九齊科技股份有限公司

Nyquest Technology Co., Ltd.

User Manual

Q-Fan

LED Fan Programmer

Version 1.8

Aug. 18, 2025

Table of Contents

1 Introduction

Q-Fan is Nyquest's brand new integrated LED Fan display function tool for NY4, NY5, NY5+, NY8 and NX1 series. The mainly purpose is to bring more convenience for customers developing their own product.

Q-Fan allows user to conveniently edit pictures and actions through simple graphical interface. It also provides import and export function of pictures, that would make product development process more efficiency. The built .bin file after compiled can be written to the demo board directly for making a demonstration.

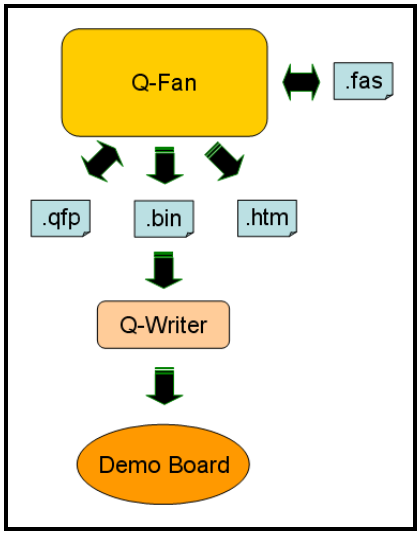
1.1 Getting Started

Please contact Nyquest Technology to acquire the latest *Q-Fan* program. To install *Q-Fan*, unzip the .zip file to a specific folder and then double-click on the .exe file in the folder to start the installation. Follow the instructions of the installation wizard to complete the installation.

System Requirements:

- A PC compiled with Pentium 1.3GHz or higher CPU, Windows 7/ 8/ 10.
- At least 1G SDRAM.
- At least 2G hardware space.
- A display card and monitor that support 1366x768 resolution or higher.
- NET Framework 4.8 installed.

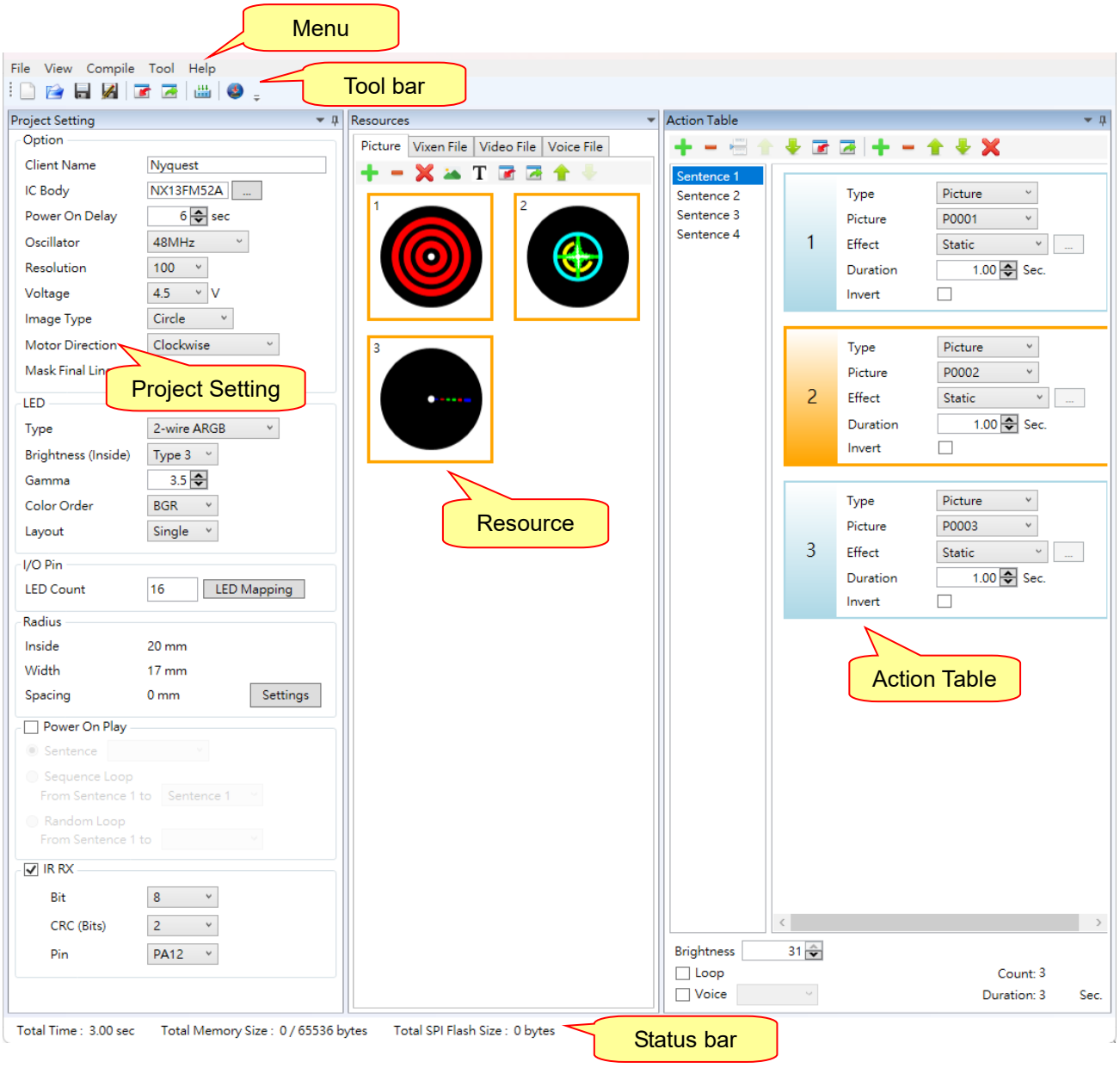
1.2 Process flow



Q-Fan File Format

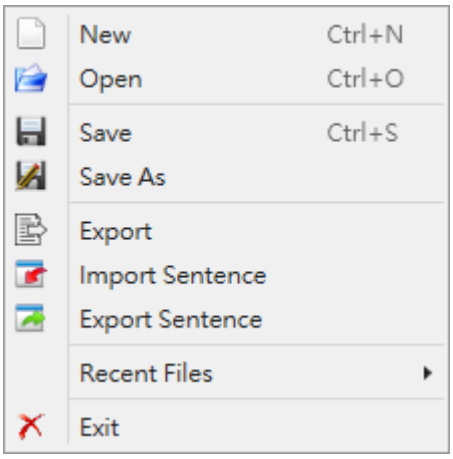
Extension	Description
.qfp	*Q-Fan* project file.
.fas	Import and export picture file.
.bin	A target binary file.
.htm	Checking list file.

2 The Main Interface of *Q-Fan*



2.1 Menu

2.1.1 File



New: Create new project.

Open: Open project.

Save: Save current project.

Save As: Save project as another name or path.

Export: Export the project and resource files to specified directory.

Import Sentence: Import the sentences from .csv file.

Export Sentence: Export the sentences of current project as .csv file.

Recent Files: Open recently accessed project.

Exit: Exit *Q-Fan*.

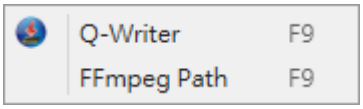
2.1.2 View

Default Layout: Restore the default layout configuration.

2.1.3 Compile

Build: This feature is for compiling current *Q-Fan* file into binary file.

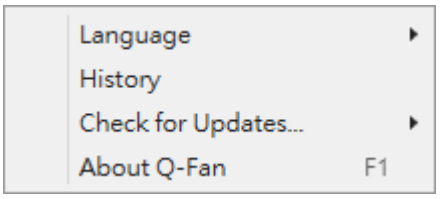
2.1.4 Tool



Q-Writer: *Q-Writer* is the software which enables user to download .bin file to the Flash Demo Board for verification.

FFmpeg* Path**：Specify ***FFmpeg path.

2.1.5 Help



Language: Switch the language of *Q-Fan*.

History: See the revision history of *Q-Fan.*

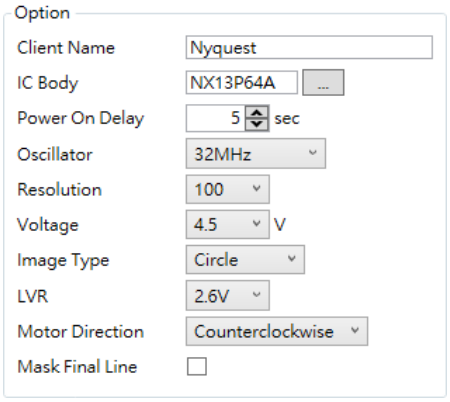
Check for Updates…: Check whether there is the latest *Q-Fan, NYASM* version, this feature must be connected to the network.

