EM Series

Panel Computer

With Embedded Linux OS

Tool Manual

Introduction

This document describes how to use the configuration tool for the EM Series of products.

Hereafter in this document, the product is called "the machine".

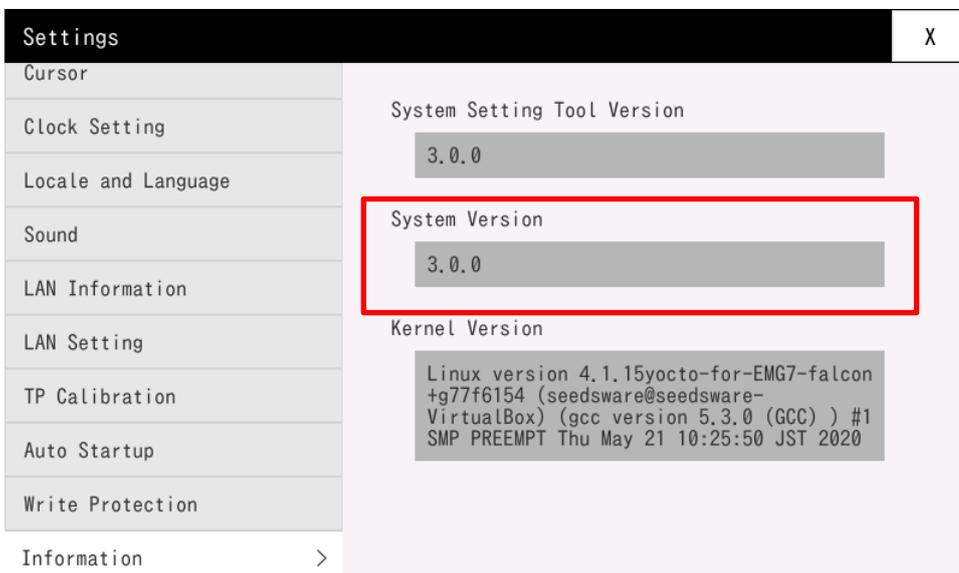This document describes working with the following models:

Model	Abbreviated model names
EMG7-W207A8-00**-*07-01	EMG7-7W
EMG7-312A8-00**-*07-01	EMG7-12
EM8-W104A7-00**-*07	EM(G)8-4
EMG8-W104A7-00**-*07	
EM8-205A7-00**-*07	EM(G)8-5
EMG8-205A7-00**-*07	
EM8-W207A7-00**-*07	EM(G)8-7W
EMG8-W207A7-00**-*07	
EM8-W310A7-00**-*07	EM(G)8-10W
EMG8-W310A7-00**-*07	

The following system version products are targeted.

Target system version	3.0.0 ~

Check the system version of the EM series from the system setting tool.

For details, please refer to "1.6.11 System Information".

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Table of Contents

1   System Setting Tool

Chapter Contents

1.1   Overview

Use this configuration tool to define various settings for the backlight, cursor, clock, and so on.

* The images in this document are from the EMG7-7W machine. Screen images may differ depending on the model.

1.2   Starting and Exiting the System Setting

This section explains how to start and exit the System Setting Tool.

1.2.1   Starting the Tool

Method 1

Start the tool by opening the [EMG Launcher] application and clicking [Setting].
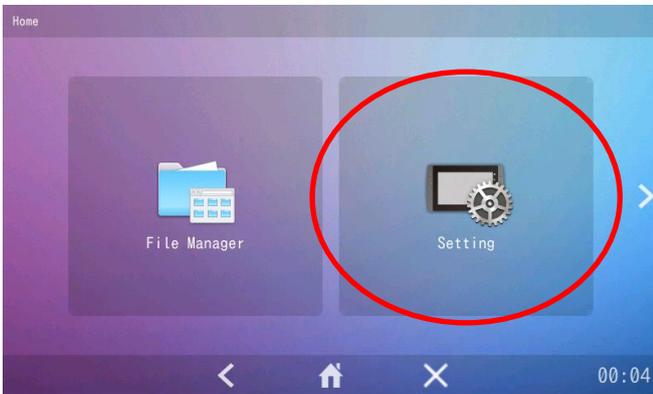
Method 2

Start the tool from [Start] menu > [Preferences] > [emgsetting].
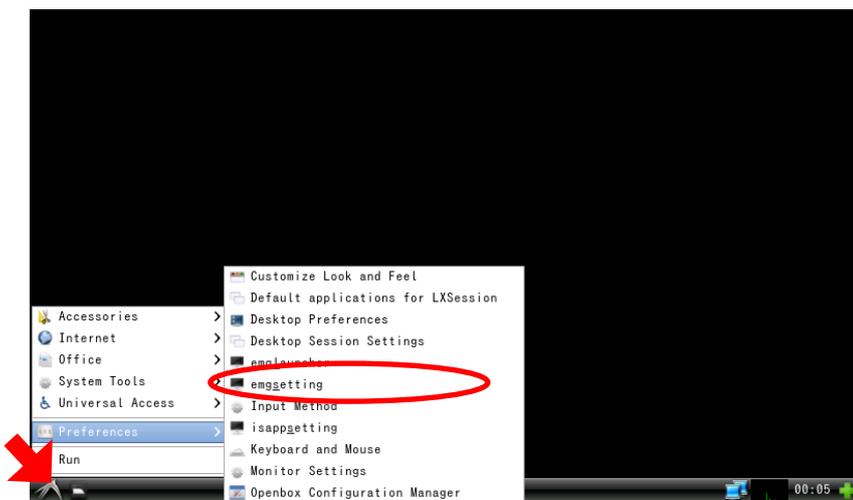
Method 3

