"

If the background image has been displayed in the preview box for an extended period, the automatically calculated moon rendering may no longer be up to date. Therefore, if you have disabled at least one of the [checkboxes—"Moon Rendering – Age" or "Moon Rendering – Rotation"](#)—you can update the actual current moon age and rotation within the moon rendering displayed in the preview image.

### Button "Save Changes"

**(only enabled if there are unsaved changes to the image settings)**

If you have made changes to the settings of the wallpaper or its moon depiction, you can save these changes to the image settings file—the ".json" file associated with the displayed wallpaper—by clicking the button.

### Button "Set as Wallpaper"

Saves the current image and moon display settings and sets the displayed image—along with its saved settings—as the Windows wallpaper.

## Image Selection

### Button "Display First Image in Image Archive Directory"



Displays the first image in the [Wallpaper Image Archive](#).

### Button "View Previous Image in Image Archive Directory"



Displays the previous image in the [Wallpaper Image Archive](#).

### Button "Show Next Image in Image Archive Directory"



Displays the next image in the [Wallpaper Image Archive](#).

### Button "View Last Image in Image Archive Directory"



Displays the last image in the [Wallpaper Image Archive](#).

## Image Manipulation

### Button "Rename Image Filename"



Opens an input window for entering a new filename for the currently displayed image.

If a new name is entered here, the image settings file (.json)—as well as any existing image settings backup file (.bak)—will be renamed accordingly.

### Button "Delete Image File"



After a security prompt, deletes the currently displayed wallpaper—including its associated image settings file (.json) and any existing backup file (.bak)—from the [Wallpaper Image Archive](#).

### Button "Open Image in External Application"



**Left Mouse Button:** Opens the image in an external application (e.g., an image editor).

If no application has been selected yet, you will be prompted via a file selection dialog to choose one.

**Right-click:** Opens a file selection dialog to choose the desired application in which the images should be opened.

### Button "Mirror Background Image Horizontally"



Mirrors the background image horizontally.

### Button "Mirror Background Image Vertically"



Mirrors the background image vertically.

## Moon depiction

### Button "Mirror Moon View Coordinates Horizontally"



Horizontally mirrors the coordinates of the moon depiction.

### Button "Mirror Moon depiction Coordinates Vertically"



Vertically mirrors the coordinates of the moon depiction.

## Copy Setting

### Button "Apply settings to all"



Applies the current Up/Down box setting to the corresponding setting of all images in the [Wallpaper Image Archive](#), or increases/decreases the values of the corresponding settings for all images by a specified offset.

Offset Input:

- If the Offset input is set to "0", the corresponding settings for each image are set to the value of the active Up/Down box.
- If a positive number is entered as the Offset (e.g., "5"), the existing setting values for the corresponding properties of all images are increased by this amount.
- If a negative number is entered as the Offset (e.g., "-5"), the existing setting values for the corresponding properties of all images are decreased by this amount.

Before performing this action, a backup file for each image settings file—with the extension ".bak"—is created and stored in the [wallpaper image archive](#).

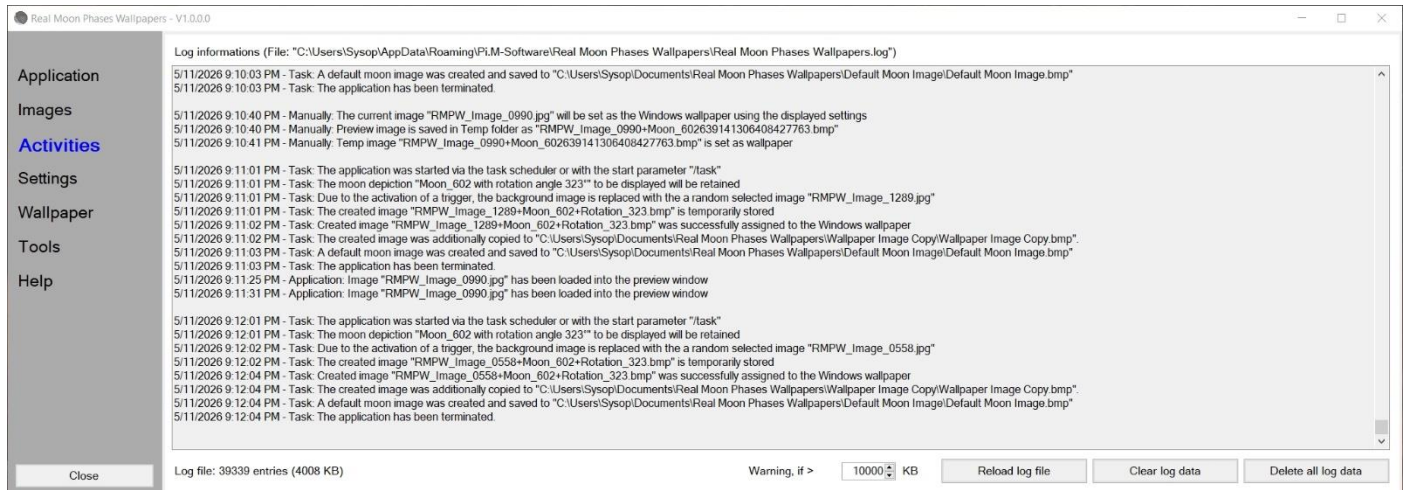
### Button "Undo: Apply Setting to All"



Replaces all image settings files (.json) with the previously saved image settings backup files (.bak), thereby discarding the changes most recently made using the "Apply Settings to All" function.