About Q-Fan: Show current *Q-Fan* version and the contact information for technical support.

2.2 Project Setting

The panel is designed for all project setting, when create a new *Q-Fan* file, system has specific default values, but user can modify it according to actual demand.

2.2.1 Option

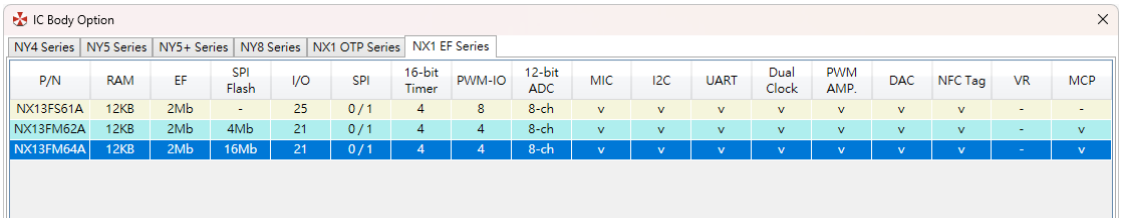


2.2.1.1 Client Name

The name of user or company is shown here. The compilation will not be completed without filling out client name. (This is for the protection of copyright of the programmer)

2.2.1.2 IC Body

The IC body is selected here. By left-clicking on , window of setting will show up for selection.



P/N	RAM	EF	SPI Flash	I/O	SPI	16-bit Timer	PWM-IO	12-bit ADC	MIC	I2C	UART	Dual Clock	PWM AMP.	DAC	NFC Tag	VR	MCP
NX13FS61A	12KB	2Mb	-	25	0 / 1	4	8	8-ch	v	v	v	v	v	v	v	-	-
NX13FM62A	12KB	2Mb	4Mb	21	0 / 1	4	4	8-ch	v	v	v	v	v	v	v	-	v
NX13FM64A	12KB	2Mb	16Mb	21	0 / 1	4	4	8-ch	v	v	v	v	v	v	v	-	v

2.2.1.3 Power On Delay

Set the delay time after power on. It allows that motor rotational speed reaches a certain speed then starts acting. The time range is from 1 to 8 seconds.

2.2.1.4 Oscillator

Set the oscillator of IC body. In NY5 / NY5+ series, user can select 1MHz or 2MHz. NY4 series is fixed as 1MHz. NY8 series is fixed as 20MHz / 4T. NX1 OPT series is fixed as 32MHz. NYX1 EF series is fixed as 48MHz / 4T.

2.2.1.5 Resolution

User can choose 128 or 256 as picture Resolution; i.e. how many LED points can be displayed in a circle. Resolution is a measure of the clarity of a picture. Higher Resolution offers better picture performance and Resolution is relative to IC Oscillator.

Note: The resolution of NY4 series is fixed as 128, NX1 series is fixed as 100.

2.2.1.6 Voltage

Set the operating voltage of IC. NY4 / NY5 / NY5+ can select 3.0V or 4.5V, NY8 is fixed as 5.0V, NX1 is fixed as 4.5V.

2.2.1.7 Image Type

Set the display mode of the picture, you can choose Circle and Rectangle.

2.2.1.8 LVR

Threshold of LVR Voltage.

Note: Only NX1 OTP supports this setting.

2.2.1.9 Motor Direction

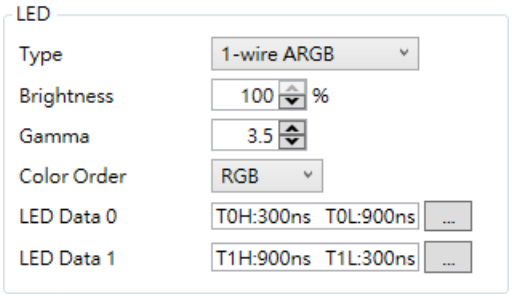
The Motor Direction function is used for setting the motor rotary direction to be clockwise or counterclockwise. User must set direction according to actual motor application circuit.

Note: When setting direction is not identical to actual motor direction, it may cause the LED display direction disordered.

2.2.1.10 Mask Final Line

Ignore the display of the last data. When the motor speed is unstable, using effects like Rotational or Flowing may create a sudden gap between the two images. Ignoring the last data of the previous image can alleviate this abruptness. However, this approach may also cause unexpected effects due to factors such as image color and contrast, so it is still necessary to refer to the actual results. This is not a universal setting.

2.2.2 LED



2.2.2.1 Type

Set the current project as the Mono, RGB, or Addressable RGB mode. The supported modes are various for the different IC series as shown below.

IC	Support LED Type		
NY4	Mono		
NY5	RGB		
NY8	Mono		
NY5+	Mono	NY5+	
NX1	1-Wire ARGB	2-Wire ARGB	RGB (ICNDS2038S)

2.2.2.2 Brightness

Set the brightness of the project.

Note: Only NX1 supports this setting.

2.2.2.3 Gamma

Set the value of the gamma to perform gamma correction on brightness and contrast.

Note: Only NX1 supports this setting.

2.2.2.4 Color Order

Set the RGB order of LED.

Note: Only NX1 supports this setting.

2.2.2.5 LED Data 0

Set the Data 0 of LED String.

Note: Only NX1 supports this setting.

2.2.2.6 LED Data 1

Set the Data 1 of LED String.

Note: Only NX1 supports this setting.

2.2.3 I/O Pin

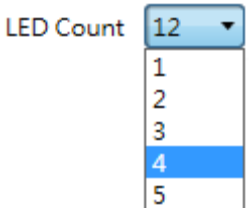
Item	Description
LED Count	Set the LED count. The minimum is one, and the maximum is determined by the IC Body settings.
LED Mapping	Set the corresponding I/O pin by needs, the I/O pins include the motor detect pin which makes the PCB layout be performed more flexibly. The LED close to center is number one, and the LED number is getting bigger toward the rim (LED [In -> Out]).

2.2.3.1 Mono

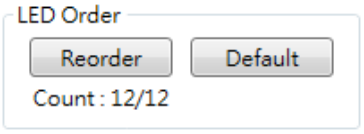
Since one I/O pin has to be set as Motor Detect Pin, the maximum LED count is shown below.

IC Series	I/O	MAX LED Count
NY4B	8	7
NY5A	8	7
NY5B	15	14
NY5C	20	19
	24	23
NY5+	8	7
	16	15
	20	19
NY8A053D/E	12	11
NY8A054D/E	14	13

User can choose the corresponding count for LED Count in drop-down list.

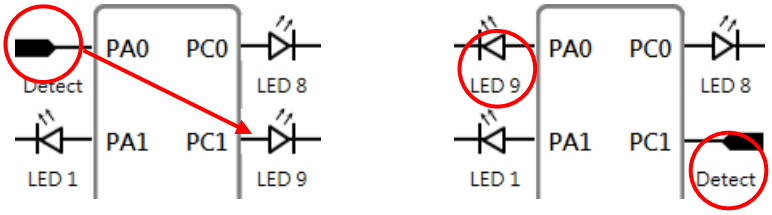


User can use the LED Order to rearrange the LED and Detect Pin.



Item	Description
Reorder	Arrange the Detect Pin and LED in sequence according to the position where the mouse left-clicking.
Default	Arrange the Detect Pin and LED in the order of the Pins.

Use drag to set the corresponding pins of the LED / Detect pin.

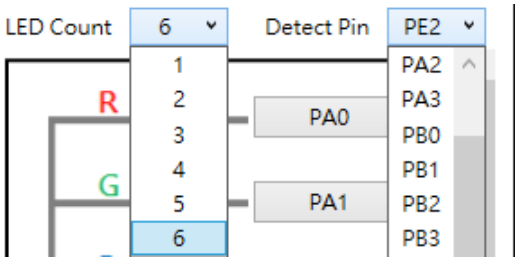


2.2.3.2 RGB

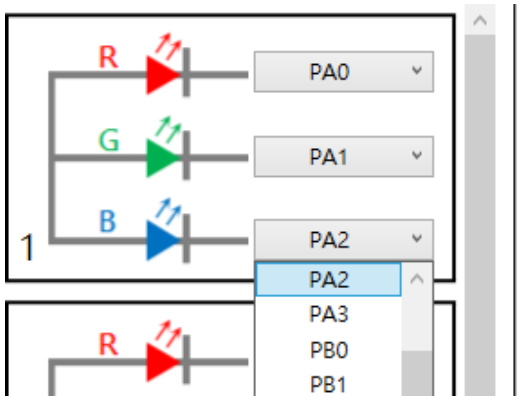
Since one I/O pin has to be set as Motor Detect Pin, the maximum LED count is shown below.