Start the tool by running the following program:

/usr/bin/emg_setting

1.2.2   Exiting the Tool

Exit the tool by touching the "x" button in the top-right corner of the window.
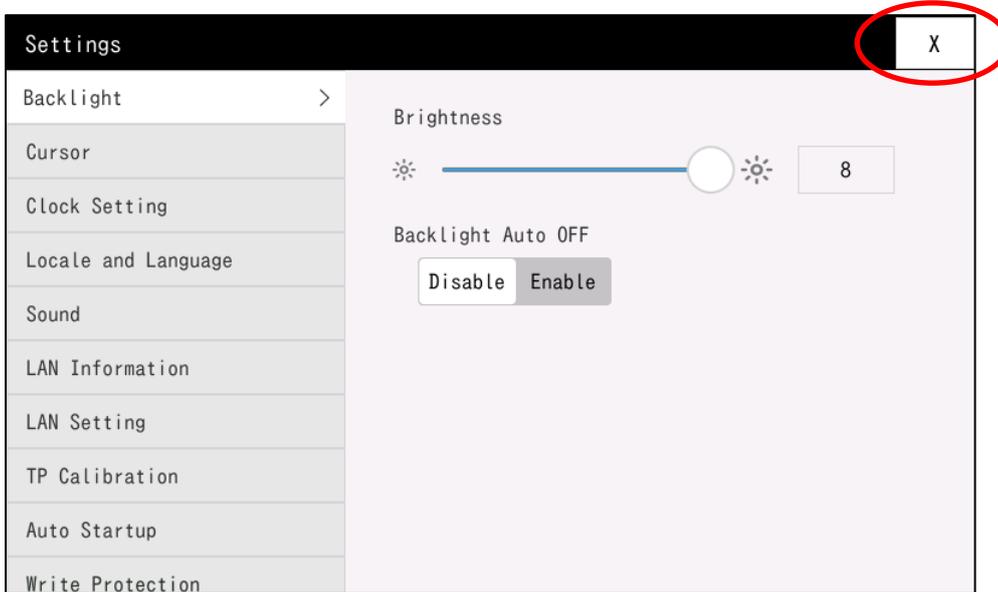
1.3   Executable file

/usr/bin/emg_setting

1.4 Functions

Items	Instruction
Backlight	Set the brightness of the backlight, and the amount of time that can elapse with no operations until the machine turns off the backlight.
Cursor	Configure the cursor display setting.
Clock Setting	Configure the clock settings (date / time).
Locale and Language	Configure the locale and language.
Sound	Set the sound volume, and turn the touch buzzer on or off.
LAN Information	View network information, such as IP address.
LAN	Configure network settings, such as IP address.
TP Calibration	Calibrate the sensitivity and coordinates of the touch panel.
Auto Startup	Configure the applications that are launched automatically when the machine is started.
Write Protection	Temporarily turn off the write protection.
System Information	Display the system information.

1.5 Changing Between Setting Items

This section describes how to change between the setting items listed in the Functions table.

1.5.1 Changing Between Items

Change between setting items by touching an item as shown below:

1.6　Function Details

1.6.1　Backlight

Set the brightness of the backlight, and the amount of time that can elapse with no operations until the machine turns off the backlight.
The new setting takes effect immediately after you change the value.