**In this process, all changes to the image settings made since the last execution of the "Apply to All" function will be lost.**

## Page „Activities“



On this page, the application displays all logged actions that it has executed to date.

To use this feature, logging of application activities must be enabled via the [menu item „Settings“ – "Enable Log File"](#).

The logged actions are stored in the text file **"Real Moon Phases Wallpapers.log"** located in the following folder:

**„C:\Users\%User name%\AppData\Roaming\Pi.M-Software\Real Moon Phases Wallpapers\“**

### Label „Log informations“

Shows the path to the log file.

### Label „Log file“

Displays the number of entries in the log file and its file size on the disk.

### Up/Down Box "Warn if >" or "Warning Threshold"

If the log file exceeds the size configured here (1–10,000), a warning window will prompt you to clear the log data.

If you decline this request to clear the log data, the label text will change to "Warning Threshold."

Consequently, no further warnings from this log file size monitor will be issued during the current application session.

When the log data is cleared, all entries in the log file—with the exception of the configured [number of most recent entries to be retained](#)—are deleted, and the log file size monitor is reactivated.

## Button "Reload Log File"

The log file is automatically monitored for changes; whenever changes occur to the log entries within the file, the text box is updated with the latest entries.

This update is performed with a 5-second delay to allow for the accumulation of any entries generated in the interim. *Otherwise—specifically when a timer triggers (an event that generates up to eight log entries)—the log file would have to be updated unnecessarily often.*

Should the monitoring described here fail, you can manually refresh the display of the entries by clicking this button.

## Button "Clean Log Data"

### **Left Mouse Button:**

Cleans up the log file, retaining only the most recent entries.

This action reactivates the previously described monitor for log file size.

### **Right Mouse Button:**

Opens an input window to specify the number of recent entries to retain when cleaning the log data.

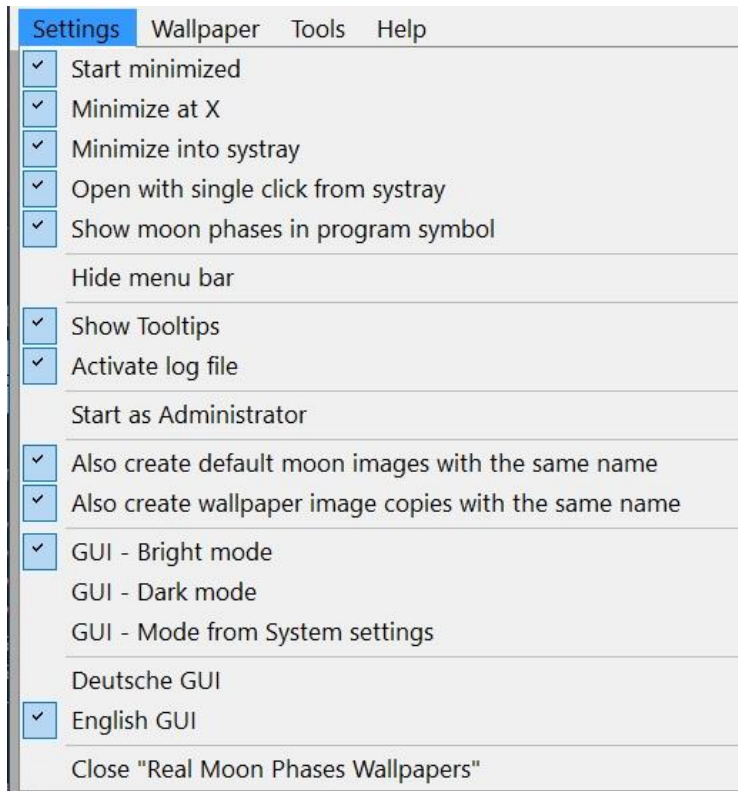
## Button "Delete All Log Data"

If you click this button, you can remove the entries currently contained in the log file.

We recommend clearing this log file regularly, as a large log file requires longer loading and display times.

## Application Menu

### Menu „Settings“



### „Start Minimized“

Starts the application minimized.

### „Minimize at X“

Clicking the "X" close icon in the top-right corner of the application's title bar minimizes the application rather than closing it. To actually close the application, you must click the ["Close" button](#) on the program interface; select the ["Close 'Real Moon Phases Wallpapers'" item from the „Settings“ menu](#); or—if the application has been minimized to the system tray—select the corresponding item from the [system tray icon's context menu](#).

### „Minimize to System Tray“

Minimizes the application to the taskbar notification area, displaying the application icon there instead of minimizing the application to the taskbar in the standard manner.

For more information on the right-click context menu of the system tray icon, please refer to the chapter ["System Tray Icon Context Menu"](#).

### „Open from system tray with a single click“

**(Only enabled if "Minimize to system tray" is checked)**

- **Unchecked:**  
Typically, the application opens only when you double-click the icon in the notification area; a single click switches the current wallpaper to a different one specified in the [system tray pop-up menu](#).
- **Checked:**  
If you select this menu item, the application opens with just a single click on the toolbar icon, while a double-click switches the current wallpaper to a different one specified in the [system tray pop-up menu](#).

Thus, the single-click and double-click functions are swapped depending on the toggle state of this menu item.

## „Show Moon Phases in Program Icon“

By default, when the application is minimized, the program icon displays the assigned standard application icon.