IC Series	I/O	MAX LED Count
NY5+	8	7
	16	15
	20	19

Choose the corresponding count for LED Count and Detect Pin in drop-down list.

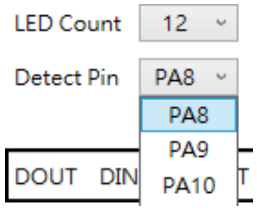


Use the drop-down list to set the corresponding pin of the LED pin

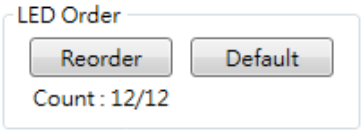


2.2.3.3 1-Wire ARGB

Choose the corresponding count for LED Count and Detect Pin in drop-down list.

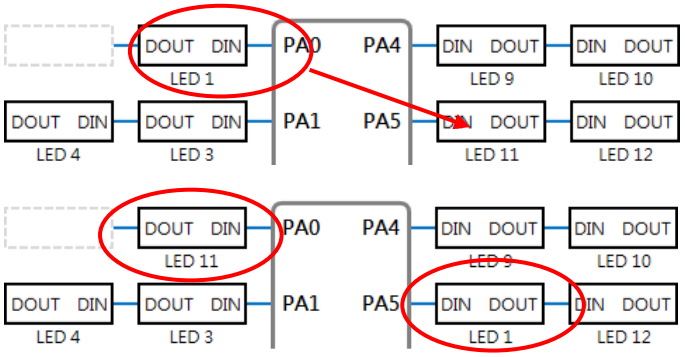


User can use the LED Order to rearrange the LED and Detect Pin.



Item	Description
Reorder	Arrange the Detect Pin and LED in sequence according to the position where the mouse left-clicking.
Default	Arrange the Detect Pin and LED in the order of the Pins.

Use drag to set the corresponding pins of the LED pin.



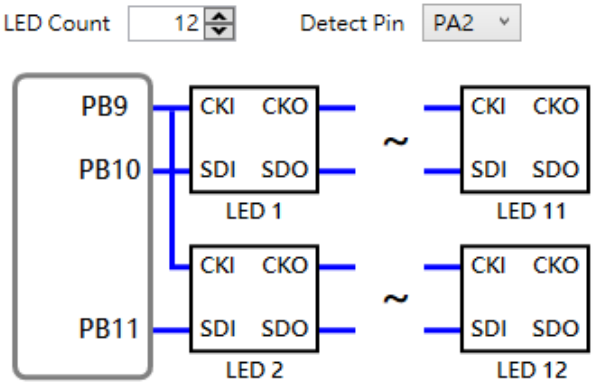
I/O pins for all series are shown below.

NYX12/13PxxA (32 I/O)			
PA0	PA1	PA2	PA3
PA4	PA5	PA6	PA7
Only the I/O listed above can be used for LED, Detect Pin is not restricted			
PA8	PA9	PA10	PA11
PA12	PA13	PA14	PA15
PB0	PB1	PB2	PB3
PB4	PB5	PB6	PB7
PB8	PB9	PB10	PB11
PB12	PB13	PB14	PB15
NX12/13MxxA (16 I/O)			
PA2	PA3	PA4	PA5
PA6	PA7	-	-
Only the I/O listed above can be used for LED, Detect Pin is not restricted			

PA8	PA9	PA10	PA11
PA12	PA13	PA14	PA15
PB6	PB7	-	-
NX13FSxxA（25 I/O）			
PA4	PA5	PA6	PA7
Only the I/O listed above can be used for LED, Detect Pin is fixed to PA15, PA3 and PA14 must be connected.			
NX13FMxxA（21 I/O）			
PA4	PA5	PA6	PA7
Only the I/O listed above can be used for LED, Detect Pin is fixed to PA15, PA3 and PA14 must be connected.			

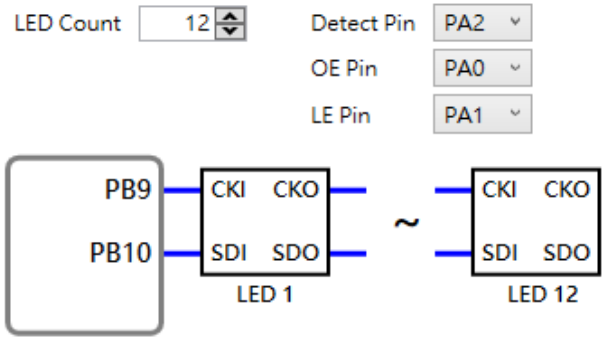
Note: If the I/O pin is selected repeatedly, there will be error notice when user compiles file.

2.2.3.4 2-Wire ARGB



Set the corresponding pins of LED Count and Detect pin. Be sure to connect the LED according to the diagram.

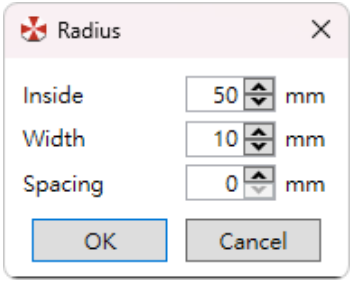
2.2.3.5 RGB (ICND2038S)



Set the corresponding pins of LED Count, Detect pin, OE pin, and LE pin. Be sure to connect the LEDs according to the diagram.

2.2.4 Radius

The Radius function sets the relevant parameters that are used to adjust the arrangement of LED space. It only changes the Resource Panel on the display.

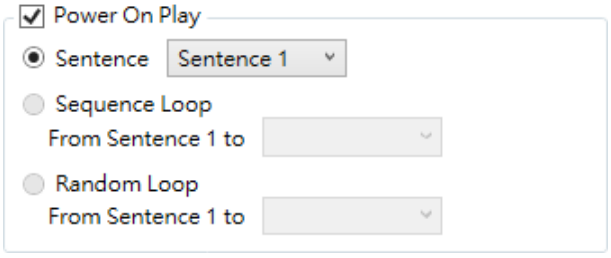


Item	Description
Inside	The radius of the inner LED round, the unit of its length is millimeter (mm).
Width	The width of the LED, the unit of its length is millimeter (mm).
Spacing	The spacing between each LED, the unit of its length is millimeter (mm).

Note: The setting is only for shows the vivid visual effect.

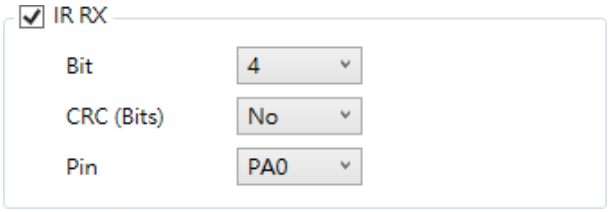
2.2.5 Power On Play

The settings will decide to trigger the action of Power-On-Play.



Item	Description
Sentence	Play Sentence N on power on.
Sentence Loop	On power on, Sentence 1~ N will play in a loop.
Random Loop	On power on, Sentence 1~ N will be played randomly in a loop.

2.2.6 IR RX

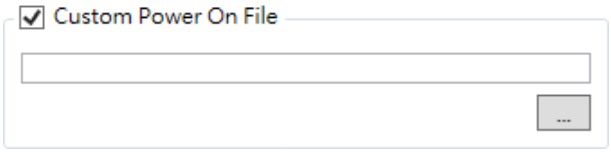


The infrared receiver can set a single pin to receive IR signals from exterior then trigger different sentences by the signals.

Item	Description
Bit (IR data length)	Set the length of IR encoded data.
IR CRC (Cyclic Redundancy Check)	Set the bit length of IR CRC, the default is “No”
Pin (IR receiver pin)	Set the IR receiver pin.

Note: Only NY4 / NY5 / NY5+ / NX1 support this setting.

2.2.7 Custom Power On File



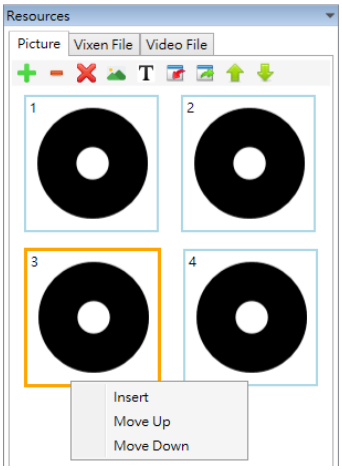
The user can add a customized .asm file and execute it in the Power On path. The program will start playing graphics after the content of the .asm has been executed.

