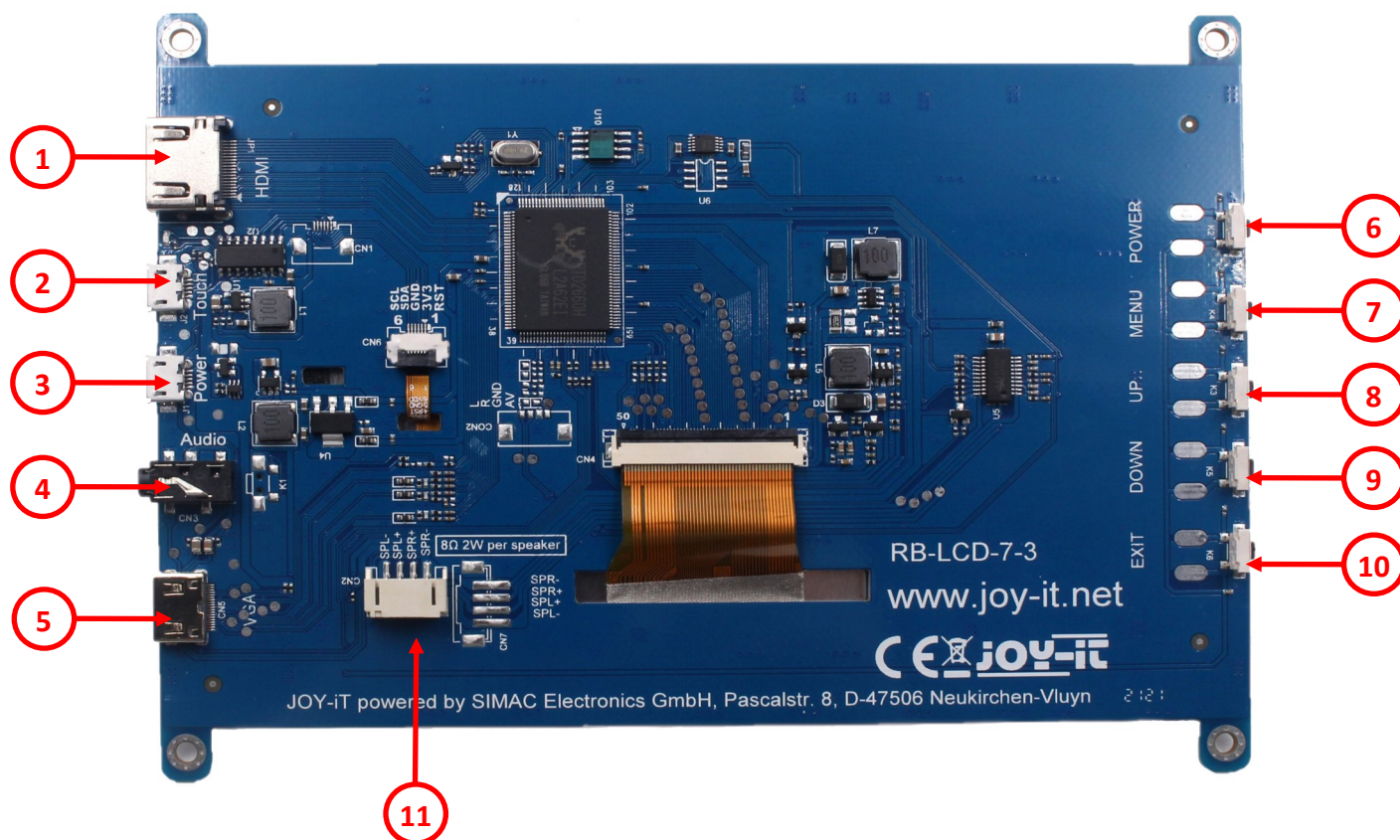# 7" TOUCH DISPLAY

RB-LCD7-3

1. GENERAL INFORMATION

Dear customer,
thank you very much for choosing our product.
In the following, we will introduce you to what to observe while starting up and using this product.
Should you encounter any unexpected problems during use, please do not hesitate to contact us.

2. OVERVIEW OF CONNECTIONS AND BUTTONS

Digit	Description	Digit	Description
1	HDMI input	6	Key: On / Off switch
2	Touch signal output / Current input	7	Key: Menu and Confirmation
3	Current input	8	Key: Up and Louder
4	Audio output	9	Key: Down and Quieter
5	VGA input	10	Key: Back
11	Speaker connection for 2x 2 W / 5 Ω		

To enter the menu of the display, it must be switched on and receive an input signal.