If you enable this menu item, a small image showing the current moon phase and rotation is displayed instead of the standard application icon.

## „Hide menu bar“

Hides the menu bar and instead displays four additional pages within the application, which contain all the items from the menu bar. On these additional pages, you can modify the same settings as in the menu.

## „Show Tooltips“

If you enable this menu item—provided the feature itself is active—the application will display information regarding the function of a specific control in a "tooltip" whenever you move the mouse pointer over that control and pause briefly.

## „Enable log file“

If you enable this menu item, the application logs the activities it performs in a log file and displays them clearly on the ["Activities" page](#).

This allows you to track the application's actions at any time.

The logged actions are saved as entries in the log file "Real Moon Phases Wallpapers.log" in the following folder:

**„C:\Users\%User name%\AppData\Roaming\Pi.M-Software\Real Moon Phases Wallpapers\“**

## „Run as Administrator“

Indicates whether the application is running as an administrator.

Information regarding whether the application was launched with administrator privileges can also be found in the application's information window, which is accessible via the menu: ["Help" > "About 'Real Moon Phases Wallpapers'..."](#).

- **Unchecked: Application is running with normal user privileges**

If you click this menu item, you will be prompted to restart the application with administrator privileges.

- **Checked: Application is running with administrator privileges**

If you click this menu item, you will be prompted to restart the application with normal user privileges.

## „Also create default moon images with same name“

This feature is designed as an add-on to the main application.

When this feature is enabled, the application generates an additional moon image—in addition to the standard Windows wallpaper—and saves it as "Default Moon Image.bmp" within the ["Default Moon Image"](#) subfolder located in your selected [working directory](#).

The purpose of this is to ensure that—should you require a neutral, up-to-date image of the moon for use in other applications—you can readily access this generated image.

This generated moon image features a current, full-screen depiction of the moon set against a cosmic background.

You can, for instance, assign this "Default Moon Image" file as the background "Picture" for your lock screen; this ensures that your lock screen will always display a wallpaper featuring an up-to-date image of the moon.

To manually modify the properties of this image, please refer to the [appendix "Using Json-Settings – Variables Not Configurable via GUI"](#).

## „Also create wallpaper image copies with the same name“

This feature is also designed as an add-on to the main application.

When this feature is enabled, the application creates a copy of the current wallpaper—in addition to the standard Windows wallpaper—and saves it as "Wallpaper Image Copy.bmp" within the ["Wallpaper Image Copy"](#) subfolder located in your selected [working directory](#).

This allows you to access this generated image should you require the current wallpaper for use in other applications.

For instance, you can assign this "Wallpaper Image Copy" image to your lock screen as a custom background; this ensures that your lock screen always displays a wallpaper featuring the current depiction of the moon.

For manual adjustment of the assigned directory and filename, please refer to the [appendix "Using Json-Settings – Variables Not Configurable via GUI"](#).

## „GUI – Light Mode“

Manually switches the user interface color scheme to the light display mode.

## „GUI – Dark Mode“

Manually switches the user interface color mode to the fixed dark theme.

## „GUI Mode from System Settings“

Switches the user interface color to the color mode selected under "Color" in your Windows system settings. If you change this setting in the Control Panel while the application is running, the application's color mode will switch accordingly.

## „German GUI“

Switches the language of the user interface and all output (including future entries in the log file, which you can view on the ["Activities" page](#)) to German.

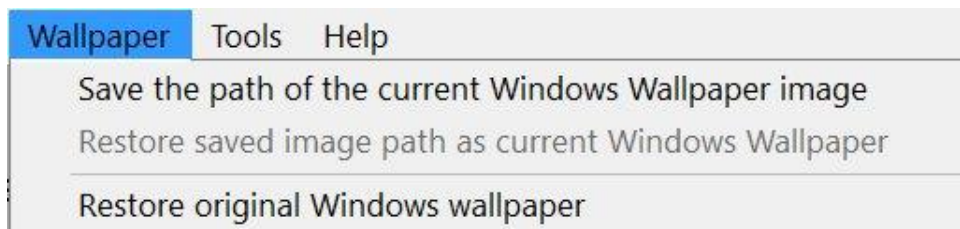
## „English GUI“

Switches the language of the user interface and all output (including future entries in the log file, which you can view on the ["Activities" page](#)) to English.

## “End ‘Real Moon Phases Wallpapers’”

Closes the application.

## Menu " Wallpaper"



## „Save the path of the current Windows Wallpaper image“

Saves the path of the currently set Windows wallpaper to this application's settings.

## „Restore saved image path as current Windows Wallpaper“

**(only enabled if a wallpaper path has been saved)**

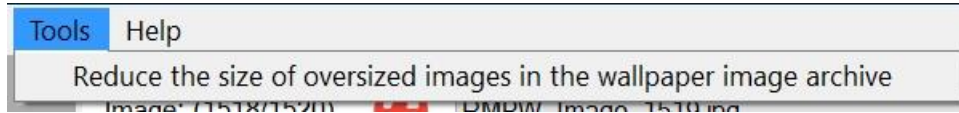
Restores the current Windows wallpaper to the saved image path.

## „Restore Original Windows Wallpaper“

With this menu item, you can restore the original default Windows wallpaper from:

„C:\Windows\Web\Wallpaper\img0.jpg“

## Menu „Tools“



## „Reduce the size of oversized images in the Wallpaper Archive“

If you save images from the web or your own personal collection to the [Wallpaper Image Archive](#)—with the intention of using them within the application as wallpapers featuring the superimposed moon display—these images may potentially be larger than the background image width and/or height currently configured on the ["Images" page](#).