Note: Only NY5 / NY5+ support this setting.

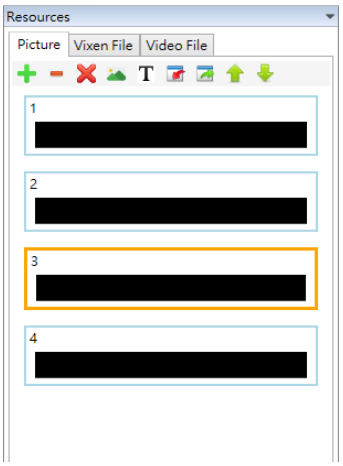
2.3 Resource

2.3.1 Picture

The list of all pictures of current project, each picture is displayed as a thumbnail. Mouse double click the pictures will enter Picture Editing Windowl. Only images used in Action Table will occupy ROM Size.



Circle



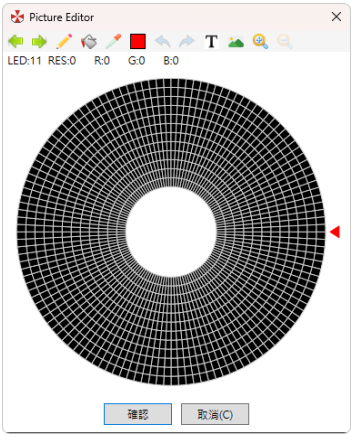
Rectangle

Item	Description
Add	Create a blank picture.
Remove	Delete the selected picture.
Remove All	Clear all pictures.
Import Image	Import the graphic file that supports the following file types: .bmp, .ico, .jpg, and .png.
Import Text	Open Import Text window .
Import	Import a .fas file.
Export	Export the selected picture as a .fas file.
Move Up	Move up the selected picture.
Move Down	Move down the selected picture.

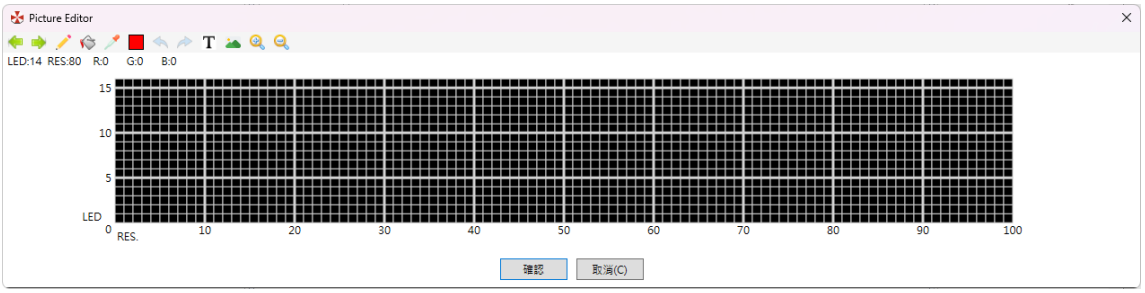
2.3.1.1 Picture Editor

The zone provides a convenient way for editing graphic with drawing tools. A block of each LED is representative of the rotated position. User can edit these LED blocks with left-click mouse, or press and drag to color the region continuously. Each LED is showed as a colored block independently. User can right-click mouse to cancel the colored blocks, or press and drag right mouse to cancel the colored block continuously. User have to set the starting point according to the motor detect position.

◆ **Circle**



◆ **Rectangle**

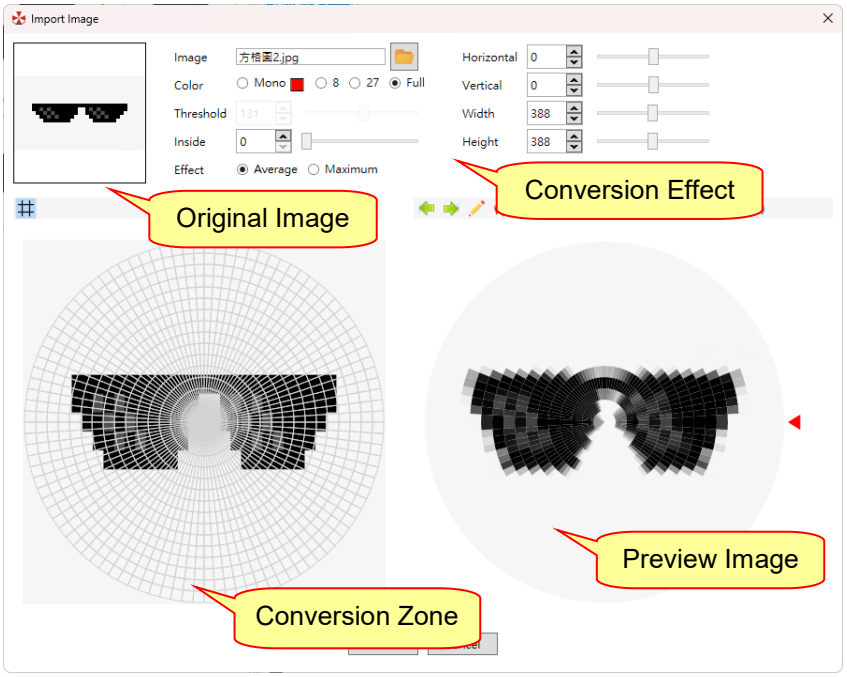


Item	Description
Shift Up	Move the graph counterclockwise. The graphic in the Square Editing Zone will move to the left.
Shift Down	Move the graph clockwise. The graphic in the Square Editing Zone will move to the right.
Pen	Fill up to color the mouse click block of graphic.
Pen Bucket	Fill up to color the mouse click zone of graphic.
Pipette	Choose the color of the mouse click block of graphic.
Color	Choose the color. User can set 8 colors, 26 colors or full colors according to the different resolutions and chip.
Undo	Recover the previous step during editing.
Redo	Cancel the previous Undo action during editing.
Zoom In	Enlarge the grids for editing easily.
Zoom Out	Narrow the grids to expand the visible region.

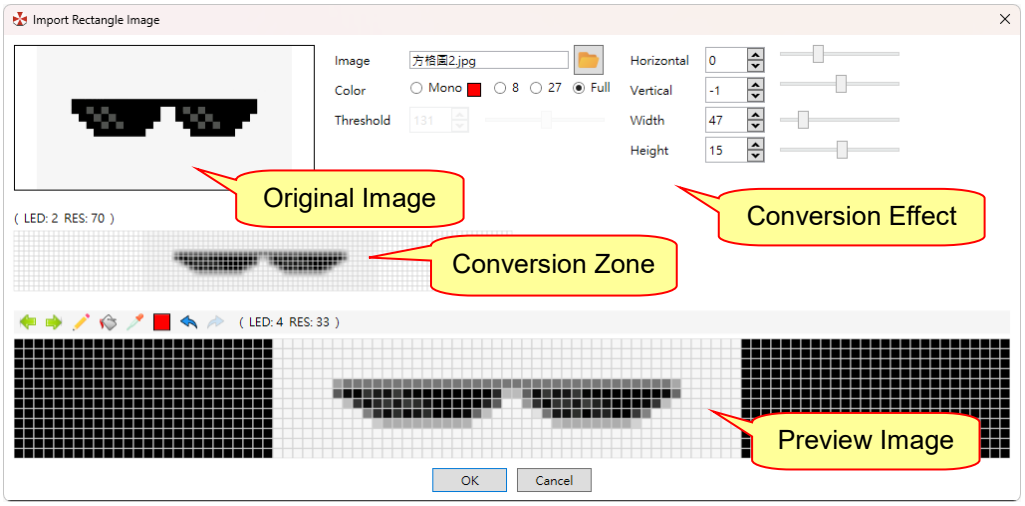
2.3.1.2 Import Image

User can convert picture into graphic data. First open the original image file, then adjusts the color, position, size and other parameters, draws the original image file to the conversion zone, and finally converts it into graphic data. The conversion effect will produce a certain degree of distortion due to the relationship between the resolution and the number of LEDs. To achieve a better conversion effect, in addition to the original image file as simple as possible, it is also necessary to use a higher resolution and increase the number of LEDs.