The display automatically switches between the available input interfaces. If both interfaces are used simultaneously, the signal received first is output.

Pressing the Menu key takes you to the display settings. Here you can first select the individual submenus with the Up and Down keys. You can always use the Menu key here to confirm and select. Pressing the Exit key always takes you back one step, and you can use the Up and Down keys to navigate through the menu and adjust settings.

In the Color menu you can adjust the brightness, contrast and saturation of the display.

In the OSD menu you can make the settings for the menu of the display. For example, you can set the menu language, the horizontal menu position, the vertical menu position, the time in seconds that the menu should remain open when inactive, and the transparency of the menu.
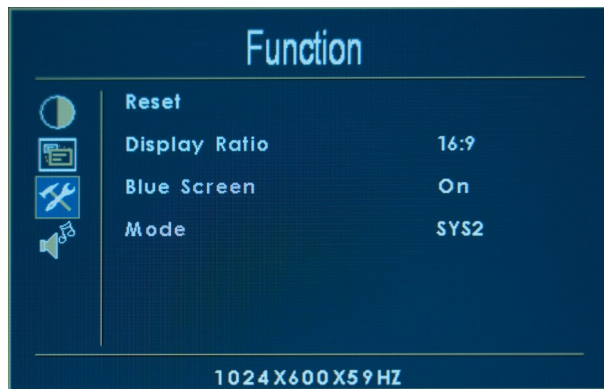
In the Function menu, you can reset the display, set the display aspect ratio, turn the bluescreen on or off, and set the mode.

With bluescreen switched on, the display always shows a blue screen for a short time at startup before the received signal is output.

If the bluescreen function is switched off, the received image is displayed immediately when the display is switched on.

The display has four different modes (SYS1 - SYS4).
With these modes you can change the orientation of the display. SYS2 is the standard mode, in SYS1 the display is horizontally mirrored, in SYS3 the display is rotated 180° and in SYS4 the display is rotated 180° and horizontally mirrored.
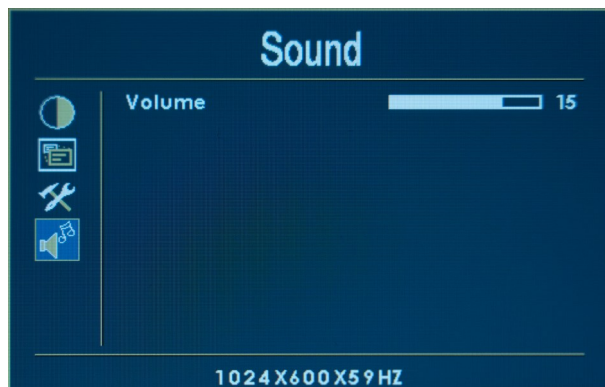
You can adjust the volume in the Sound menu.
You can also adjust the volume outside the menu using the Up and Down keys.

4. USE UNDER RASPBERRY PI OS

Under the latest versions of Raspberry Pi OS, setup is especially easy.

Connect the display to your Raspberry Pi via an HDMI cable. For the touch function you have to connect the touch port of the display with a USB port of your Raspberry Pi via a USB cable. The display is then also supplied with power via this port.

During the first start-up, a black border can be seen on the display, which also affects the accuracy of the touch function. To change this, you need to follow the steps below.

Once you get your Raspberry Pi up and running again, after connecting the display, you can manually remove the black border on the display. Open a terminal window and enter the following command:

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

Now find the line **#disable_overscan=1** and remove the **#** sign.

```
# uncomment this if your display has a black border of unused pixels visible
# and your display can output without overscan
disable_overscan=1
```

Save the file with **CTRL + O** and confirm with **Enter**.

Now you can close the file with the key combination **CTRL + X**. After a reboot of your Raspberry Pi your display will be ready for use.

5. ANPASSUNG DES SYSTEMS

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 have to insert the following

```
hdmi_group=2

hdmi_mode=87

hdmi_cvt 1024 600 60 6 0 0 0

hdmi_drive=1

display_rotate=0
```

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

```
[all]
hdmi_group=2
hdmi_mode=87
hdmi_cvt 1024 600 60 6 0 0 0
hdmi_drive=1
display_rotate=0
```

Attention! Please make sure that there are no spaces on either side of the equal sign.

Save the file with the key combination **CTRL+O**, confirm with Enter and exit with the combination **CTRL+X**. After restarting the system, the display is ready for use just use the following command.