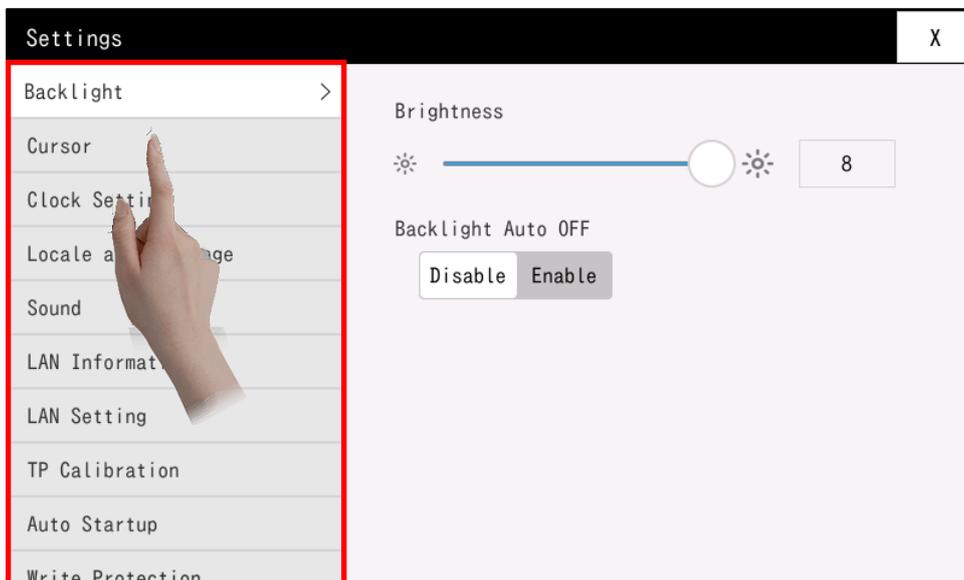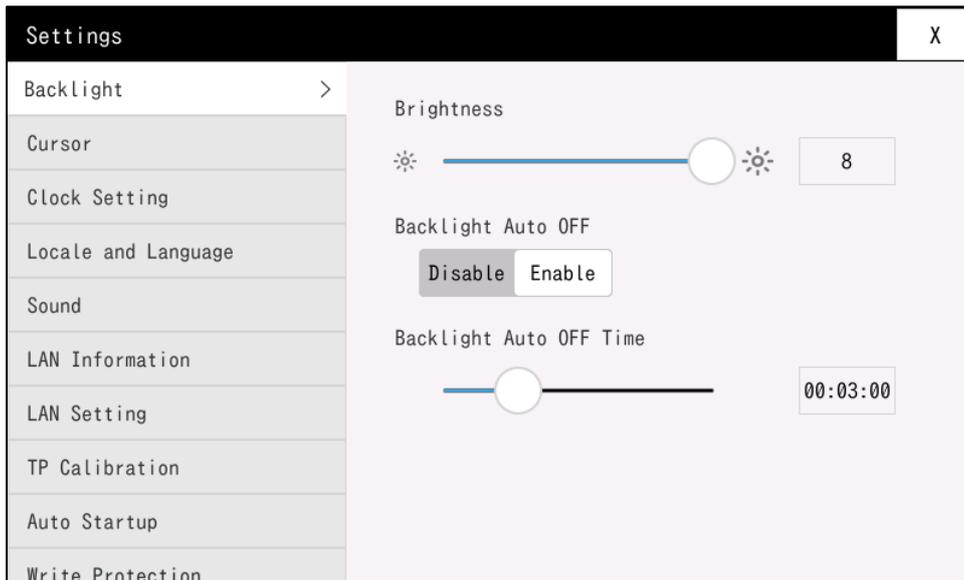| Item Name	Contents
Brightness	Adjust the brightness of the backlight for normal conditions. • Value: 1 - 8 (Larger the number, the brighter)
Backlight Auto OFF	Turn on the Backlight Auto OFF feature to turn off the backlight automatically when there are no operations for the specified time. • ON: Automatic Backlight OFF is on. • OFF: Automatic Backlight OFF is off.
Backlight Auto OFF Time	Specify the amount of time that can elapse with no operations until the machine automatically turns off the backlight. Value: 15 seconds, 30 seconds, 1 minute, 3 minutes, 5 minutes, 10 minutes, 30 minutes, 1 hour, 2 hours, 3 hours, 6 hours, or 12 hours.

1.6.2　　Cursor

Configure the machine's cursor display setting.

Select either ON or OFF.

Select the cursor display setting, touch [OK], and restart the system to enable the new cursor setting.
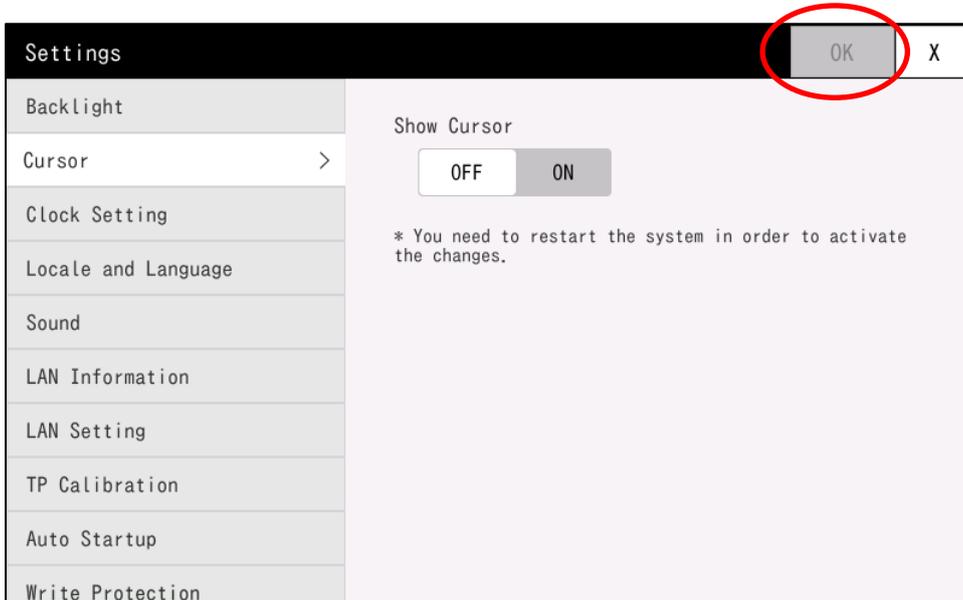
Item Name	Contents
Show Cursor	Select ON or OFF.

When you touch [OK], the following dialog box appears.

Touch [Yes] to restart the system immediately.

Touch [No] to apply the change when the system restarts.

1.6.3　Clock Setting

Configure the clock settings (date / time) for the machine.

Touch a field to open an on-screen keyboard, and enter the new value.

