joy-it RB-LCD-10B LCD Display Version Instruction Manual

Contents

joy-it RB-LCD-10B LCD Display Version

Specifications

- **Product Name: 1**0,1 LCD Display Version B
- **Model Number:** RB-LCD-10B
- **Manufacturer:** Joy-IT powered by SIMAC Electronics GmbH
- **Address:** Pascalstr. 8, 47506 Neukirchen-Vluyn
- **Website**: www.joy-it.net

Product Usage Instructions

General Information

Thank you for choosing our product. In the following, we will show you what to pay attention to during commissioning and use. If you encounter any unexpected problems during use, please feel free to contact us.

Numbering of the Mounting Holes

The mounting holes on the foiled cover correspond to the numbers at the bottom left. These holes are designed to mount single-board computers such as Raspberry Pi or Banana Pi. The following single-board computers can be mounted:

Number	Single-Board Computer
1	BananaPi
2	Raspberry Pi A+
3	Raspberry Pi A, Beaglebone Black
4	BananaPi-M3, Raspberry Pi B+
5	Raspberry Pi B, BananaP1-M2u
6	Raspberry Pi 2B
7	Raspberry Pi 3B, Raspberry Pi 3A+
8	Raspberry Pi 3B+, Raspberry Pi 4B
9	BananaPi-M2-Berry
10	BananaPi-M5

Bracket Assembly

1. First, loosen the screws of the protective cover and remove it.
2. Remove the protective film from the feet.
3. Remove the spacers located on the screws that attach to the board. Place the legs on the board by lifting the board. Ensure that the leg with the larger cutout is placed on the side with the connections.
4. Remove the protective film from the cover.
5. Fasten the spacers with the supplied nuts to the openings provided for them. Note that the numbers represent the different single-board computers that are compatible with the display.
6. Screw the single-board computer tightly onto this plate.

Activation/Deactivation of the Backlight
On the back of the device, there is a switch in the upper right corner of the PCB. This switch is used to turn the backlight of the device ON or OFF.

To save changes made to the device, follow these steps:

1. Make sure there are no spaces on either side of the equal sign.
2. Save the file with the CTRL+O key combination, confirm with Enter, and exit with the CTRL+X key combination.
3. After restarting the system, the display will be ready for use. You can also use the following command to reboot: `sudoreboot`

Device Connection
Follow these steps to connect the device:

1. Connect the LCD’s power-only interface to a 5V 2.4A adapter using a type A to micro USB cable.
2. Connect the HDMI interface of the LCD to the HDMI interface of your Raspberry Pi using an HDMI cable.
3. Connect the touch interface of the LCD to one of the USB interfaces of your Raspberry Pi.
4. Insert a microSD card into the card socket of the Raspberry Pi.

5. Connect your Raspberry Pi to power and turn it on.

Display Rotation
To change the display orientation, follow these steps:

1. Open the application menu.
2. Open the settings.

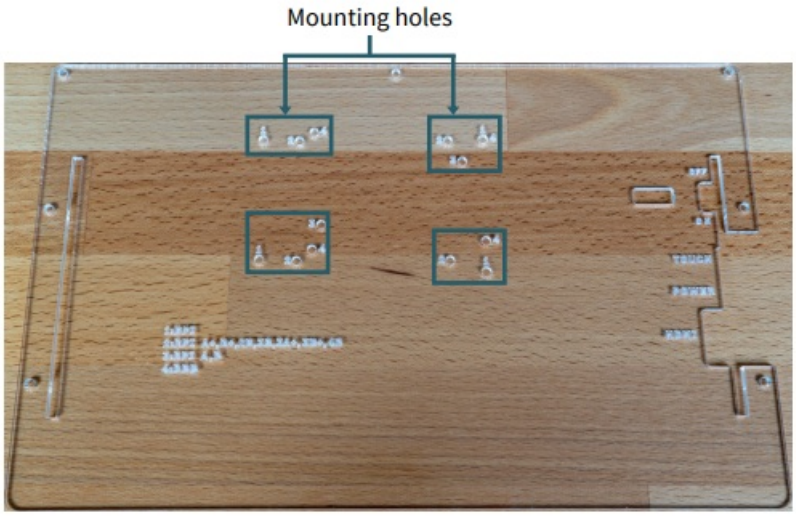
GENERAL INFORMATION

Dear Customer,
thank you for choosing our product. In the following, we will show you what to pay attention to during commissioning and use.
If you encounter any unexpected problems during use, please feel free to contact us.

