KSuse PhotoWall

v 1.8.8

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In case you have a license, the program's work is not limited, but a watermark is added to the photos.

System requirements

Compatibility: Windows 10 x64.

Recommended computer: Intel i5 (8th Gen and above), i7 (4 or more cores), SSD, at least 8GB of RAM.

Required software:

- .NET Framework 4.8. https://dotnet.microsoft.com/download/dotnet-framework/thank-you/net48-web-installer
- Microsoft Visual C ++ 2015 Update 3 redistributable component (both x86 and x64 versions). https://www.microsoft.com/en-us/download/details.aspx?id=53587
- Codecs. Recommended K-Lite Codec Pack Mega.
 https://codecguide.com/download_kl.htm
- Win7DSFilterTweaker.
 https://codecguide.com/windows7 preferred filter tweaker.htm

Description of the program interface

Main window (photo wall)



This window displays the current status of the photo wall.

Photos that have been downloaded and processed are displayed in gray.

Photos that were sent to print are displayed in full-color version with superimposed graphics.

If printing or the use of black and white cells is disabled, then the photos are immediately displayed in full color.

When you click on a photo with the left mouse button while holding down the Shift key, it is sent again to print.

When you click on a photo with the right mouse button while pressing the Shift key, it is deleted.

When you right-click on the photo while holding down the Ctrl key, the Zoom animation to this cell starts.

Indicators:

• Green - Waiting. The wall is either not running or is already fully printed.

• White - The wall is being filled.

The readiness indicator consists of 4 sections: processed / distributed / added to the queue / total necessary.



- export the finished wall to a file for printing (full resolution up to 23K)

The file for printing can be exported only if the cells were rendered in high resolution (see print settings).



- export previews of the finished wall (monitor resolution)



- reprint cell

If the checkbox is checked and the print settings indicate that it is necessary to print copies to guests, then a cell and copies to guests will be printed.



- cell replacement



- fill the wall with duplicates

If the quantity is not specified or equal to 0, then full filling is performed, otherwise the specified number of takes is created.

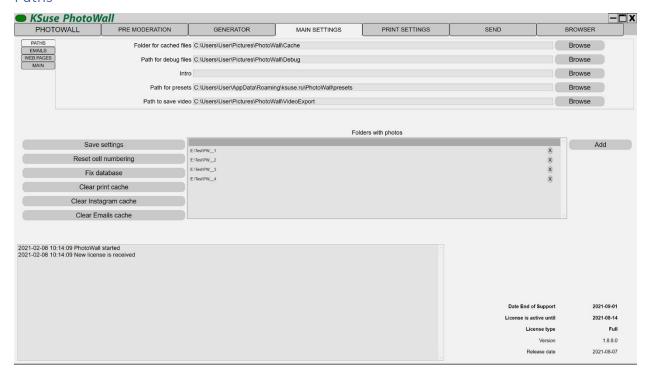
If you press this button while holding down the Shift key, then the filling is done not with copies of photos, but overlaid graphics with turned off transparency. The entire wall is filled, including cells outside the mask, even if the "fill mask only" option is enabled.



- print all photos (delayed printing)

Main settings window

Paths



Attention! Settings cannot be saved if you currently have a wall in the "Start" status!

After changing the parameters, you must save the settings by clicking on the "Save Settings" button!

In this window, you can select folders for save cached data (downloaded photos, previews for photo wall, printed photos) and for debug files.

At the bottom of the window you can see the log of the program, the end date of support, the end date of the active license, the type of your license and the release date of this release.

The release, released after the end of support, works in demo mode.

The license is automatically renewed for 7 days (by default) when the program starts when there is an Internet connection. If the license has not been renewed, then after the specified date the program runs in demo mode.

The "Fix database" button cleans the database from duplicates.

The button "Clear print cache" deletes cells.

The button "Clear Instagram cache" deletes all photos downloaded from Instagram.

The button "Clear Emails cache" deletes all files downloaded from the mailbox. There is no automatic cleaning of the folder with files downloaded from mail. When moving to a new wall, it is recommended that you clear the message cache to avoid adding old images to the new wall.

The "Add" button is used to add folders to the folders list. To delete a folder from the list, select it in the list and press the Delete key on the keyboard, or click on the X in the corresponding row.

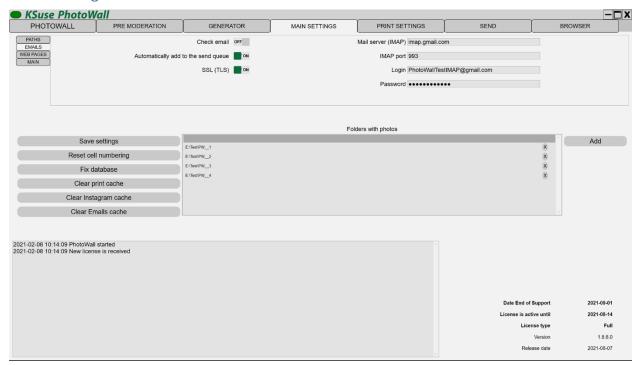
If the filename is set_X_Y.jpg, then the photo is placed in the specified cell, otherwise the index is randomly selected in accordance with the fill settings.