Consequently, due to their dimensions, these images may occupy more storage space within the wallpaper image archive than is actually required by the application.

Therefore, this function allows you to scan all images in your wallpaper image archive to identify any that exceed the configured background image dimensions, and, if necessary, resize them.

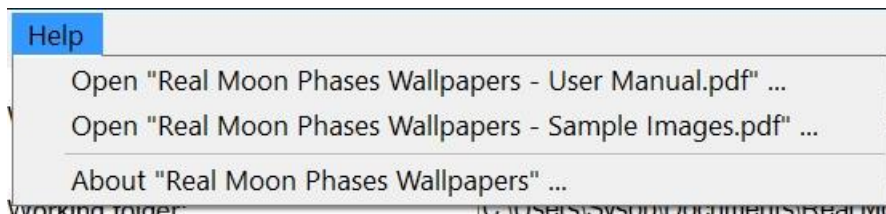
During this process, any images that exceed the specified background image dimensions are scaled down to match those dimensions.

Images that are wider than the configured background image width are resized to match that width.

Similarly, images that are taller than the configured background image height are resized to match that maximum height.

**Warning! Executing this function will actually edit/modify the images in the wallpaper image archive.**

## Menu „Help“



## „Open ‘Real Moon Phases Wallpapers – User Manual.pdf’ ...“

Open this user manual in the application.

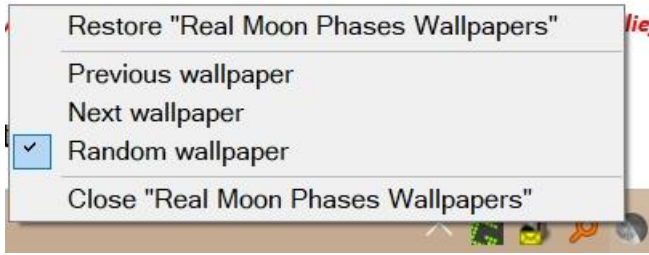
## „Open ‘Real Moon Phases Wallpapers – Sample Images.pdf’ ...“

Opens a PDF where you can view examples of the diverse possibilities for designing your own wallpapers featuring a live moon display.

## „About ‘Real Moon Phases Wallpapers’ ...“

Displays in an information window whether the application was launched with administrator privileges, the application's version number, the licensee, and—in compliance with legal requirements—the postal addresses of our company and the program developer.

## Systray icon popup menu



### „Restore ‘Real Moon Phases Wallpapers’“

Opens the minimized application window.

### „Previous Wallpaper“

Switches the Windows wallpaper to the previous background image, including its settings.

This saves the "Previous Wallpaper" function and executes it whenever:

- The option "[Open from Systray with single click](#)" under the „Settings“ menu item is unchecked, and the Systray icon is single-clicked.
- Or, this option is checked, and the Systray icon is double-clicked.

### „Next Wallpaper“

Switches the Windows wallpaper to the next background image, including its settings.

This saves the "Next Wallpaper" function and executes it whenever:

- If the option "[Open from Systray with single click](#)" is unchecked under the „Settings“ menu, and the Systray icon is single-clicked.
- If this option is checked, and the Systray icon is double-clicked.

### „Random Wallpaper“

Sets the Windows wallpaper to a randomly selected background image, applying its specific settings.

This saves the "Random Wallpaper" function, which is then executed whenever:

- If the option "[Open from Systray with single click](#)" is unchecked under the „Settings“ menu, and the Systray icon is single-clicked.
- If this option is checked, and the Systray icon is double-clicked.

### „Close ‘Real Moon Phases Wallpapers’“

Closes the application.

## JSON Settings Application – Variables Not Configurable via GUI

Advanced users can customize the application further to suit their personal needs than the GUI allows.

To do so, the entries listed below in the application settings file "settings.json" can be modified while the application is closed.

This file is located at:

**„C:\Users\%User name%\AppData\Roaming\Pi.M-Software\Real Moon Phases Wallpapers\settings.json“**

We request that you refrain from modifying other settings, as these are either continuously created or modified by the application, or can be changed directly within the application's GUI.

- **Caution! Incorrect modifications to these variable values may lead to malfunctions within the application!**
- **Modify values only if you are certain of the consequences.**
- **Before making any changes, be sure to create a backup of the "Settings.json" file.**
- **In path specifications (string variables), backslash characters "\" must always be entered as double backslashes "\\ to ensure they are processed correctly by the application.**
- **When modifying variables, pay close attention to the comma at the end of each line!**

## General Settings

### Wait time for removable drives

**"Common\_Wait\_For\_Drive\_Availability\_Seconds": 60,**

Integer (Whole Number) – Maximum wait time for removable drives in seconds (1 - 600)

### Brightness and shadow of the small moon depiction in the program icon

**"Settings\_Program\_Symbol\_Brightness": 80,**

Integer (Whole Number) – Brightness of the bright areas (0 – 255)

**"Settings\_Program\_Symbol\_Shadow": 0,**

Integer (Whole Number) – Brightness of the dark areas (0 – 255)

### Integer (Whole Number) – Brightness of the dark areas (0 – 255)

When the task timer is enabled, its triggers can be switched on and off using this control.