NUMBERING OF THE MOUNTING HOLES

On the foiled cover, you will find a few holes with numbers above the center. These numbers correspond to the numbers that you can find at the bottom left.

The mounting holes are designed to mount single-board computers and offer the possibility to mount different models like the Raspberry Pi or Banana Pi. The various single-board computers that can be mounted with the respective associated holes are listed below.



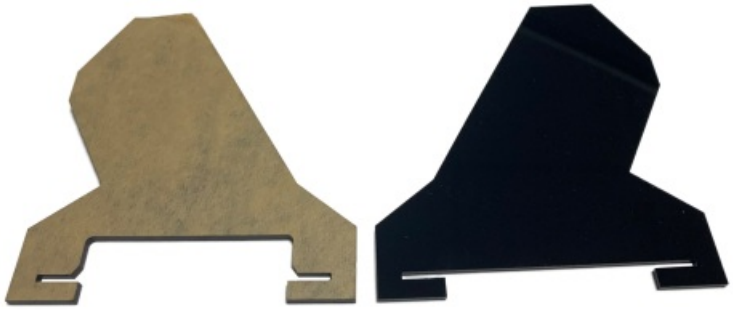
1	2	3	4
BananaPi	Raspberry Pi A+	Raspberry Pi A	Beaglebone Black
BananaPi-M3	Raspberry Pi B+	Raspberry Pi B	
BananaP1-M2u	Raspberry Pi 2B		
	Raspberry Pi 3B		
	Raspberry Pi 3A+		
	Raspberry Pi 3B+		
	Raspberry Pi 4B		
	BananaPi-M2-Berry		
	BananaPi-M5		

BRACKET ASSEMBLY

Simply follow the following illustrated instructions step by step for quick and easy mounting of the bracket.

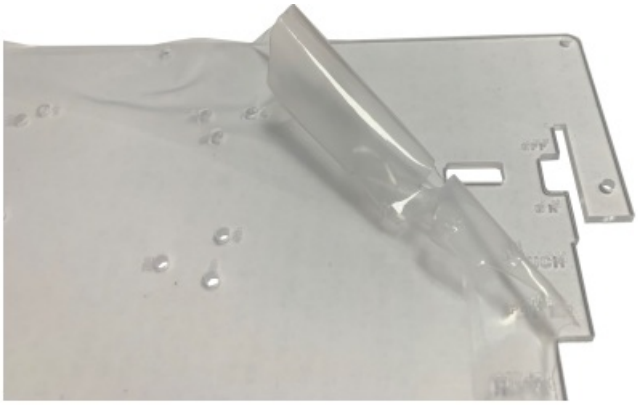
1. First, loosen the screws of the protective cover and remove it.

2. Now remove the protective film from the feet.



3. Now you must first remove the spacers that are located on the screws with which the board is attached. You can now put the legs on the board by lifting the board. Make sure that the leg with the larger cutout is placed on the side with the connections.

4. Now remove the protective film from the cover.

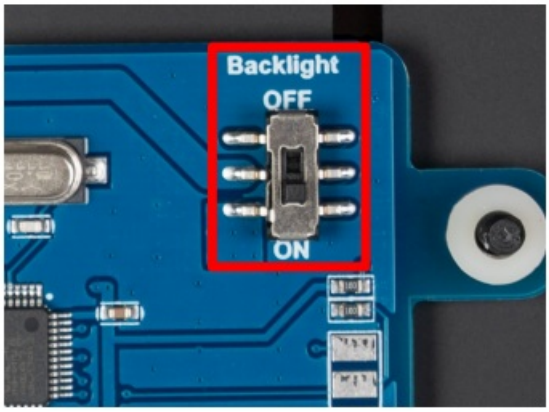


5. Now fasten the spacers with the supplied nuts to the openings provided for them. Note that the numbers represent the different single board computers that are compatible with the display.