After you enter the value, touch [OK] to apply the new setting.
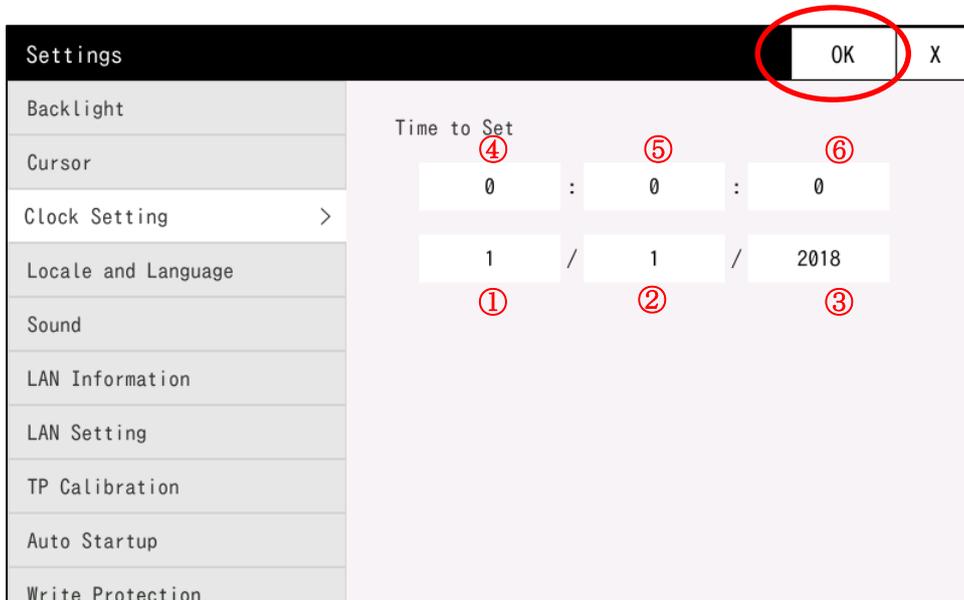
Number	Items	Contents
①	Year	Set the year. Value: 2000 to 2037
②	Month	Set the month. Value: 1 to 12
③	Date	Set the date. Value: 1 to 31 (The maximum allowed values vary depending on the year and month.)
④	Hour	Set the hour. Value: 0 to 23
⑤	Minute	Set the minute. Value: 0 to 59
⑥	Second	Set the second. Value: 0 to 59

*　When you set the [Locale and Language] to English, the Time field takes the following format:

Hour : Minute : Second　　Month/Date/Year

1.6.4　　Locale and Language

Configure the interface language displayed on the machine.

You can select either [Japanese(JPN)] or [English(USA)].

To change the interface to the new language, select the new language, touch [OK], and restart the machine.
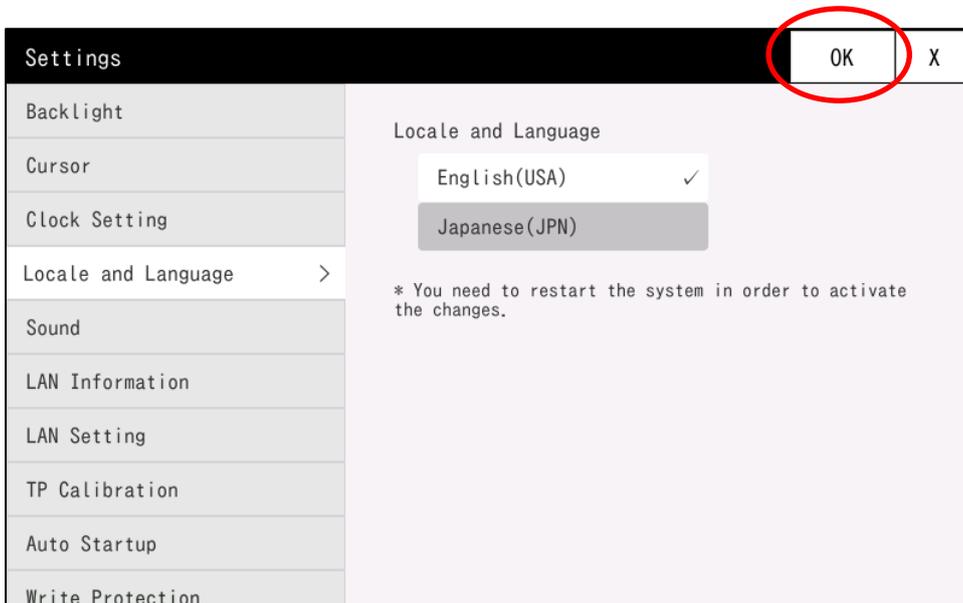
Item Name	Contents
Locale and Language	Select either English (USA) or Japanese (JPN).

When you touch [OK], the following dialog box appears.
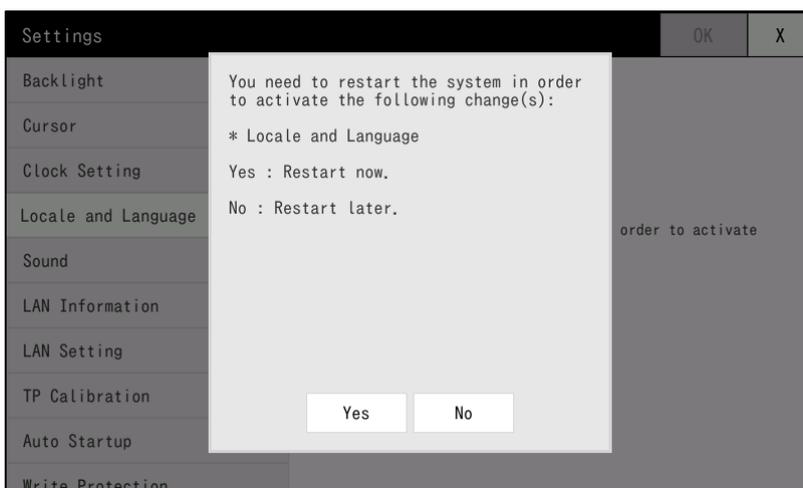
Touch [Yes] to restart the system immediately.