After changing the list of monitored folders, it is recommended to restart the program.

Photos added to the monitored folders (including subfolders, if the corresponding option is enabled) automatically fall on the photo wall.

The button "Reset cell numbering" allows you to reset the ordinal number of cells, sets the numbering starting from 1. Attention! This procedure is performed only after removing all walls from the lower list.

Email settings



You can enter the data of the mailbox from which the photo wall will download letters with photos.

Letters are also affected by the "Date (from)" filter of the current photo wall. Only messages received after the specified date are downloaded.

If the competition mode is enabled, then the number of the team must be indicated in the subject.

Both attachments and photos inserted into the message body are downloaded.

Attention! To read pdf files, you must install Ghostscript.

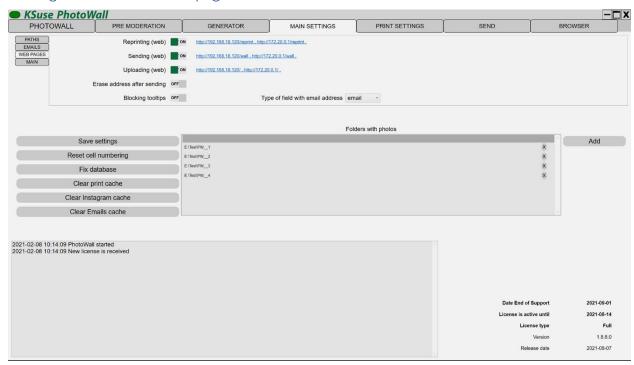
https://www.ghostscript.com/download/gsdnld.html

SSL connection on port 465 is not supported!

To use Gmail, you need to allow less secure apps:

https://myaccount.google.com/lesssecureapps

Settings of embedded webpage



The "Reprint (web)" link is used by operators to reprint cells and to order sending animations to mail.

The "Send (web)" link is used by visitors to order sending animations to mail.

The link "Download (web)" is used to send photos to the photo wall.

For the field types "email" and "text", a different virtual keyboard is displayed. Validation for compliance with the format is used for the field with the type "email", but there is no autocomplete on iOS devices.

"Erase the address after sending" - automatic cleaning of the field with the address immediately after sending.

"Blocking tooltips" - disable autocomplete.

For the web pages to work correctly, you must allow access via the TCP protocol for port 80 in the firewall, or disable the firewall. It is also necessary to turn off any other programs that may use port 80 before starting KSuse PhotoWall.

Main settings



In this window, you can select the interface language, color theme.

You can enable the search for photos in subfolders in the directories selected for the search.

You can pause between detecting photos and adding them to the processing queue, which will prevent the addition of temporary files.

When the option "Generate preview of cells of the current wall" is enabled, a preview of the cells of the current wall with the file names X_Y.png is created in the Cell2 folder

Using the "Main Screen" and "Second Screen" options, you can redirect application windows to other displays.

Displays for displaying the digital wall are selected in the central block by clicking on the display rectangle. The selected displays are highlighted in green.

The digital wall works correctly only when the scale is 100% set in the properties of all monitors.

If you need high-resolution processed photos, then you need to enable the "Render photos for printing and animation" option. The option turns on automatically when the digital wall is active.

When the option to show the wall on the second monitor is turned on, the photo wall is also displayed on it.

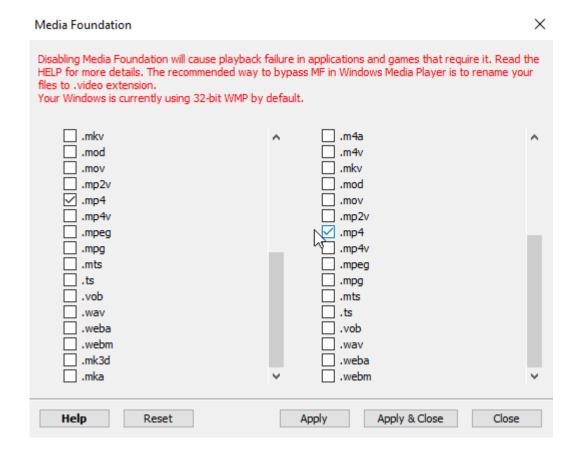


Если наполнения цифровой стены используются mp4 файлы и включена анимация Zoom, то необходимо отключить Media Foundation для этого типа файлов.