6. Now you can screw the single-board computer tightly on this plate.

ACTIVATION/DEACTIVATION OF THE BACKLIGHT

- On the back of the device, you will find a switch in the upper right corner of the PCB.
- This switch is only used to turn the backlight (the backlight of the device) ON or OFF and therefore has no other functions.



USE WITH A RASPBERRY PI

Only a few adjustments are necessary to use the display. These adjustments are necessary to ensure optimal operation of the display. Use the following command to open the config.txt file to make the adjustments.

```
sudo nano /boot/config.txt
```

After opening the file, go to the part in the file that shows [all]. Under the item [all] you must insert the following

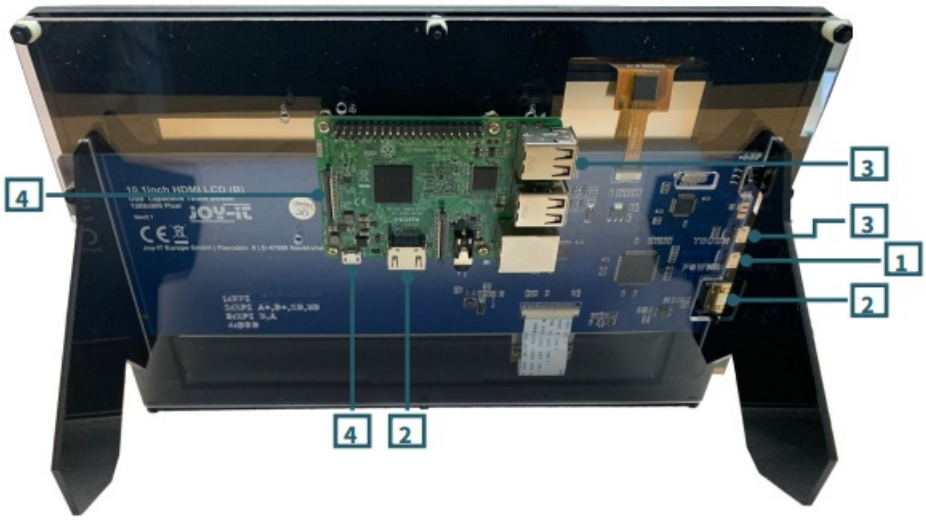
```
max_usb_current=1
hdmi_group=2
hdmi_mode=1
hdmi_mode=87
hdmi_cvt 1280 800 60 6 0 0 0
```

In your case, the part under [all] should now look like the following image.

Attention! Please make sure that there are no spaces on either side of the equal sign.
Save the file with the CTRL+O key combination, confirm with Enter, and exit with the CTRL+X key combination.
After restarting the system, the display is ready for use.
You can also use the following command to reboot.

```
sudo reboot
```

Device connection



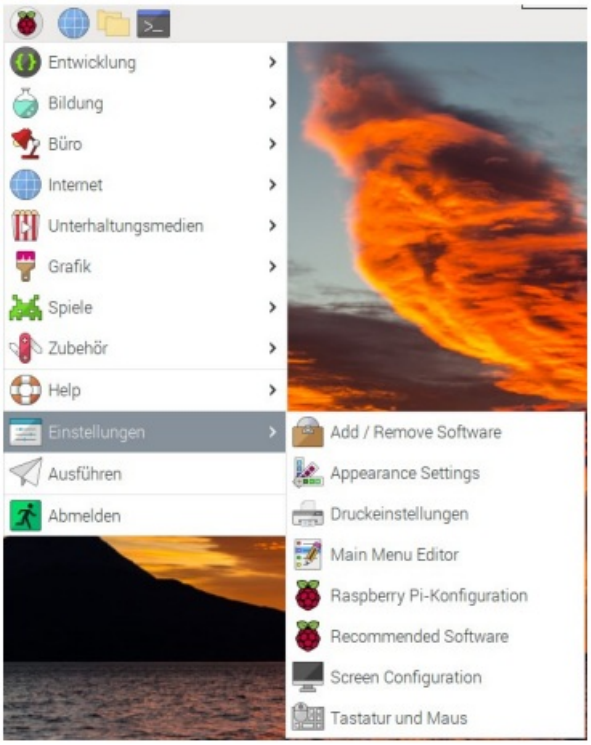
1. Connect the LCD's power-only interface to a 5 V 2.4 A adapter. This should be equipped with a type A to micro USB cable.
2. Connect the HDMI interface of the LCD to the HDMI interface of your Raspberry Pi using an HDMI cable.
3. Connect the touch interface of the LCD to one of the USB interfaces of your Raspberry Pi.
4. Insert a microSD card into the card socket of the Raspberry Pi, connect your Raspberry Pi to power, and then turn on the Raspberry Pi.