**"Timer\_Trigger\_Task\_Timer\_At\_Boot": true,**

Boolean (true|false) – Trigger a Task Timer upon system boot

**"Timer\_Trigger\_Task\_Timer\_At\_LogOn": true,**

Boolean (true|false) – Trigger a Task Timer upon login / user switch

**"Timer\_Trigger\_Task\_Timer\_At\_WakeUp": true,**

Boolean (true|false) – Trigger a Task Timer upon waking from Sleep/Hibernate

**"Timer\_Trigger\_Task\_Timer\_At\_Scheduler\_Intervall": true,**

Boolean (true|false) – Trigger a Task Timer trigger upon expiration of the timer interval.

## Color Settings

"GUI\_Color\_Dark\_Menu\_BackColor": "60,60,60",

"GUI\_Color\_Regular\_Menu\_BackColor": "MenuBar",

Color (RGB Value) – Background color of the menus

"GUI\_Color\_Dark\_Menu\_ForeColor": "White",

"GUI\_Color\_Regular\_Menu\_ForeColor": "MenuText",

Color (RGB Value) – Menu Font Color

"GUI\_Color\_Dark\_Menu\_BackColor\_Highlighted": "Gray",

"GUI\_Color\_Regular\_Menu\_BackColor\_Highlighted": "MenuHighlight",

Color (RGB Value) – Menu Highlight Color

"GUI\_Color\_Dark\_GUI\_BackColor\_Left": "45,45,45",

"GUI\_Color\_Regular\_GUI\_BackColor\_Left": " AppWorkspace ",

Color (RGB Value) – Background color of the left side of the program interface

"GUI\_Color\_Dark\_GUI\_ForeColor\_Left\_Labels": "White",

"GUI\_Color\_Regular\_GUI\_ForeColor\_Left\_Labels": "Black",

Color (RGB Value) – Font color for the left side of the program interface

"GUI\_Color\_Dark\_GUI\_ForeColor\_Left\_Labels\_Highlighted": "Yellow",

"GUI\_Color\_Regular\_GUI\_ForeColor\_Left\_Labels\_Highlighted": "Blue",

Color (RGB Value) – Highlight color for the left side of the program interface

"GUI\_Color\_Dark\_GUI\_BackColor\_Right": "30, 30, 30",

"GUI\_Color\_Regular\_GUI\_BackColor\_Right": "Window",

Color (RGB Value) – Background color of the right side of the program interface

"GUI\_Color\_Dark\_GUI\_ForeColor\_Right": "White",

"GUI\_Color\_Regular\_GUI\_ForeColor\_Right": "Black",

Color (RGB Value) – Font color for the right side of the program interface

"GUI\_Color\_Dark\_GUI\_TextBoxes\_BackColor": "ControlDark",

"GUI\_Color\_Regular\_GUI\_TextBoxes\_BackColor": "Control",

Color (RGB Value) – Background color of the text boxes

"GUI\_Color\_Dark\_GUI\_TextBoxes\_ForeColor": "WindowText",

"GUI\_Color\_Regular\_GUI\_TextBoxes\_ForeColor": "WindowText",

Color (RGB Value) – Font color of the text boxes

"GUI\_Color\_Dark\_GUI\_Buttons\_BackColor": "ButtonFace",

"GUI\_Color\_Regular\_GUI\_Buttons\_BackColor": "ButtonFace",

Color (RGB Value) – Background color of the buttons

"GUI\_Color\_Dark\_GUI\_Buttons\_ForeColor": " ControlText ",

"GUI\_Color\_Regular\_GUI\_Buttons\_ForeColor": "ControlText",

Color (RGB Value) – Button Text Color

"GUI\_Color\_Dark\_GUI\_NumericUpDown\_BackColor": "Window",

"GUI\_Color\_Regular\_GUI\_NumericUpDown\_BackColor": "Window",

Color (RGB Value) – Background color of the NumericUpDown boxes

"GUI\_Color\_Dark\_GUI\_NumericUpDown\_ForeColor": "ControlText",

"GUI\_Color\_Regular\_GUI\_NumericUpDown\_ForeColor": "ControlText",

Color (RGB Value) – Font color of the NumericUpDown boxes

## Default Moon Image

**"Default\_Moon\_Image\_Path": "C:\\Users\\%User name%\\Documents\\Real Moon Phases Wallpapers\\Default Moon Image\\Default Moon Image.bmp",**

String (Text) – Path to the folder where the default moon image is saved in bitmap format.

**"Default\_Moon\_Image\_Background\_Image\_Path": "",**

String (Text) – The path to the desired background image to be used for creating the default moon image. If an empty string is provided, the default background image from the application's resources will be used.