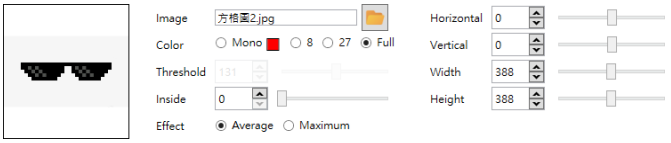
◆ **Circle**



◆ Rectangle

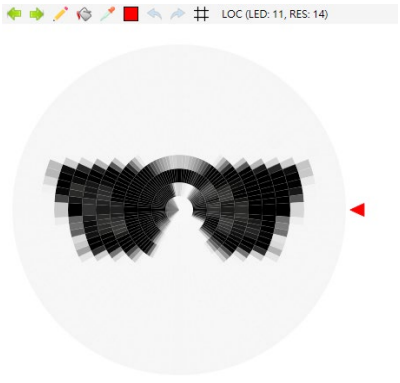


◆ Conversion Effect



Item	Description
Shift Up	Move the graph counterclockwise. The graphic in the Square Editing Zone will move to the left.
Shift Down	Move the graph clockwise. The graphic in the Square Editing Zone will move to the right.
Pen	Fill up to color the mouse click block of graphic.
Pen Bucket	Fill up to color the mouse click zone of graphic.
Pipette	Choose the color of the mouse click block of graphic.
Color	Choose the color. User can set 8 colors, 26 colors or full colors according to the different resolutions and chip.
Undo	Recover the previous step during editing.
Redo	Cancel the previous Undo action during editing.

◆ Preview Image



Item	Description
Shift Up	Move the graph counterclockwise. The graphic in the Square Editing Zone will move to the left.
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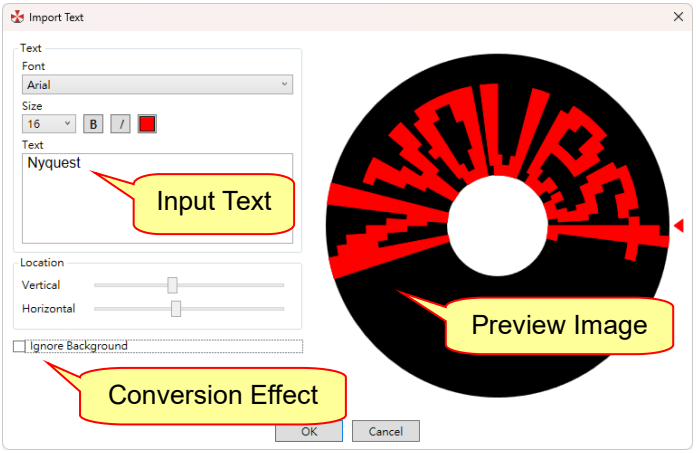
Pen Bucket	Fill up to color the mouse click zone of graphic.
Pipette	Choose the color of the mouse click block of graphic.
Color	Choose the color. User can set 8 colors, 26 colors or full colors according to the different resolutions and chip.
Undo	Recover the previous step during editing.
Redo	Cancel the previous Undo action during editing.
Grid	Turns the grid on or off. Only supported for Circuit mode.

Input Text

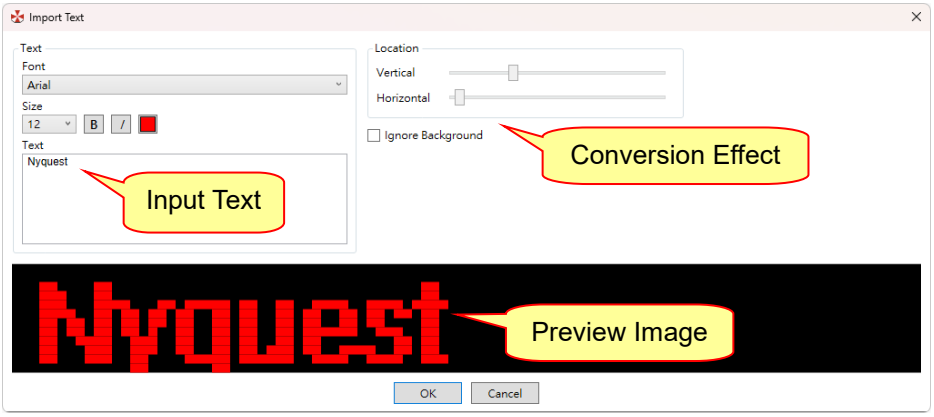
2.3.1.3 Import Text

User can design picture by using Text editor which is a tool for simply converting text into a picture.

◆ **Circle**

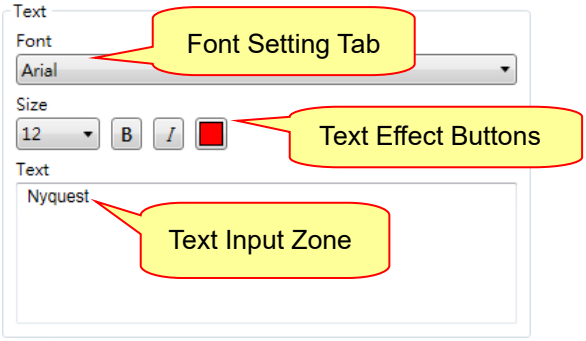


◆ **Rectangle**

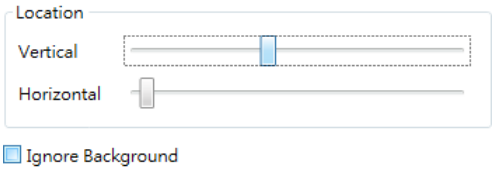


◆ **Input Text**

User can enter text in Text Editing Zone and set the font, font size, italics, and bold. After setting, User can preview the converted picture in Picture Preview Zone.



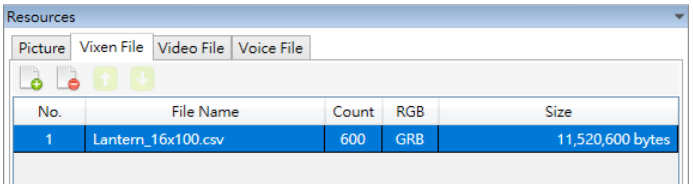
◆ **Conversion Effect**



Item	Description
Vertical	Move the graph vertically.
Horizontal	Move the graph horizontally.
Ignore Background	Ignore the background pattern.

2.3.2 Vixen File

Users can use ***Vixen Lights*** to edit a lighting effect and add the .csv file here.



Item	Description
Add File	Add files.
Remove File	Remove the selected files.
Move Up	Move up the selected file.
Move Down	Move down the selected file.
RGB	Set the RGB order of the file.

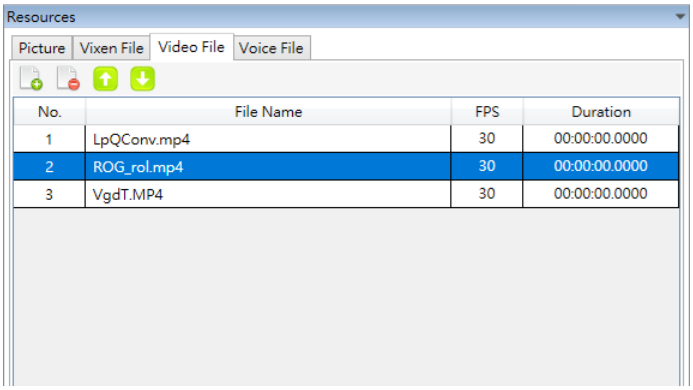
Note:

1. Only NX1 supports this setting.

2. LED count must match .csv to be added

2.3.3 Video File

Add .mp4 files. Make sure the FFmpeg path is valid.



Item	Description
Add File	Add files.
Remove File	Remove the selected files.
Move Up	Move up the selected file.
Move Down	Move down the selected file.
File Name	Mouse left button double-click to change the file.

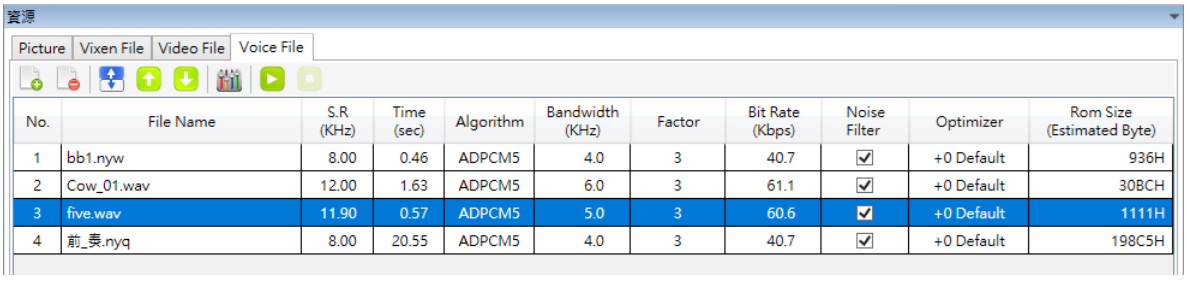
Note:

1. Only NX1 supports this setting.

2. Too few LED counts will result in poor display effects.

2.3.4 Voice File

Add voice files. Supported filename extensions are wav, .nyq and .nyw.