Touch [No] to apply the change when the system restarts.

1.6.5　　Sound

Set the sound volume (LINE OUT) of the machine, and turn on or off the touch beep (embedded buzzer).

The new setting takes effect immediately after you change the value.

*　If write protection is on, turn it off temporarily to change these settings.

Settings		X
Backlight	Volume	
Cursor	━━━━━━◯━━ 75	
Clock Setting		
Locale and Language	Touch Beep	
Sound 〉	OFF　ON	
LAN Information		
LAN Setting		
TP Calibration		
Auto Startup		
Write Protection		

Item Name	Contents
Volume * Displayed on the applicable models only.	Set the sound volume (LINE OUT) between 0 and 100. • 0: Mute • 100: Maximum volume Applicable models EMG7-7W / EMG7-12
Touch Beep	Play a beep sound (embedded buzzer) whenever there is a touch operation on the touch panel. • ON: Touch Beep is on • OFF: Touch Beep is off *　We recommend turning off the touch beep if you are using an embedded buzzer device on the application side. *　The volume, frequency, and duration of the touch beep are fixed.

1.6.6　　　LAN Information

Displays the current LAN settings on the machine.

Change these settings from the LAN Setting menu.

```
Settings                                              X

Backlight                 IP Info

Cursor                      IP Address    192.168.0.130

Clock Setting               Subnet Mask   255.255.255.0

Locale and Language
                          LAN Setting
Sound
                            Status        Enable
LAN Information      >
                          Interface
LAN Setting
                            Name          eth0
TP Calibration
                            MAC Address   00:06:48:01:98:BE
Auto Startup

Write Protection
```
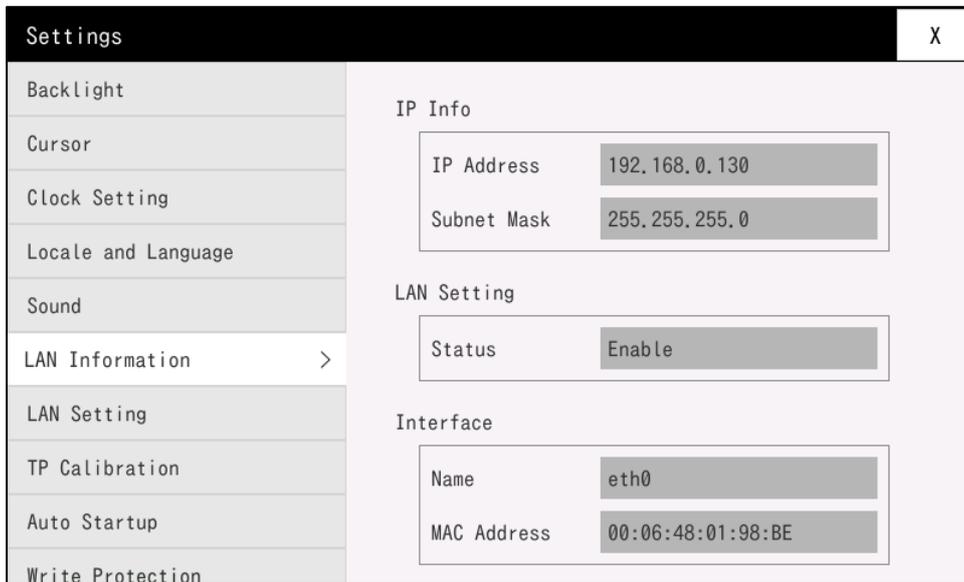
Item Name	Contents
IP Address	Displays the current IP address.
Subnet Mask	Displays the current subnet mask.
Status	The current status of the LAN interface. • Enable: Communication open • Disable: Communication closed
Name	Displays name of the interface.
MAC Address	Displays the MAC address.

[Note]

This system uses a network of "192.168.10.*" for USB-Ether (usb0).

Please be careful of conflicts when setting the IP address.

* If the IP address is set to "192.168.10.*", communication will not work properly.

1.6.7　　LAN Setting

Use this function to configure the network settings of the machine.

You can select to either obtain the IP address from the DHCP server automatically, or use a fixed IP address.

After you enter the value, touch [OK] to apply the new setting.

Item Name	Contents
LAN	Enable or disable the LAN interface. • Enable:　LAN is enabled. • Disable:　LAN is disabled.
IP Mode	Select the method for setting the IP address, either dhcp or static. • dhcp:　Get the IP address from the DHCP server. • static:　IP address is fixed.
The following settings are available when IP Mode setting is static.	
IP Address	Set the IP address.
Subnet Mask	Set the subnet mask.
Gateway	Set the default gateway.