Это можно сделать с помощью программы Win7DSFilterTweaker: https://codecguide.com/windows7 preferred filter tweaker.htm

Win7DSFilterTweaker 6.4	×
Preferred decoders	
Media Foundation	
MS Codec Tweaks	
Help Exit	

Установите галочки напротив .mp4



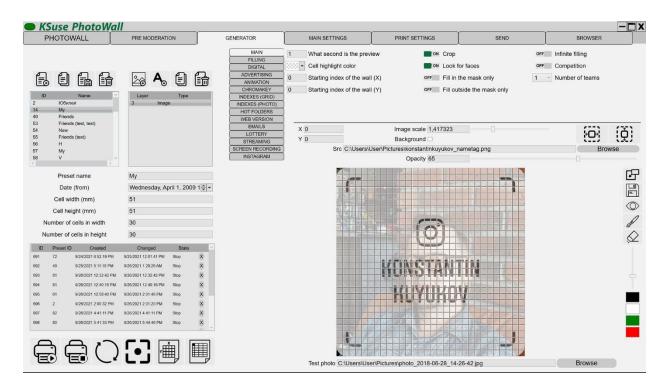
Для корректного воспроизведения видео в других программах необходимо снять эти галочки.

Add interface language

1. Create a copy of C:\Program Files\ksuse.ru\PhotoWall\lang\en.xaml

- 2. Rename the copy to the two-letter designation corresponding to the new language, for example, ru.xaml
- 3. Add a new language to the new line in langs.txt in the format designation=name, for example, ru=Russian

Generator

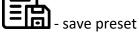


In this window, you can create and configure wall presets, as well as manage current walls.

Attention! Settings cannot be saved if you currently have a wall in the "Start" status!

After changing the parameters, you must save the settings by clicking on the "Save preset" button!







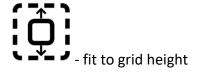


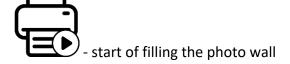


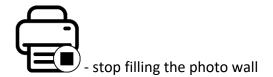




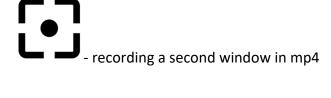


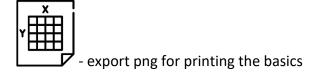








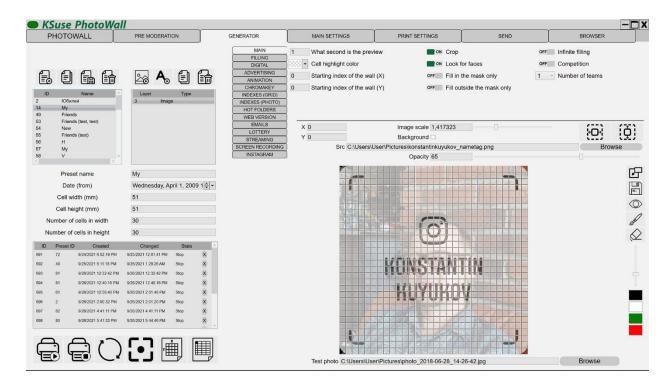




• "Date (from)" - Photos created and changed earlier than the specified time are not processed.

By choosing a test image, you can check how the overlaid graphics will look on your photos and configure chromakey removal.

Main settings of preset



- "What second is the preview" If an mp4 file is found in the hot folder, the wall takes a frame from the specified second of the video as a photo.
- "Infinite filling":
 off (default) loading of new images stops after filling the entire wall;
 on after filling the entire wall, loading of new images continues with the replacement
 of existing cells.
- "Cell highlight color" The last added cell is highlighted with the frame of the specified color (by default, transparent).
- "Start Wall Index (X)" The default column numbering starts at 0.
- "Start Wall Index (Y)" The default line numbering starts at 0.
- "Crop" When this option is enabled, the photo will be cropped to the aspect ratio of the cell. When the option is disabled, the photo will be fitted. The empty space around the photo is filled with overlay graphics with transparency turned off.
- "Look for faces" When this option is enabled, faces are searched and photo is cropped with offset to prevent faces from being cut off. When the option is turned off, strips of the same width are cut on both sides.

• "Fill only in the mask" - When this option is enabled, only the cells under the mask are filled.

• "Fill only outside the mask" - When this option is enabled, only the cells around the image mask are filled.

Competition

In this mode, the photo wall is divided into columns, in the amount indicated in the "Number of teams" field.

The first column of the photo wall is filled with photos with the first hashtag and from folders whose names end with __1 (the two underscores and the command number). The second one is filled with photos with the second hashtag and from folders whose names end with __2 and so on.

When the competition mode is off, photos on all the specified hashtags and from all the folders specified in the settings are loaded on the photo wall.

Settings of filling



This settings block allows you to specify the order of filling the wall. You can choose a combination of 3 parameters: Priority of filling, vertical direction and horizontal direction.

Example: https://www.youtube.com/watch?v=QCC8sx3O4Uc

Mask of priority

Using a brush, you can draw a mask for the photo wall. Cells located under the mask will be filled first.

Using the slider, you can change the width of the brush.

When the brush mode is on, the left mouse button draws a mask, the right mouse button erases a mask.



You can import transparent PNG as a mask, opaque pixels become a mask.

Settings of second screen



- "Wall background color" fill color of the second screen.
- "Background color of the second screen" background color outside the wall.
- "Stretch the wall to full screen":
 off (by default) the wall is centered, keeping the proportions;
 on the wall is stretched to full screen (the proportions are not preserved).
- "Preview size" an additional increase in the resolution of the generated preview to improve the sharpness of photographs on large high-definition screens.
- "Preview instead of background" In the place of empty cells an image is displayed that will be laid out in a mosaic.
- "Add background" In the place of empty cells, an image is displayed, the path to which
 is typed in the text box.