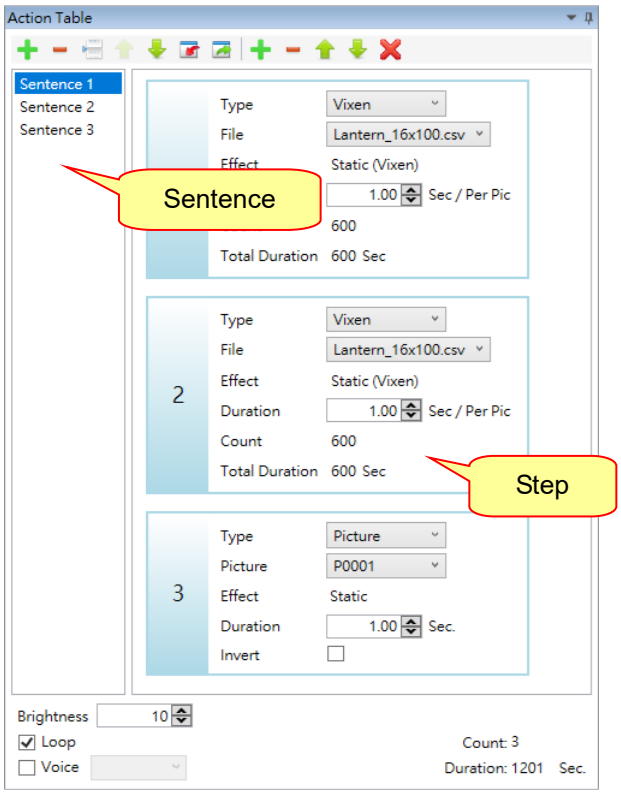
Item	Description
Add File	Add files.
Remove File	Remove the selected files.
Move Up	Move up the selected file.
Move Down	Move down the selected file.
File Name	Mouse left button double-click to change the file.
Factor	Selection compression rate of the algorithm.

Noise Filter	Choose whether or not to enable noise filter function to lower background noise.
Optimizer	Optimize the sound according to the setting value. Sound optimization function can adjust the voice to enhance contrast (sharp), or make the sound smoother.
ROM Size	The estimated ROM Size information.

Note: Only NX1 supports this setting.

2.4 Action Table

The Sentences editor provides the action list composed by pictures and corresponding actions. User can edit the action list by clicking columns.

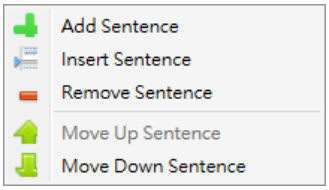


Item	Description
Add Sentence	Create a new Sentence.
Remove Sentence	Delete the selected Sentences.
Insert Sentence	Insert a new Sentence.
Move Up Sentence	Move up the selected Sentence.
Move Down Sentence	Move down the selected Sentence.
Import Sentence	Import a .csv file. Only certain formats are supported. Please refer to the exported Sentence file content.
Export Sentence	Export all sentences to .csv.
Add Step	Create a new Step.
Remove Step	Delete the selected Step.

Move Up Step	Move up the selected Step.
Move Down Step	Move down the selected Step.
Remove All	Remove all steps in the Sentence.
Loop	Set the loop of the sentence.
Voice	Set the voice of the sentence. ***Note: Only NX1 supports.***
Brightness	Set the brightness of the sentence. ***Note: Only 2-Wire ARGB supports.***
Count	The number of steps in the sentence.
Duration	The duration of the sentence.

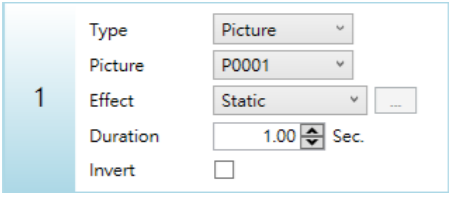
2.4.1 Sentence

The Sentence column shows the sentence numbers the steps belong to. Every sentence, which may contain several steps, can specify which picture to display. Users can add or delete Sentence from the toolbar, or use the right-click menu to edit.



2.4.2 Step

2.4.2.1 Picture



Item	Description
Picture	Select serial numbers of the picture optionally.
Effect	Set the effects of sentences by selecting effects of static, twinkle, rotational, flowing, circle stepping and delay.
Duration	Set Duration which means how long the action will last.
Invert	Set the action inverting-displayed via the Invert column.

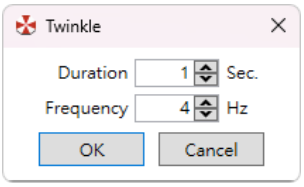
◆ **Static**

The action shows picture as static appearance. User can set Duration which means how long the action will last. The range of Duration is shown below.

Resolution	Duration (Sec)
128	0.1 ~ 120
256	0.1 ~ 240
100 (NX1 Series)	0.1 ~ 60

◆ **Twinkle**

The action shows picture dynamically as flashing appearance.



For setting, user can set Duration and Frequency. The ranges of Duration and Frequency are shown below.

Resolution	Duration (Sec)	Frequency (Hz)
128	0.1 ~ 120	0.1 ~ 15
256	0.1 ~ 240	0.1 ~ 30
100 (NX1 Series)	0.1 ~ 60	0.1 ~ 15

Ex.

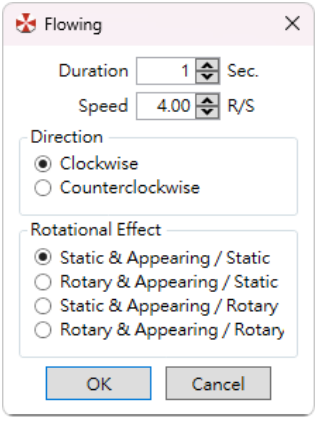
Duration = 4 sec

Frequency = 2 Hz

The picture flashes two times one second. The picture becomes bright and dark every 0.5 sec, and the action will last for 4 seconds. Thus, it totally flashes 8 times.

◆ **Flowing**

The action shows picture dynamically as gradual appearance or disappearance to cover the previous picture.



In this menu, user can set Duration and Speed. The ranges of Duration and Speed are shown below.

Resolution	Duration (Sec)	Speed (R/S)
128	0.1 ~ 120	0.01 ~ 25
256	0.1 ~ 240	0.01 ~ 25
100 (NX1 Series)	0.1 ~ 60	0.01 ~ 25

Direction is the rotary direction of picture. It can be set in Clockwise or Counterclockwise.Flowing

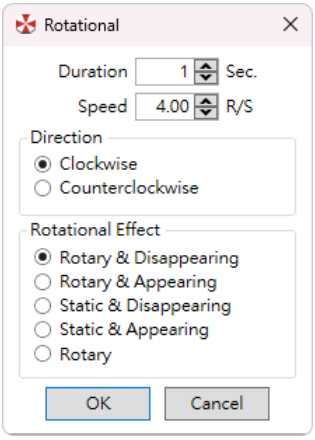
Effect is shown below.

Flowing Effect	Description
Static & Appearing / Static	The picture gradually appears from starting position and stays static, meanwhile, the previous picture is gradually covered.
Rotary & Appearing / Static	The picture rotates from starting position and then gradually appears, meanwhile, the previous picture is gradually covered.
Static & Appearing / Rotary	The picture gradually appears from starting position and stays static, meanwhile, the previous picture rotates to the starting position and gradually disappears.
Rotary & Appearing / Rotary	The picture rotates from starting position and then gradually appears, meanwhile, the previous picture rotates to the starting position and gradually disappears.

Note: Please refer to Appendix 4.1 for the detail setting of Duration and Speed.

◆ Rotational

The action shows picture dynamically as gradual appearance or disappearance.



In this menu, user can set Duration and Speed. The ranges of Duration and Speed are shown below.

Resolution	Duration (Sec)	Speed (R/S)
128	0.1 ~ 120	0.01 ~ 25
256	0.1 ~ 240	0.01 ~ 25
100 (NX1 Series)	0.1 ~ 60	0.01 ~ 25

Direction is the rotary direction of picture. It can be set in Clockwise or Counterclockwise. Rotational Effect is shown below.