[Note]

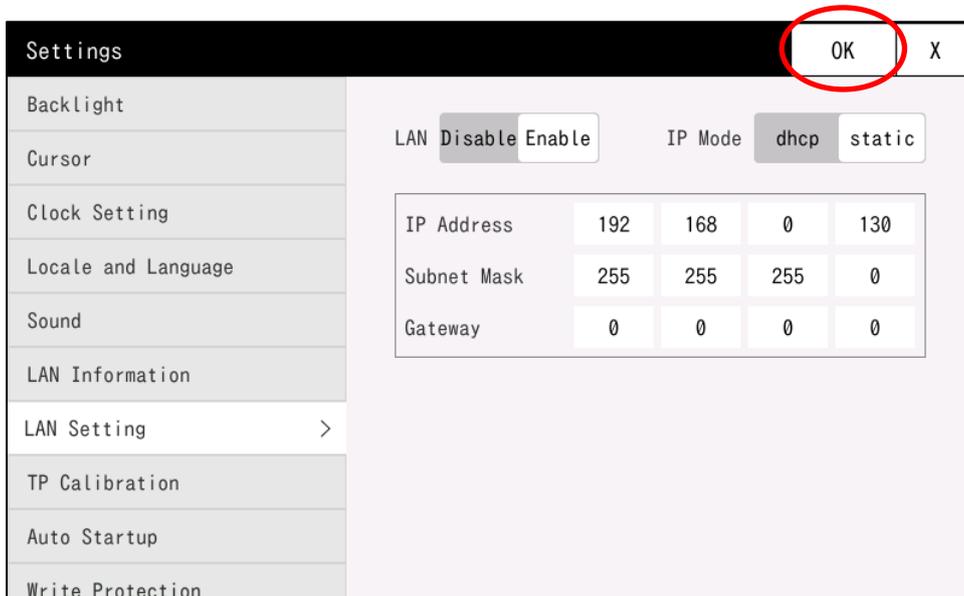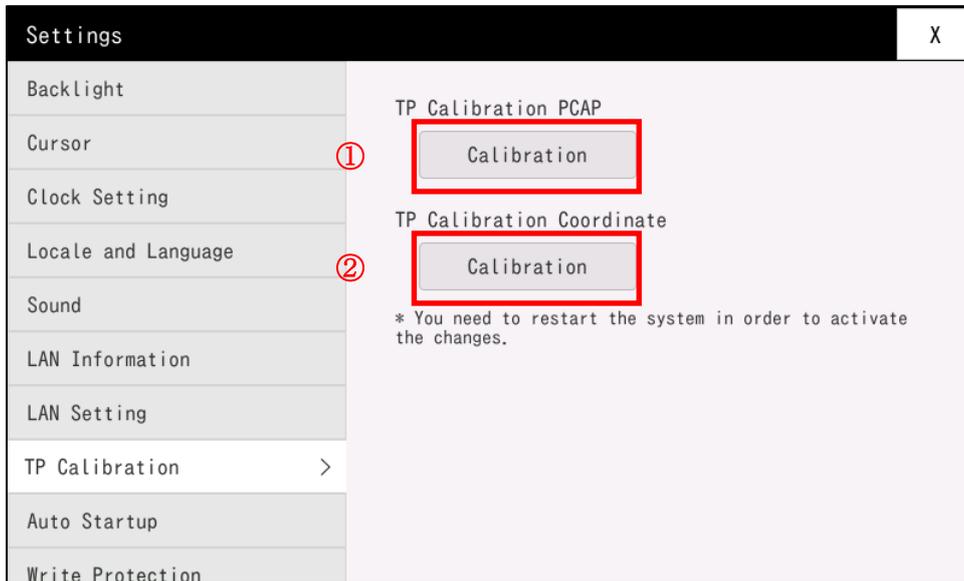This system uses a network of "192.168.10.*" for USB-Ether (usb0).

Please be careful of conflicts when setting the IP address.

* If the IP address is set to "192.168.10.*", communication will not work properly.

1.6.8　TP Calibration

Calibrate the touch panel of the machine.

Number	Item Name	Contents
①	TP Calibration PCAP	You can calibrate the sensitivity of the capacitance sensor. Calibrate the sensor if the sensor becomes overly sensitive or unresponsive due to the installation environment. *　Although you can calibrate the sensitivity for resistive touch panel models, it has no effect on touch panel behavior. *　EMG8-W310A7 does not need to be "TP Calibration" because it is auto-calibrated.
②	TP Calibration Coordinate	Calibrate the coordinates of the touch panel. Calibrate the coordinates if the touch and display become misaligned. *　Do not perform this operation on capacitive touch panel models. It may cause malfunction.

Resistive Touch Panel Models	Capacitive Touch Panel Models
EM8-W104A7-00**-*07 EM8-205A7-00**-*07 EM8-W207A7-00**-*07 EM8-W310A7-00**-*07	EMG7-W207A8-00**-*07-01 EMG7-312A8-00**-*07-01 EMG8-W104A7-00**-*07 EMG8-205A7-00**-*07 EMG8-W207A7-00**-*07 EMG8-W310A7-00**-*07

TP Calibration PCAP

1. To calibrate the sensitivity of the touch panel, touch TP Calibration PCAP.

The screen below is displayed.

Settings		X
Backlight	Would you like to start calibration?	
Cursor	* TP Calibration PCAP	
Clock Setting	OK : Execute calibration.	
Locale and Language	Cancel : Cancel calibration.	
Sound		order to activate
LAN Information		
LAN Setting		
TP Calibration	OK Cancel	
Auto Startup		
Write Protection		
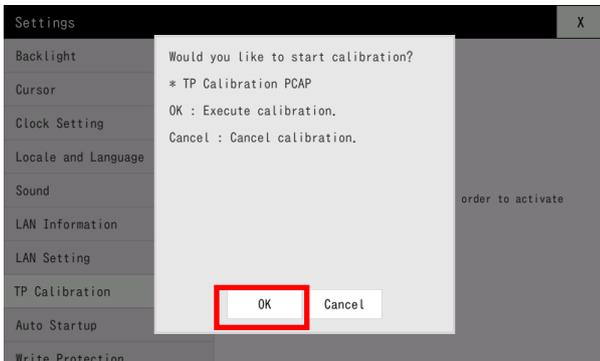
Touch OK to run sensitivity calibration.