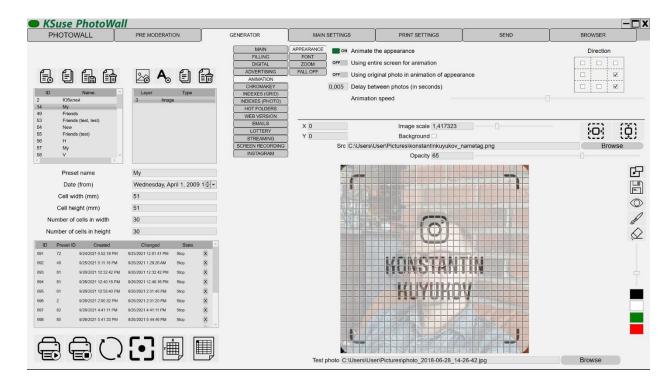
If a transparent background of the screen or photowall is selected, then the contents of the screen located under the photowall window are displayed. In this mode, it is impossible to record video to a file or broadcast to a rtmp server!

Settings of ads on the second screen



- "Add ads" Turn on / off the output on the second screen of advertising images (png, jpg) and video (mov, mp4).
- "Folder with advertising materials" Images and videos are loaded from the specified folder. They display in turn in alphabetical order.
- "Ad unit impression interval, seconds" Interval in seconds between ad impressions.
- "Display duration (for image), seconds" Applies to images. The video is hidden after the end of its playback.
- "Maximum size, % of screen" Ad unit size.

Settings of animation on the second screen



- "Animate the appearance" The photo flies from behind the screen, is displayed in large size, and then takes its position in the wall.
- "Use the entire screen for animation" If the wall does not occupy the entire area of the second screen, this parameter indicates whether the area used by the animation is limited by the size of the wall.
- "Use the original photo in the appearance animation" If enabled, the photos appear in
 the animation on a digital wall without overlay graphics, and after they have taken their
 position, they are replaced with cells with overlay graphics. If off, then the entire
 animation happens with the resulting cells.
- "Delay between photos" Delay in seconds between the appearance of photos.

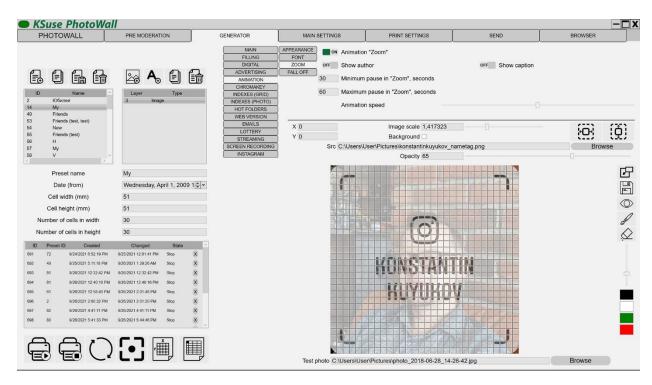
Using the "Animation speed" slider, you can speed up or slow down the animation.

Checkmarks "Direction" mark the sides from which the photos will "fly". If no one checkmark is not checked, then the photos appear from the center.



In this window it is possible to customize the appearance of the cell labels.

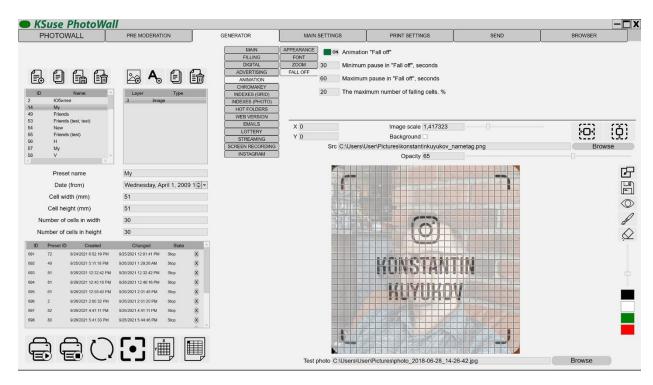
For the web version, only color adjustment is applied.



- "Animation "Zoom". During idle, a wall at a random moment brings a randomly selected photo closer, then returns to its original state.
- "Min. pause in the animation "Zoom", seconds" and "Max. pause in the animation
 "Zoom", seconds" Defines the interval between starts of the animation.

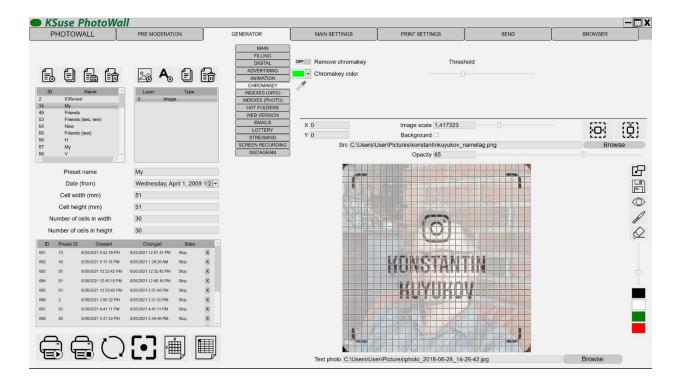
Using the "Animation speed" slider, you can speed up or slow down the animation.