**"Default\_Moon\_Image\_Image\_Size\_Width": 1200,**

Integer (Whole Number) – Width of the default moon image to be created (100 – 4000)

**"Default\_Moon\_Image\_Image\_Size\_Height": 1200,**

Integer (Whole Number) – Height of the default moon image to be created (100 – 2000)

**"Default\_Moon\_Image\_Wallpaper\_Brightness": 128,**

Integer (Whole Number) – Brightness of the bright areas (0 – 255)

**"Default\_Moon\_Image\_Wallpaper\_Shadow": 128,**

Integer (Whole Number) – Brightness of the dark areas (0 – 255)

**"Default\_Moon\_Image\_Moon\_location\_X": 600,**

Integer – Left edge of the moon representation (0 – 4000)

**"Default\_Moon\_Image\_Moon\_location\_Y": 600,**

Integer (Whole Number) – Upper edge of the moon depiction (0 - 2000)

**"Default\_Moon\_Image\_Moon\_Size": 1100,**

Integer (integer) – (0 -  $\text{math.min}(\text{Default\_Moon\_Image\_Image\_Size\_Width}, \text{Default\_Moon\_Image\_Image\_Size\_Height})$ )

**"Default\_Moon\_Image\_Moon\_Brightness": 128,**

Integer – Brightness of the bright areas of the moon representation (0–255)

**"Default\_Moon\_Image\_Moon\_Shadow": 128,**

Integer – Brightness of the dark areas of the moon representation (0–255)

**"Default\_Moon\_Image\_Moon\_Hue": 128,**

Integer – Hue of the moon representation (0–255)

**"Default\_Manual\_Moon\_Image\_Moon\_Rotation": 23.0,**

Double (Decimal) – Manual rotation angle of the moon representation (0 – 259.99)

**"Default\_Manual\_Moon\_Image\_Moon\_Age": 14.76,**

Double (Decimal) – Manual Moon Age for the Moon Display (0 – 29.50)

**"Default\_Moon\_Image\_Use\_Manual\_Moon\_Rotation": false,**

Boolean (true|false)

true = Use manual rotation angle for the Moon display

false = Use the current calculated rotation angle for the Moon display

**"Default\_Moon\_Image\_Use\_Manual\_Moon\_Age": false,**

Boolean (true|false)

true = Use the manual Moon age value for the Moon display

false = Use the current calculated Moon age for the Moon display

## Copy of the current wallpaper

**"Wallpaper\_Image\_Copy\_Path": "C:\\Users\\%User name%\\Documents\\Real Moon Phases Wallpapers\\Wallpaper Image Copy\\Wallpaper Image Copy.bmp ",**

String (Text) – Path to the folder where a copy of the current wallpaper is saved in Bitmap format

## Hotkeys

### First\_Key

Ctrl	=	1
Alt	=	2
Shift	=	4

For combinations, add the values (e.g., "Ctrl + Alt" = 3).

### Second\_Key

See: <https://www.toptal.com/developers/keycode/table>

**"Hotkeys\_Hotkey\_Previous\_Wallpaper\_First\_Key": 3,**

Integer (Integer) – First part of the key combination for the previous wallpaper (1–7)

**"Hotkeys\_Hotkey\_Previous\_Wallpaper\_Second\_Key": 103,**

Integer (whole number) – Second part of the key combination for previous wallpaper (1 - 255)  
(Default: "Ctrl" + "Alt" + "Num 7")

**"Hotkeys\_Hotkey\_Next\_Wallpaper\_First\_Key": 3,**

Integer (Integer) – First part of the key combination for the previous wallpaper (1–7)

**"Hotkeys\_Hotkey\_Next\_Wallpaper\_Second\_Key": 104,**

Integer (whole number) – Second part of the key combination for previous wallpaper (1 - 255)  
(Default: "Ctrl" + "Alt" + "Num 8")

**"Hotkeys\_Hotkey\_Random\_Wallpaper\_First\_Key": 3,**

Integer (Integer) – First part of the key combination for the previous wallpaper (1–7)

**"Hotkeys\_Hotkey\_Random\_Wallpaper\_Second\_Key": 105,**

Integer (whole number) – Second part of the key combination for previous wallpaper (1 - 255)  
(Default: "Ctrl" + "Alt" + "Num 9")

**"Hotkeys\_Hotkey\_PlaySound": true,**

Boolean (true|false)

true = Play a confirmation sound when the hotkey combination is pressed

false = Do not play a confirmation sound when the hotkey combination is pressed

**"Hotkeys\_Hotkey\_PlaySound\_Path": "",**

String (Text) – The path to the sound file that is played when a hotkey combination is pressed.

The following file formats are supported: ".mp3", ".wav", ".wmv", ".aac", ".m4a".

If the string is empty, the default sound from the application's resources is used

## Quick-Adjustment Scrollbar for Image List Combobox and Up/Down Boxes

**SmallChange** = Click on the arrows to the left and right of the scrollbar.

Integer (Whole Number) – (1 – Maximum value of the respective control)

**LargeChange** = Click on the scrollbar background to the left and right of the slider.

Integer (Whole Number) – (1 – Maximum value of the respective control)

"Scrollbars\_FastScrollBar\_SmallChange\_Cob\_Wallpaper\_List\_Preview": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_Cob\_Wallpaper\_List\_Preview": 50,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Wallpaper\_Brightness": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Wallpaper\_Brightness": 10,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Wallpaper\_Shadow": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Wallpaper\_Shadow": 10,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Wallpaper\_Width": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Wallpaper\_Width": 20,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Wallpaper\_Height": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Wallpaper\_Height": 20,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_Size": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_Size": 10,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_Brightness": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_Brightness": 10,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_Shadow": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_Shadow": 10,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_LocationX": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_LocationX": 20,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_LocationY": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_LocationY": 20,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_Hue": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_Hue": 10,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_Age": 0.041,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_Age": 0.41,

"Scrollbars\_FastScrollBar\_SmallChange\_NuD\_Moon\_Rotation": 1,

"Scrollbars\_FastScrollBar\_LargeChange\_NuD\_Moon\_Rotation": 10,

## Horizontal Scrollbar: Moon View X-Coordinate

"ScrollBars\_HScrollbar\_SmallChange\_Moon\_Position\_X": 1,

„ScrollBars\_HScrollbar\_LargeChange\_Moon\_Position\_X": 10,

## Vertical Scrollbar: Moon Display Y-Coordinate

"ScrollBars\_VScrollbar\_SmallChange\_Moon\_Position\_Y": 1,

„ScrollBars\_VScrollbar\_LargeChange\_Moon\_Position\_Y": 10,

## Uninstalling the Application

### Restore Windows Wallpaper

Reset the current Windows wallpaper to the default wallpaper using the [menu item „Wallpaper“ > "Restore Original Windows Wallpaper"](#).