Settings		X
Backlight	Device is calibrating.	
Cursor	* TP Calibration PCAP	
Clock Setting	Please do not touch the device.	
Locale and Language		
Sound		order to activate
LAN Information		
LAN Setting		
TP Calibration		
Auto Startup		
Write Protection		
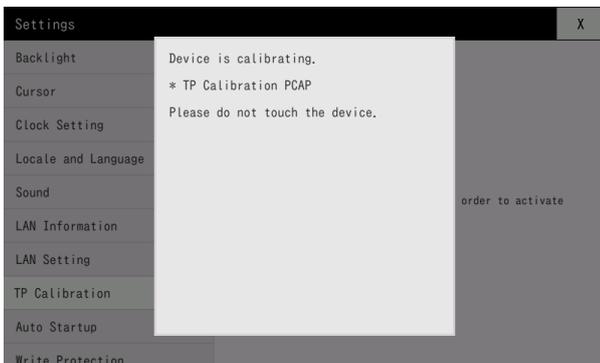
The calibration stops automatically after a while.

* Do not touch the touch panel or machine until calibration is completed successfully.

Settings		X
Backlight	Touch calibration succeeded.	
Cursor		
Clock Setting		
Locale and Language		
Sound		order to activate
LAN Information		
LAN Setting		
TP Calibration		
Auto Startup	OK	
Write Protection		
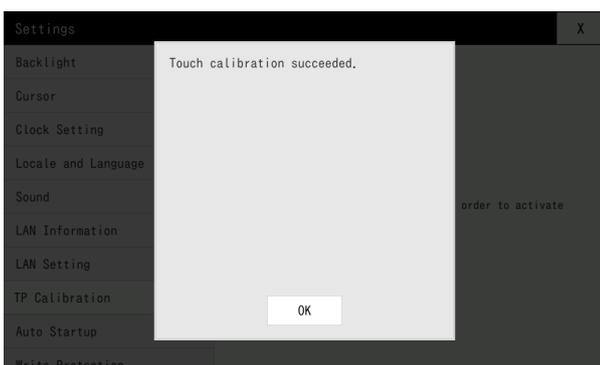
Calibration is complete.

If the machine does not behave as expected, run calibration again.

TP Calibration Coordinate

2. To calibrate the coordinates of the touch panel, touch TP Calibration Coordinate.
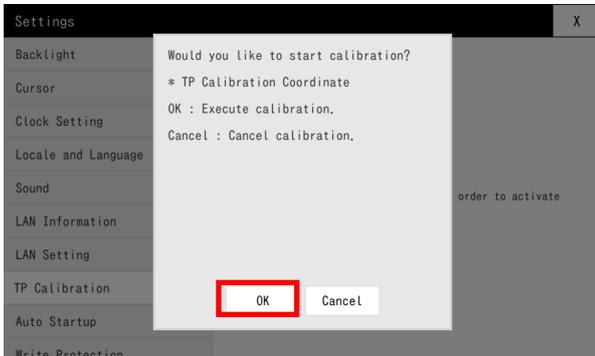
The screen below is displayed.

Touch OK to run the calibration of coordinates.

Red cross-hairs are displayed. Touch the middle of the cross-hairs. (4 times.)
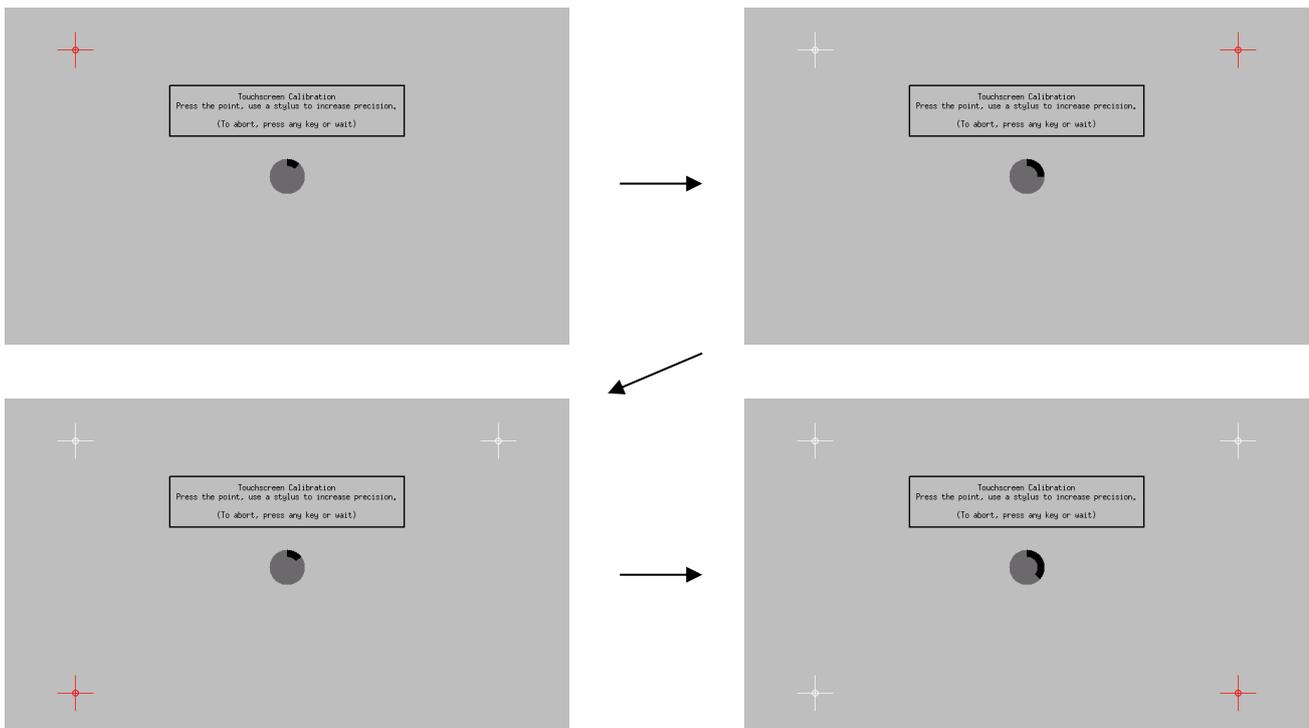
After you touch the 4 cross-hairs at the top-left, top-right, bottom-left, and bottom-right corners, the following screen is displayed.