When downloading photos from Instagram or by e-mail, the author of the photo and the caption to the photo are recorded. It is possible to customize the display of this information in the Zoom animation.



- "Animation "Fall off". During idle, a wall at a random moment brings a randomly selected photo closer, then returns to its original state.
- "Min. pause in the animation "Fall off", seconds" and "Max. pause in the animation "Fall off", seconds" Defines the interval between starts of the animation.
- "Maximum number of falling cells,%" The number of cells is random within the specified percentage.

Background Removal Settings



Enable the option "Remove chromakey", set the color of the chromakey, set the threshold.

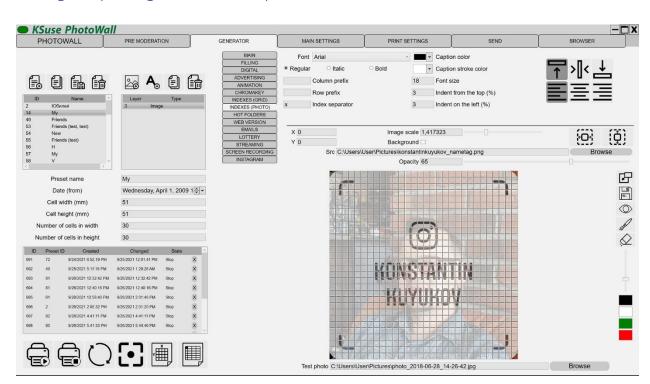
Using the eyedropper, you can take color from the test image.

The deleted background is filled with a background color and then with an overlay with transparency turned off.

Settings for printing indexes on the exported grid



Settings for printing indexes on cell printouts



Settings of additional hot folders

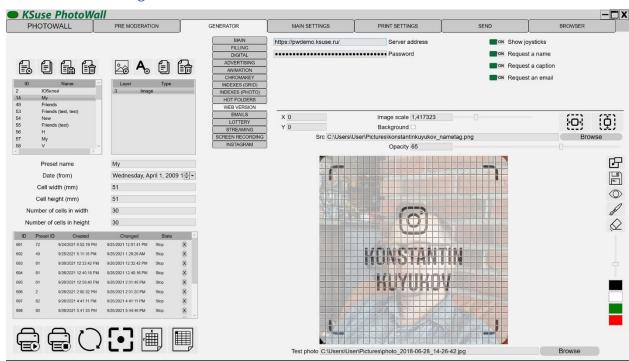


The list of folders in this window functions identically to the same in the main settings.

This setting makes it possible to set hot folders that will be used only in this preset.

The "Add" button is used to add folders to the folders list. To delete a folder from the list, select it in the list and press the Delete key on the keyboard, or click on the X in the corresponding row.

Web version settings



Website address for the web version of the photo wall and password for synchronization.

Synchronization procedure: https://youtu.be/JCxU0zxAPMM

The files from the folder "for_site" that you copied to the site must correspond to the version of the program in which the photo wall placed on the site is created.

You must set 0777 permissions to folder "Data".

Attention! When synchronizing, the program only checks for the presence of a file on the server, and does not control its content.

Attention! Cleaning is done by deleting the contents of the Data folder.

Sending photos from the site is done using email!

Email settings



The settings are identical to the Emails tab in the main settings.

Enabling mail checking here overrides the general setting. That is, in this tab, you can set individual settings for each preset instead of the general ones.

If the option "Check mail" is enabled, the form on the site sends emails with photos to this mailbox.

"Add animation to orders" - Adds a sender to the finished animation sending queue.

"Send Thank You" - Automatically send a letter of thanks. The template for sending thanks must be selected before filling the wall.

If the mailbox settings are not filled in or the wall has already been assembled, then the submission form is hidden from the site.

If the mailbox settings are not filled out or the wall is already filled, then the sending form is hidden from the site.

Lottery settings



In this window, you can enable the lottery and set the winning cells.

If you do not fill in the column and / or row fields when adding a new position, then they are set randomly.

Winning cells are surrounded by a frame of the specified color on the digital wall, and also blink in the appearance animation.

It is possible to export the list of winning cells with detailed data (email, Instagram data).

Streaming settings

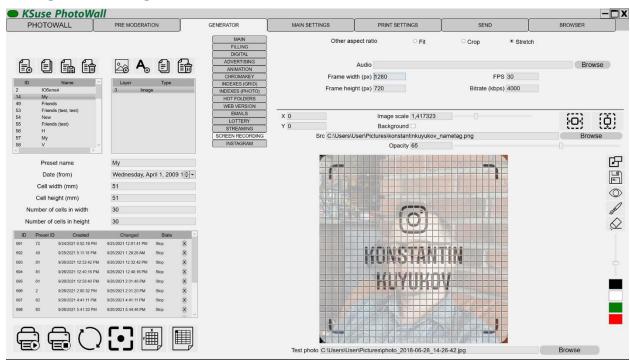


It is possible to broadcast the contents of the second window to the rtmp server and record in mp4. **Available only with Full license.**

The YouTube server address is made up of the stream URL and the stream key.