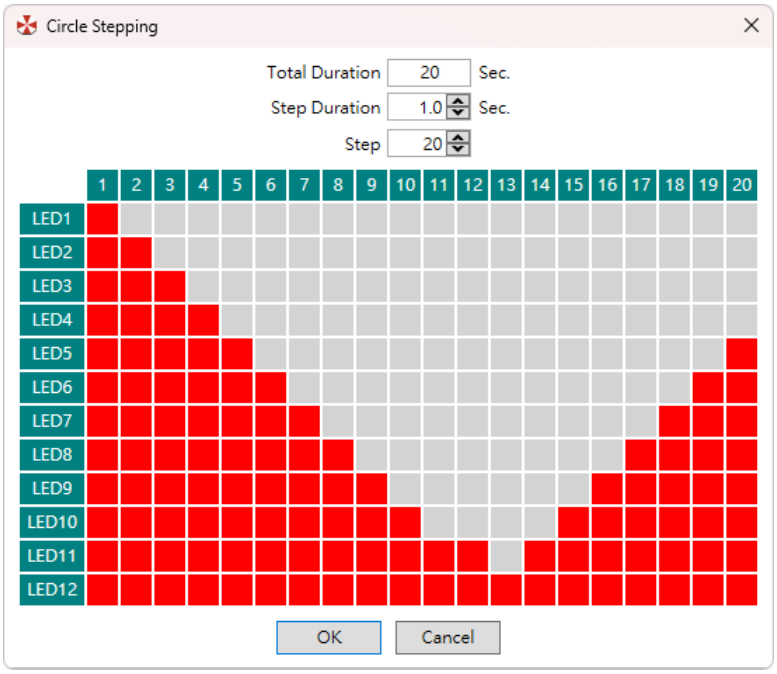
Rotational Effect	Description
Rotary & Disappearing	The picture rotates to the starting position and then gradually disappears. (Usually cooperate with the previous picture.)
Rotary & Appearing	The picture rotates from starting position and then gradually appears. (The direction for English words should be counterclockwise)

Static & Disappearing	The picture stays static and then gradually disappears from the starting position. (Usually cooperate with the previous picture.)
Static & Appearing	The picture stays static and then gradually appears from the starting position. (The direction for English words should be clockwise)
Rotary	The picture rotates from starting position. (According to the direction setting)

Note: Please refer to Appendix 4.1 for the detail setting of Duration and Speed.

◆ **Circle Stepping**

The action shows picture dynamically as stepping appearance or disappearance of different circle of LED.



In this menu, user can set Step Duration and Step. The ranges of Step and Step Duration are shown below.

Step	Step Duration (Sec)
1 ~ 256	0.1 ~ 20

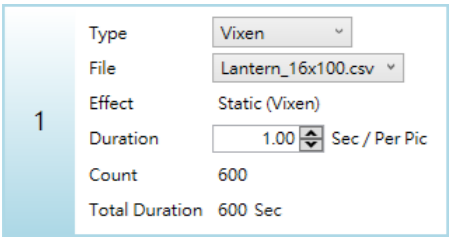
Total Duration = Step Duration x Step.

In the left of Step table, it indicates the position of LEDs. In the above, the stepping sequence is indicated. User can edit these LED blocks with the mouse to left-click, or click and drag the region. Each LED is showed as a colored block independently. To cancel the selection, left click or drag the colored block with the mouse. In this way user can make LEDs appeared or disappeared gradually from inside to outside or from outside to inside.

As shown above, the 1st step lights up all LEDs, the 2nd step turns off LED1, the 3rd step turns off LED1 and LED2 until the 12th step only remains LED12 is still on. All pictures will gradually

disappear in 20 seconds from inside to outside.

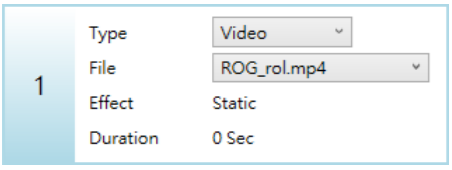
2.4.2.2 Vixen



Item	Description
File	Select the Vixen file.
Duration	Set duration of every image in the Vixen.
Count	The number of picture in the Vixen.

Note: Only NX1 supports this setting.

2.4.2.3 Video

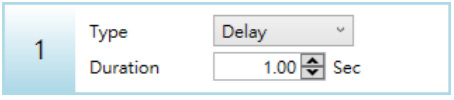


Item	Description
File	Select the Video file.
Duration	Set Duration of every image in the Video.

Note: Only NX1 supports this setting.

2.4.2.4 Delay

The action shows a blank picture. User can set Duration. The range of Duration is shown below.



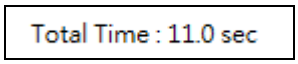
Resolution	Duration (Sec)
128	0.1 ~ 120
256	0.1 ~ 240
100 (NX1 Series)	0.1 ~ 60

Note: Inserting Delay between two actions, it will display a blank picture until the duration of Delay ends then continue to the next action.

2.5 Status Bar

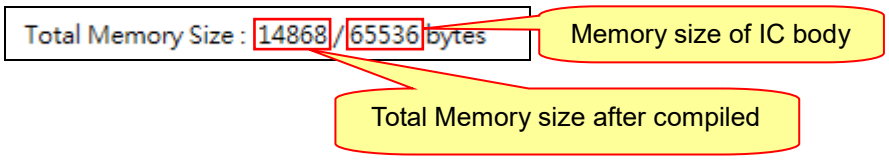
Status bar shows current project information, including Time and ROM size.

Total Time: The duration time of all actions.

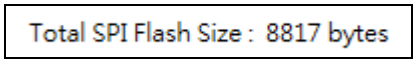


Note: Please refer to

Total Memory Size: The size is the used Memory space after compiled.



Total SPI Flash Size: The size is the used SPI Flash space after compiled, the unit is Bytes.



3 How to Release Code

After finishing a *Q-Fan* project, please follow the instructions in this chapter to release the code.

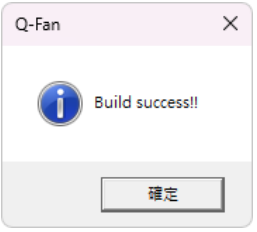
3.1 Saving the Project

By selecting [Save] from the [File] menu or by clicking the [Save] button on the toolbar, the current *Q-Fan* project will be saved. Choose [Save As…] if in need of saving the project with a different name and/or to a different location. Names of *Q-Fan* project files will have the **.qfp** extension.

Note: Due to Q-Fan does not provide the auto-save function, please save the undone project frequently in order to avoid unexpected Windows system crash or power failure causing data missing.

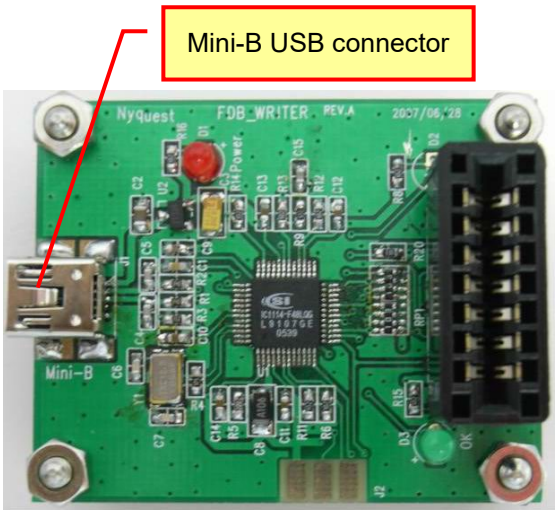
3.2 Building up the .bin File

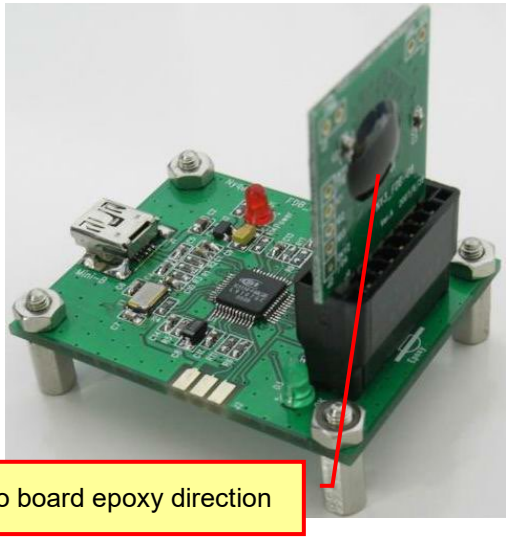
By selecting [Build] from the [Compile] menu or by clicking the [Build] button on the toolbar, the compiling process will start. *Q-Fan* will check all the settings and options first. If there are no errors, the target file (.bin) and checking list file (.htm) will be generated. These two files will be put in the same folder as the project file (.qfp) folder. If the compiling is successfully completed, a dialog box that says “Build success” will pop up. (See the right figure)