You can also use the following command to restart.

```
sudo reboot
```
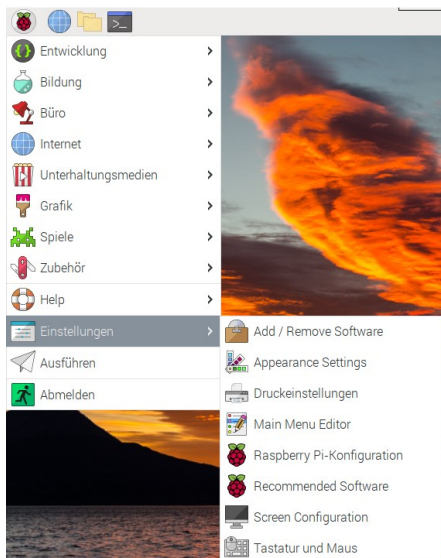
6. DISPLAYROTATION

Changing the display orientation is helpful for many purposes. Of course, you can also configure the display orientation here.

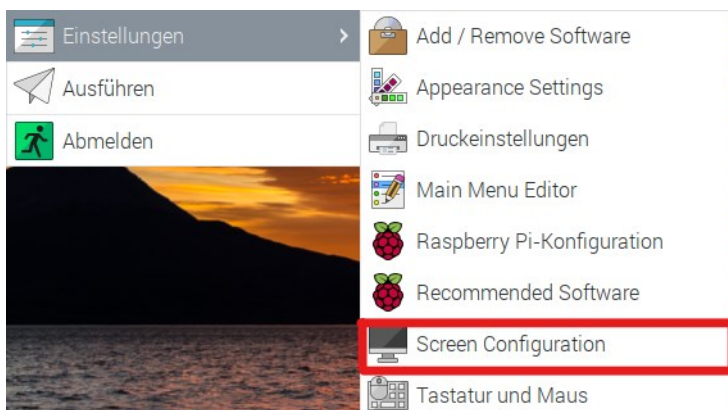To do this, you simply need to follow the steps in the following images to do this.
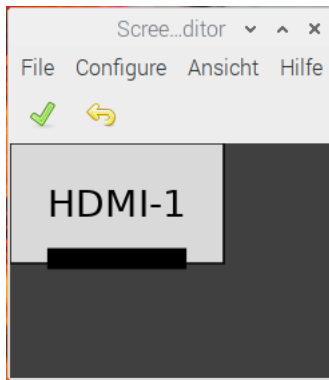
1. Open the **application menu.**

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.

7. 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.
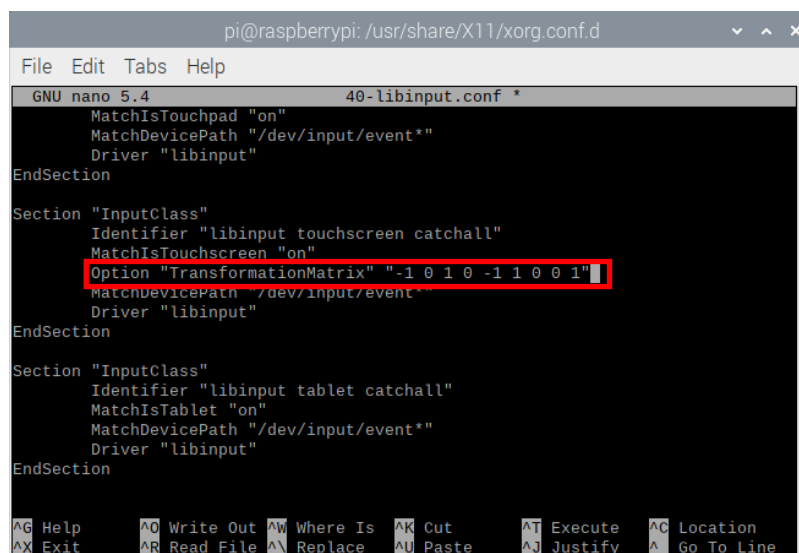
To do this, first enter the following two commands in the Terminal:

```
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.

8. USE WITH WINDOWS 10 AND WINDOWS 11

To operate the display on a Windows computer, simply connect the display with an HDMI and a USB cable. The USB cable is connected to the touch port of the display and to a free USB port of your computer. The USB cable is used for both the data exchange for the touch function and the power supply for the display.

Please note that the touch function only works on the main monitor of your system if you use multiple monitors. The display is ready to use out of the box and requires no driver installation.

9. 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 enclosed 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 purchase 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.

10. 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 o'clock)

For further information please visit our website:
www.joy-it.net