Attention! Broadcasting and recording are carried out only with the digital wall display turned on and the encoding settings made. The second window may be behind the first. It is important that it is not minimized.

Settings of recording of animation



It is possible to broadcast the contents of the second window to the rtmp server and record in mp4. **Available only with Full license.**

Attention! Broadcasting and recording are carried out only with the digital wall display turned on and the encoding settings made. The second window may be behind the first. It is important that it is not minimized.

Instagram settings



You can enable loading of all files from multipost.

By default, photos are loaded without author information. When you enable the download of such information, it is loaded at much larger intervals than the photos themselves, since the limits for such requests are much smaller.

A preview is taken from the video as a photo.

"Hashtags" - Hashtags are separated by commas. Photos with these hashtags are also filtered by the date above. If @ is specified at the beginning, then this keyword is used as the username. If # is specified at the beginning or not @ or #, then this keyword is used as a hashtag. Functionality in competition mode is different. See the relevant section.

More about limits and authorization on page 47.

Operating procedure

- 1. Work begins with the creation of a new preset.
- 2. Next, you need to configure the wall settings in the created preset:
 - a. Select a hashtag that will be tracked on Instagram.
 - b. Enter cell dimensions in mm (height and width).
 - c. Enter the number of cells in height and width.
 - d. Check all settings.
- 3. Add the necessary graphic elements to the wall.
 - a. Add an image layer to the preset.
 - b. Specify the path to the image. The program imports any graphic elements that ImageMagick can work with. To work with some formats, third-party programs are needed. For example, to work with eps you need to install Ghostscript for Windows (64 bit).
 - c. The position of the element is selected by entering the X and Y coordinates, or by dragging by the mouse.
 - d. Set the scale and transparency to the element.
 - e. The image specified as the background will be printed in areas not occupied by the photo (chromakey removal, background removal, the "Crop" option disabled).
- 4. Save the preset.

This is quite a long process. You must wait for the green indicator "Saved".

- 5. Select the folders from which photos will be downloaded in the print settings.
- 6. Start printing the photo wall.

If any wall is selected in the list of walls, then the button to start printing starts the continuation of its filling.

If no wall is selected, the button to start printing starts a new photo wall from scratch.

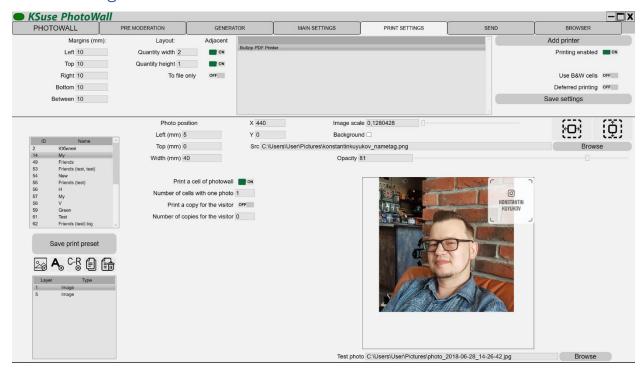
If you need to temporarily interrupt the process, you can turn off the program. At the next launch, it will continue to fill the current photo wall.

Attention! If you are going to continue to print any wall, then do not change the settings of the preset with which this wall is printed.

Attention! The changes made are not saved if there is a wall in the "Start" status.

To delete a wall and its cache, you must select it in the list and press the Delete key, or click on the X in the corresponding row.

Print settings window



Attention! Settings cannot be saved if you currently have a wall in the "Start" status!

When printing is on, photos are automatically sent to the printers added to the list. Print jobs are sent to each printer in turn. Printers in offline state are skipped.

Do not enable the "Printing enabled" option if printers are currently unavailable!

Attention! Paper size and orientation is defined in the printer settings in Windows! These parameters must be the same on every printer added to the list!

Using the "Margins" and "Layout" settings you can place several photos on one printed sheet.

Margins are not related to margins in printer settings! These are additional indents of the photo from the edge of the sheet.

Margins are configured separately for each printer in the list.

Fields are filled with the color selected in the "Background wall color" in the preset settings in the Generator.

By setting the margins in the program, you can eliminate the cropping of the photo by the printer. If the printer cuts the photo, first increase the margins to such a value that they appear on the print, and then reduce them exactly as far as they are visible.

The option "To file only" allows you to create an image intended for printing in the Print folder without sending it to the printer (virtual printing).

Using the "Number of cells with one photo" setting, you can print multiple cells with a one copy of the photo.

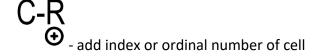
This option does not work if the layout settings indicate that adjacent cells should be printed.

It is not recommended to print several cells with one photograph, if sequential (not random) filling of the wall is used.