### Delete any existing task in the Task Scheduler.

Please note that when uninstalling the software using the included uninstaller, any potentially active task named "Real Moon Phases Wallpapers"—located in the Task Scheduler and created by the activated "Task-Timer"—is **NOT** automatically removed.

Therefore, before uninstalling the application, you must—in this case—either deactivate the "Task-Timer" within the application itself (on the ["Application" page](#)—this action deletes the corresponding task from the Task Scheduler) or, alternatively, manually delete the task named "Real Moon Phases Wallpapers" (which was created by the "Task-Timer") directly from the Task Scheduler on your Windows system.

Only then should you uninstall the application using the included uninstaller.

### Now, uninstall the application using the included program in the Start Menu: "Real Moon Phases Wallpapers > Real Moon Phases Wallpapers – Uninstall".

After uninstalling the application, you can check whether all [directories created during installation](#) were automatically deleted, and—if necessary—manually remove them, including their contents.

#### Program Directory:

"C:\Program Files\ Real Moon Phases Wallpapers\"

#### Static Application Data:

„C:\ProgramData\Pi.M-Software\Real Moon Phases Wallpapers\“

#### Flexible Application Data:

„C:\Users\%User name%\AppData\Roaming\Pi.M-Software\Real Moon Phases Wallpapers\“

#### Working Directory (User Data):

[„C:\Users\%User name%\Documents\Real Moon Phases Wallpapers\“](#)

## License Agreement (EULA)

### For the software "Real Moon Phases Wallpapers"

As of: May 1, 2026

Please read this license agreement carefully before installing or using the software "Real Moon Phases Wallpapers."

By installing or using the software, you agree to the following terms and conditions.

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### §1 License Type

The software "Real Moon Phases Wallpapers" is provided as **freeware** with limited functionality.

#### Limitations of the Freeware Version:

- Only the first 10 images from the assigned [wallpaper image archive](#) can be used and configured as a slideshow.
- It is not possible to save modified background image or moon settings for the wallpapers to be created.

To make unrestricted use of all program functions, the purchase of a user license is required.

The author grants the user a non-exclusive, non-transferable, and royalty-free license to use the freeware version of this software.

Use is permitted exclusively for private and non-commercial purposes.

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### §2 Usage License

The usage license consists of a file containing a personalized registration key for the purchaser, which removes the restrictions of the freeware version and unlocks the application as the purchased version.

#### Extended Capabilities with an Installed User License:

- Any number of background images can be managed in the [wallpaper images archive](#) and used as a slideshow.
- Changes to image settings can be saved.

Upon receipt, this file must be copied or saved by the purchaser into the program directory (installation directory) of this software.

When utilizing a usage license legally acquired from us, the purchaser is granted—for an unlimited period—the non-exclusive, non-transferable right to install and use the acquired license on up to:

**A maximum of three computers belonging to the purchaser's household or business.,**

For the use of the software on more than three computers within a single household or company, the purchase of a corresponding number of additional user licenses is required.

The purchase of a user license entitles the purchaser to lifetime free download, installation, and licensed use of all subsequent versions of "Real Moon Phases Wallpapers" published by us.

## §2.1 Acquisition of a Usage License

You can order the usage license to unlock all features of the application from us by transferring **USD \$9.90** to our PayPal account:

[bestellung@pi-m-software.de](mailto:bestellung@pi-m-software.de)

When making your PayPal payment, please be sure to provide us with the following four details in the "Message to Seller" field:

- "Real Moon Phases Wallpapers" (so that we know for which software a usage license is being ordered)
- Your email address (otherwise, we will use the email address used to process the payment)
- Your real first and last name (No nicknames or aliases!)
- Your postal address (We require your name and address for legally compliant invoicing as well as for generating the usage license file)

Based on this information, your personalized usage license file will be generated and sent to the email address you provided, along with your invoice and payment confirmation, as email attachments.

Unfortunately, our automated ordering and licensing system can only process individual orders. Therefore, if you wish to order multiple usage licenses, please place a separate order for each one. Please contact us before ordering multiple licenses to inquire about special volume-based pricing.

## §2.2 Transfer of a Usage License

The resale, gratuitous transfer to third parties, or any other reproduction and/or distribution of our usage license files is strictly prohibited.

The usage licenses are non-transferable.

As the name and email address of the respective purchaser are embedded within the usage license files, the origin of said files can be traced at any time.

In the event that usage licenses are circulated illegally, we will take legal action against the original purchaser for such unauthorized distribution. Specifically, we will sue said purchaser to recover the financial damages incurred by us as a result of this impermissible transfer.