DISPLAY ROTATION

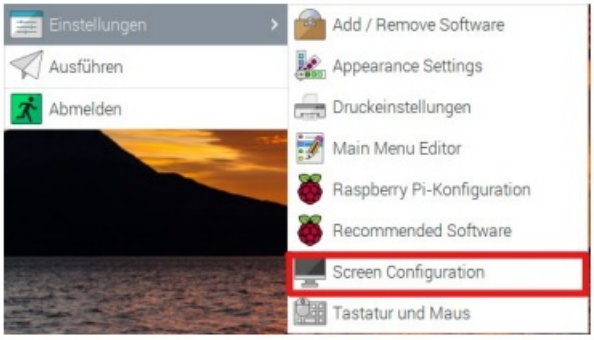
Changing the display orientation is helpful for many purposes. Of course, you can also configure the display orientation here.
To do this, you simply need to follow the steps in the following images.

1. Open the application menu.

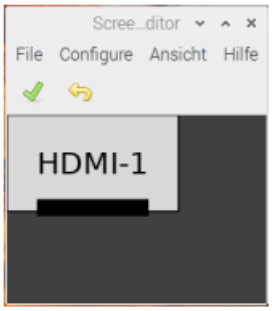
2. Open the settings.



3. Open the screen configuration.



After performing the previous steps, a window like the one shown in the following image should open on the desktop of your Raspberry Pi.



In this window, simply go to Configure > Screens > HDMI-1 > Rotation and select the desired orientation that you want to use for your display.

DISPLAY CALIBRATION

After you have selected the orientation of your display, you must now calibrate the touchscreen so that the touches are also correctly shown and registered on the display.

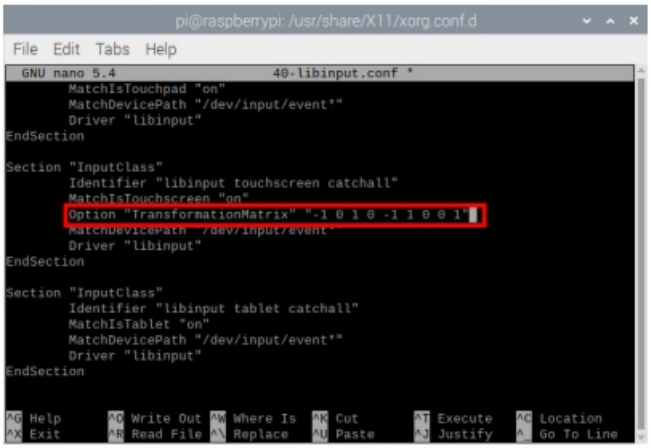
To do this, first enter the following two commands in the Terminal:

```
cd /usr/share/X11/xorg.conf.d
```

```
sudo nano 40-libinput.conf
```

Find the paragraph InputClass for Touchscreen and enter the following line under the MatchIsTouchscreen “on” line.

```
Option "TransformationMatrix" "0 1 0 -1 0 1 0 0 1"
```



Depending on how you rotate the display, other options are necessary, please use the following options:

- 90° = Option “TransformationMatrix” “0 1 0 -1 0 1 0 0 1”
- 180° = Option “TransformationMatrix” “-1 0 1 0 -1 1 0 0 1”
- 270° = Option “TransformationMatrix” “0 -1 1 1 0 0 0 0 1”

Note that the settings only take effect after the system has been restarted.