In this window, you can set the branding of printouts for the visitor, by overlaying graphic and text elements.











In the cached folder, all prints are saved: photos for the photo wall and copies for the visitor to the cache under the names "wall number _ row _ column .png" and "wall number _ row _ column _c.png", respectively; print tasks (layout with margins) to a file named "wall number _ date _ time .png". With the help of these files you can print any photo and check the correspondence of the aspect ratio and approximate size (it is necessary to cut the transparent fields).

Attention! The cell numbering here always starts at 0 and does not depend on the preset settings.

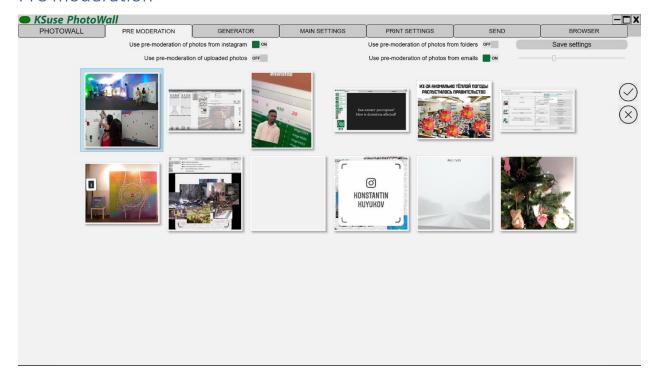
When the option "Use B/W cells" is turned on, photos after processing appear on the wall in black and white without overlay graphic. After being sent to print, they are replaced by color photos with overlay graphic.

When the "Deferred printing" option is enabled, the photos will be fully processed, but they will be sent to the printer only after clicking the "Print all photos" button in the main window.

Disabling the use of black and white cells allows you to see photos with overlay graphics for delayed printing.

It is possible to print adjacent cells on one sheet. This may be necessary, for example, when you print 4 photos on a 4"x6" sheet and want to glue it whole without cutting it. It is possible to make separate settings for columns and rows when your printer can cut along one side.

Pre moderation



In this window, pre-moderation of photos is turned on / off.

Moderation is separately activated for photos uploaded from folders, Instagram, emails and uploaded via the built-in web server.

It is highly recommended to moderate emails. There you can get more junk files, for example, logos embedded in the caption.

The first number shows how many photos are needed.

The second number indicates how many photos are in the print queue.

Using the slider, you can resize preview of photos.

To accept or reject photos, select the photos you need and then use the right-click menu or the buttons on the right side of the screen.



- approve photo



In this window, the first photo is automatically selected when there is no selection.

Hotkeys	
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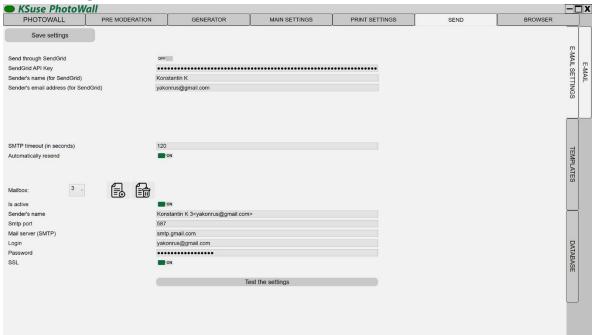
A – accept

R – reject

Remember to reject photos that you don't need. Only the number of photos necessary to complete the wall is loaded into pre-moderation.

Window "SEND"

Email Settings Window

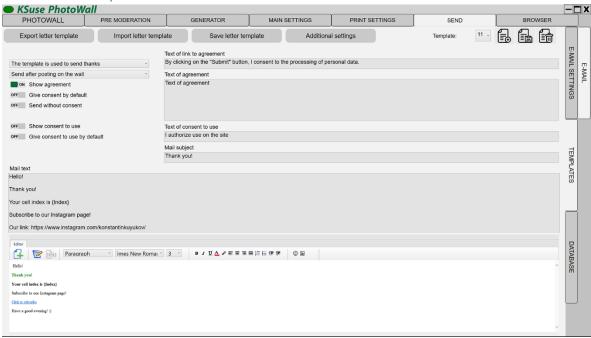


To send via SendGrid, you need to create an API key in your account and copy it to the program settings.

When entering the data of several mailboxes, the program will send letters in turn from each. In the absence of a license, sending is done from only one mailbox.

In the "Senders's name" field, it is possible to specify a display name and in square quotation type an email. The specified email must match the account on the mail server.

Windows "Templates"



It is necessary to fill in both text and html version of the email!

It is possible to obtain two consents from the user on the animation ordering web page. The first of these can be made mandatory.