## §2.3 Waiver of Right of Withdrawal upon Purchase of a Usage License

With the reform of the right of withdrawal in June 2014, the legislature generally granted consumers a right of withdrawal, even in the case of digital goods. However, this right of withdrawal may expire under the conditions set forth in Section 356, Paragraph 5 of the German Civil Code (BGB) if the business has commenced performance of the contract—provided that the consumer has expressly consented to the business beginning performance prior to the expiration of the withdrawal period, and has further acknowledged that, by granting such consent, they forfeit their right of withdrawal upon the commencement of contract performance.

The creation of a personalized user license constitutes digital content produced individually according to customer specifications, specifically tailored to the respective buyer's data. This entitles us to invoke the aforementioned clause.

The buyer confirms both their waiver of the right of withdrawal and their instruction for us to deliver the user license prior to the expiration of the withdrawal period by explicitly acknowledging this clause during the ordering process. This acknowledgment is effected via a mandatory checkbox located next to the corresponding explanatory text within the order form for the user license on our website.

It is not possible to submit the order form without the buyer's consent to waive their right of withdrawal and their instruction for the immediate creation and delivery of the user license directly upon receipt of the purchase price payment in our PayPal account.

### §3 Usage Rights

The user is entitled:

- To install the software—without the license file—on any number of your own devices.
- To use any legally acquired license on up to three computers within a single household or company.
- To create backup copies for your own personal use.

The following is not permitted:

- the transfer of an acquired usage license to third parties, or making the usage license available to other persons
  - the sale, rental, or sublicensing of the software
  - distribution in a modified form
  - the removal of copyright or authorship notices
  - reverse engineering, decompiling, or disassembling, except to the extent mandatorily permitted by law
- 

### §4 Copyright

The software "Real Moon Phases Wallpapers," as well as all included content (e.g., graphics, moon phase images, source code, algorithms), is protected by copyright.

All rights remain with the author.

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### §5 Disclaimer of Warranty

The software is **provided "as is."**

No warranty is provided for:

- Absence of errors
- Uninterrupted operation
- Fitness for a particular purpose
- Compatibility with all system configurations

Use is at your own risk.

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### §6 Limitation of Liability

The author is not liable for:

- Data loss
- System damage
- Lost profits
- Other direct or indirect damages

This does not apply in cases of intent or gross negligence, insofar as mandatorily prescribed by law.

## §7 Software Changes

The author reserves the right:

- to modify the software at any time
- to add or remove features
- to discontinue the provision without notice

There is no entitlement to updates or support.

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## §8 Termination

This license terminates automatically if the user violates any of the terms.

In this case, the software must be completely uninstalled, and all copies must be deleted.

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## §9 Final Provisions

The laws of the Federal Republic of Germany shall apply.

Should individual provisions of this agreement be or become invalid, the validity of the remaining provisions shall remain unaffected.

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## Privacy Policy

In general, this software does not access the World Wide Web or other computers (whether local or remote) during its use. Consequently, any data transmission from this application to us or to third parties is absolutely precluded.

### Data Storage

The data required from the buyer when purchasing a usage license, and transmitted to us in the process:

**First and Last Name**

**Email Address**

**Billing Address**

**IBAN (if paying by bank transfer)**

are stored by us in our accounting records for the legally prescribed retention period for the purpose of processing the purchase.

The data transmitted to us by the buyer is used exclusively for processing the purchase, for invoicing, and for generating the usage license; it is not disclosed—either in whole or in part—to third-party companies or external individuals.

Furthermore, we permanently store a copy of the usage license delivered to the buyer in an encrypted folder on our local server (not a web server), in the event that the buyer should lose the license and need to request a replacement from us.

### Deletion of Data Stored by Us

The buyer may object to this data storage at any time by sending us an email to:

[email@pi-m-software.de](mailto:email@pi-m-software.de)

In response to your request for data deletion—and as soon as the statutory retention period for your order data has expired—we will remove all data stored by us regarding your person and your order from our accounting records.

Furthermore, upon receipt of your request for data deletion, we will immediately delete the backup of your purchased license held by us, as well as all existing data pertaining to you—such as any notes regarding your interactions with our company, etc.

**Please note the following:**

**Should you lose your license, it will not be possible to send you a replacement license; in such a case, you must purchase a new license from us.**

## Copyright

© 2026 [Pi.M-Software]  
All rights reserved.

## Developer:

Hubert Allgäuer

## Pi.M-Software

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[email@pi-m-software.de](mailto:email@pi-m-software.de)

<https://www.pi-m-software.de>

**However, please use the provided telephone contact method only in urgent emergencies.**

Programmers do not really appreciate having their deep concentration constantly interrupted by phone calls while they are coding...

For general questions regarding the application—the answers to which do not require immediate attention—please use our email contact form or send us a fax.

We typically respond to incoming inquiries within 24 hours.

## Have you tested it yet?

- Our program "ICE – Ideal Clipboard Expander" makes working on your PC easier and more efficient. For information about the program and to download it, visit: <https://www.ice-clipboard.de>
- Our new program "IDE – Ideal Desktop Expander" brings a completely new and innovative technology to your Windows desktop.

With IDE, you can create an interactive desktop background (layout) for any application—complete with labels and buttons that allow you to execute a wide range of functions.

For example, you can insert predefined text blocks into third-party applications, launch programs, and more.

These custom layouts appear on your Windows desktop background whenever you open an application for which a layout exists.

IDE is optimized for use with secondary touchscreen monitors, but it can, of course, also be used in a single-monitor setup.