3.3 Demonstration

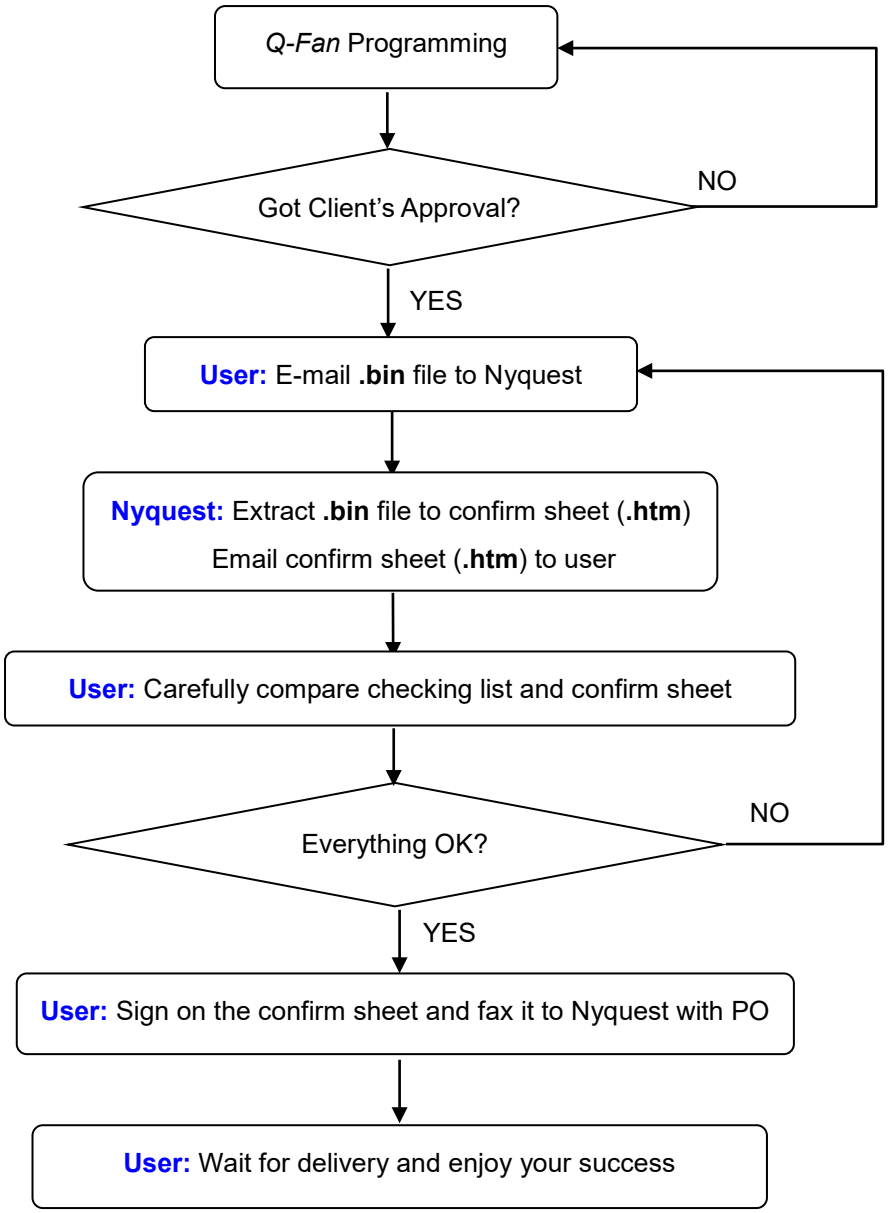
To make a demonstration, please write the target file (.bin) into NY4_FDB demo board or NY5_FDB demo board by Nyquest *FDB_Writer* with *Q_Writer* provided by Nyquest. To launch *Q-Writer* software, User can simply select [Q-Writer] from the [Tools] menu.





3.4 New Code Release Flow

When the client approves of the project, a target file (.bin) and checking list (.htm) will be generated after *Q-Fan* finishing the compiling process. Please send the .bin file to Nyquest or Nyquest's agent. As Nyquest receives the file, Nyquest would offer a confirm sheet to the client for double checking, for example, a confirm sheet named "NX13P64A-XXXX.htm" (XXXX is the code numbers provided by Nyquest). After a careful and thorough review, please send the confirm sheet with signatures via fax machine along with official PO to Nyquest. Nyquest will start IC mask production immediately. All our clients need to do is wait for our delivery and enjoy success. The complete flowchart is shown below:



4 Appendix

4.1 Speed Table of Rotational and Flowing

When setting Speed parameter of Rotational and Flowing mode, the difference between actual motor speed and program default speed may lead to display deviation. If actual rotational motor speed is lower than default rotational speed, picture refresh speed will be slightly slower than the setting and will lead to a slower display. If actual motor rotational speed is higher than default rotational speed, picture refresh speed will be slightly faster than the setting and will lead to a faster display. Therefore, the setting Duration will be different from the actual required duration that completes all the dynamic effects.

Note: The default motor rotational speed is 3500 RPM.

Resolution = 128			
Speed (R/S)	Duration (S)		
	RPM = 3000	RPM = 3500 (Default)	RPM = 4000
0.0100	116.1	99.5	87.1
0.0110	105.8	90.7	79.3
0.0125	92.9	79.6	69.7
0.0141	82.6	70.8	61.9
0.0167	69.7	59.7	52.2
0.0196	59.3	50.9	44.5
0.025	46.4	39.8	34.8
0.028	41.3	35.4	31.0
0.032	36.1	31.0	27.1
0.041	28.4	24.3	21.3
0.050	23.2	19.9	17.4
0.064	18.1	15.5	13.5
0.09	12.9	11.1	9.7
0.11	10.3	8.8	7.7
0.15	7.7	6.6	5.8
0.22	5.2	4.4	3.9
0.45	2.6	2.2	1.9
0.89	1.3	1.1	1.0
1.3	0.9	0.7	0.6
1.7	0.7	0.6	0.5
2.6	0.4	0.4	0.3
3.4	0.3	0.3	0.3
4.8	0.2	0.2	0.2
9.7	0.1	0.1	0.1

Resolution = 256			
Speed (R/S)	Duration (S)		
	RPM = 3000	RPM = 3500 (Default)	RPM = 4000
0.0103	113.1	96.9	84.8
0.0113	102.8	88.1	77.1
0.0141	82.2	70.5	61.7
0.0162	72.0	61.7	54.0
0.020	56.5	48.5	42.4
0.025	46.3	39.7	34.7
0.028	41.1	35.2	30.8
0.032	36.0	30.8	27.0
0.037	30.8	26.4	23.1
0.045	25.7	22.0	19.3
0.056	20.6	17.6	15.4
0.07	15.4	13.2	11.6
0.1	10.3	8.8	7.7
0.2	5.1	4.4	3.9
0.4	2.6	2.2	1.9
0.6	1.7	1.5	1.3
0.8	1.3	1.1	1.0
1.1	1.0	0.9	0.8
1.3	0.9	0.7	0.6
1.7	0.7	0.6	0.5
2.0	0.6	0.5	0.4
2.4	0.5	0.4	0.4
3.2	0.4	0.3	0.3
4.8	0.2	0.2	0.2
9.7	0.1	0.1	0.1

Ex.

For editing Speed parameter and setting Duration in Flowing.

Conditions: Resolution = 128, RPM = 3500, Speed = 0.22 (R/S). According to these conditions, we can find Duration = 4.4 seconds in Table.

a) Set Duration = 5.0 seconds, it means that action will show picture as static appearance for 0.6 seconds after picture has renewed.

b) Set Duration = 3.0 seconds, it means that action will jump to next while picture is being renewed for 3.0 seconds.

Revision History

Version	Date	Description	Modified Page
1.8	2025/8/31	1. Update Introduction. 2. Update The Main Interface of *Q-Fan*. 3. Update Menu. 4. Update Project Setting. 5. Update Resource 6. Update Action Table. 7. Update Building up the .bin file.	3 4 5, 6 6 ~ 14 14 ~ 20 21 ~ 26 28