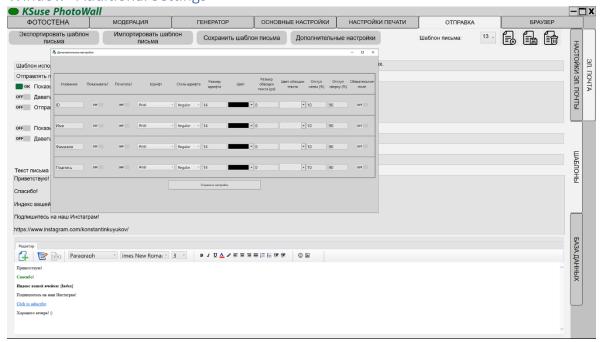
There are 4 types of email templates: Template is not used, Template is used to send animation, Template is used to send thanks, Template is used to notify about a win. The last two are used to send notifications if photos are received via email or from the online version (website) of the photo wall.

Saving a template with one of the last 3 types, automatically sets the "Template not used" type for the previously selected one with the same type.

If a template for sending animation is not selected, then letters will not be placed in the sending queue. Likewise, with the last two templates.

An email with thanks can be sent either when you receive a photo or when posted on the wall. In the second variant, the text {Index} in the email template is replaced with the cell index.

Window "Additional Settings"



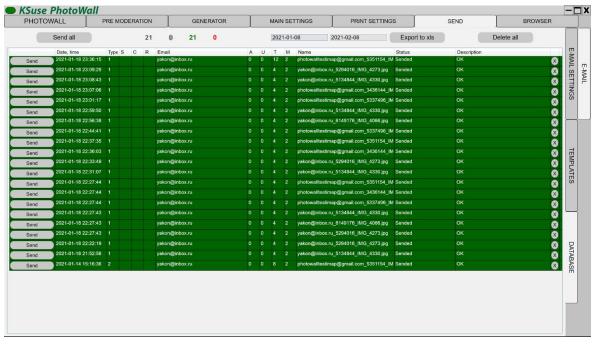
In this window, you can choose which additional data entry fields to display in the web gallery.

The collected data is contained in the exported xls file.

It is also possible to turn on printing of the entered data on photos choosing the position, font, and color of labels.

Additional fields can be renamed and made mandatory.

Database window



In this window, you can see the status of all sent letters in the selected date range and resend if necessary.

You can delete an error line by selecting and pressing the Delete key.

The width of the columns can be changed by moving the separators in the table header.

The "Send All" button starts the creation of the video and re-sends all emails for the specified date interval except those already sent.

In the table you can change the email address of the recipient and the number of the template.

"S" - wall ID

"C" - column number

"R" - row number

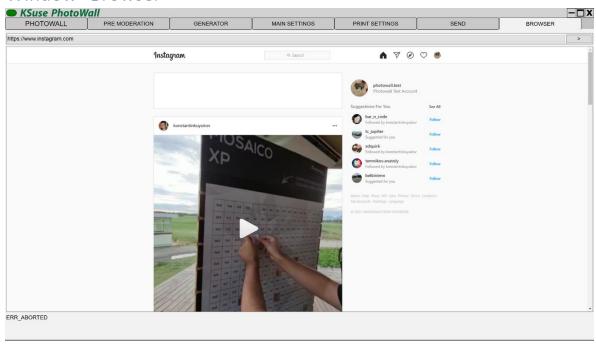
"A" - whether consent was given to the processing of personal data

"U" - was consent to the use of the video given

"T" - letter template number

"M" - mailbox number

Window "Browser"



This tab contains a built-in Chromium-based browser. It serves for authorization, confirmation and unblocking on Instagram.

Limitations of working with Instagram without authorization:

- Photos from only 16 recent posts
- Only the first photo from a multi post
- Only open accounts

There is an opportunity to log in to Instagram. **Attention! Don't use your main account! The account used in PhotoWall may be banned!**

Program activation

Attention! The program is tied to the computer. One license is valid for one computer.

License management is carried out through KSuse Manager.

Used libraries

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http://creativecommons.org/licenses/by/3.0/

System.Data.SQLite - https://system.data.sqlite.org

Microsoft - https://dotnet.microsoft.com/

The MIT License:

Newtonsoft.Json - https://www.newtonsoft.com/json

FluentFTP - https://github.com/robinrodricks/FluentFTP

HelixToolkit - https://github.com/helix-toolkit/helix-toolkit

HttpMultipartParser - https://github.com/Http-Multipart-Data-Parser/Http-Multipart-Data-Parser/
Parser

MailKit - http://www.mimekit.net/

MimeKit - http://www.mimekit.net/

Portable.BouncyCastle - https://www.bouncycastle.org/csharp/

SendGrid - https://sendgrid.com/

SharpZipLib - https://github.com/icsharpcode/SharpZipLib

starkbank-ecdsa - https://github.com/starkbank/ecdsa-dotnet

InstagramApiSharp - https://github.com/ramtinak/InstagramApiSharp

Apache License:

Magick.NET - https://github.com/dlemstra/Magick.NET

NPOI - https://github.com/tonyqus/npoi

Microsoft Public License (Ms-PL):

Extended.Wpf.Toolkit - https://github.com/xceedsoftware/wpftoolkit

BSD 3-Clause License:

NLog - https://nlog-project.org/

OpenCvSharp4 - https://github.com/shimat/opencvsharp

LGPL v3:

FFMPEG - https://www.ffmpeg.org/

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