USAGE INSTRUCTIONS

USE WITH A PC

- This product supports Windows 7 / 8 / 8.1 / 10 and 11 operating systems. For Windows operating systems 8 and up, multi-touch gestures of up to 10 points are supported.
- In some Windows 7 operating systems, only single-touch gestures are supported.

Device connection
Please make sure that the connections are made in the correct order.

1. Connect a 5 V and 2.5 A micro USB power supply to the Power Only port of the LCD.
2. Connect the touch port of the LCD to one of the USB ports of your computer.
3. Connect the HDMI port of the LCD to the HDMI port of your computer using an HDMI cable.

If multiple screens are registered by your PC, the LCD can only control the cursor of the main screen. It is advised to use the LCD as the main screen. Generally, as with any other display, the display will not display anything by itself, image output will only happen when signals are input via the HDMI input. A single tap will perform the left button action of the mouse and holding it down will perform the right button action.

USE WITH A BANANA PI

1. Working under Raspbian OS Install the Raspbian for Banana Pi image file. This image supports BananaPi Pro and BananaPi.
    - Download the packed image file to your PC. After extracting you will get a file with the extension .img.
    - Connect a microSD card to your PC and open a program like Win 32 Disk Imager.
      Note: The memory size of your micro SD card should be more than 4GB.
    - Start the Win 32 Disk Imager program and in the first step select the image file and also the MicroSD card to be written.
      After that click the Write button to write the image to the card.
2. device connection
    - Connect the LCD to the HDMI interface of the Banana Pi.
    - Connect the touch interface of the LCD to the USB interface of the Banana Pi.
    - Connect the LCD’s power-only interface to a 5V 2.5A adapter. This should be a type A to micro USB cable.

ADDITIONAL INFORMATION

Our information and take-back obligations according to the Electrical and Electronic Equipment Act (ElektroG)

Symbol on electrical and electronic equipment:
This crossed-out dustbin means that electrical and electronic appliances do not belong in the household waste. You must return the old appliances to a collection point.
Before handing over waste batteries and accumulators that are not en-closed by waste equipment must be separated from it.

Return options
As an end user, you can return your old device (which essentially fulfils the same function as the new device purchased from us) free of charge for disposal when you purchase a new device.
Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities independently of the pur-chase of a new appliance.

Possibility of return at our company location during opening hours
SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn, Germany

Possibility of return in your area
We will send you a parcel stamp with which you can return the device to us free of charge. Please contact us by email at Service@joy-it.net or by telephone.

Information on packaging
If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

(FAQ)

Frequently Asked Questions (FAQ)

- **Q: What should I do if I encounter unexpected problems during use?**

  A: If you encounter any unexpected problems during use, please feel free to contact us for assistance.
- **Q: How can I contact customer support?**

  A: You can contact our customer support by visiting our website **www.joy-it.net** and finding the contact information.

SUPPORT

If there are still any issues pending or problems arising after your purchase, we will support you by e-mail, telephone, and with our ticket support system.
Email: service@joy-it.net
Ticket system: http://support.joy-it.net
Telephone: +49 (0)2845 9360 – 50 (Mon – Thur: 09:00 – 17:00 o‘clock,
Fri: 09:00 – 14:30)
For further information please visit our website: **www.joy-it.net**
Published: 2023.10.04

www.joy-it.net
SIMAC Electronics GmbH
Pascalstr. 8, 47506 Neukirchen-Vluyn

Documents / Resources

	joy-it RB-LCD-10B LCD Display Version [pdf] Instruction Manual RB-LCD-10B LCD Display Version, RB-LCD-10B, LCD Display Version, Display Version, Version

References

- ITnet | Servizi di Colocation e Cloud
- Joy-IT Helpdesk
- For Makers and Professionals | Joy-IT
- Joy-IT Helpdesk
- Win32 Disk Imager download | SourceForge.net
- User Manual