*   If you make a mistake, return to the top-left corner, and start from the beginning.

```
Settings                                                    X

Backlight        You need to restart the system in order
                 to activate the following change(s):
Cursor
                 * TP Calibration Coordinate
Clock Setting    Touch calibration succeeded.

Locale and Language   Yes : Restart now.

                 No : Restart later.
Sound
                                                   order to activate
LAN Information

LAN Setting

TP Calibration
                      Yes         No
Auto Startup

Write Protection
```

Calibration is complete.

Touch [Yes] to restart the system immediately.

Touch [No] to apply the change when the system restarts.

If the machine does not behave as expected, run calibration again.

1.6.9　　Auto Startup

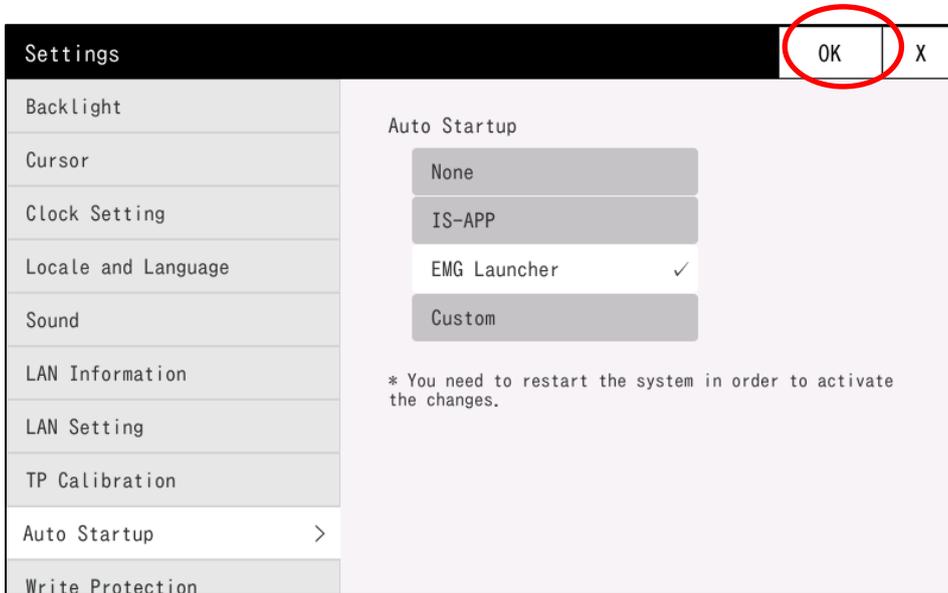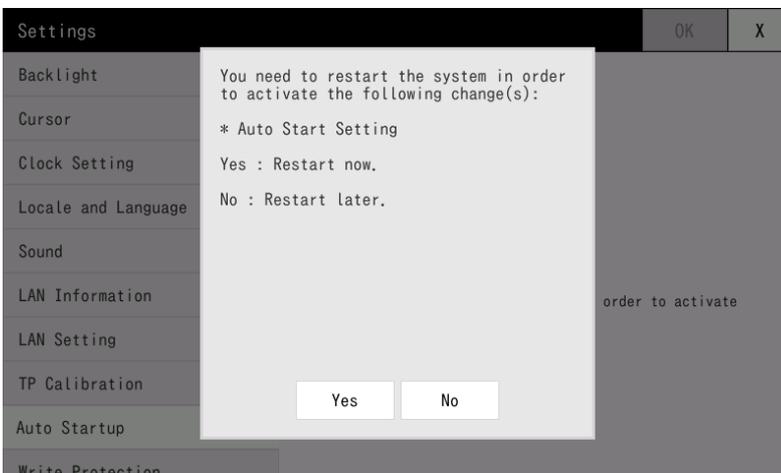Configure the processes that are run when the machine starts up.

For the new setting to take effect, touch [OK], and restart the system.

Item Name	Contents
Auto Startup	Select the processes to run when the machine is starting up. • None • IS-APP • EMG Launcher • Custom

When you touch [OK], the following dialog box appears.

Touch [Yes] to restart the system.

Touch [No] to apply the change when the system restarts.

Process Details

Depending on this setting, the following processing will be performed at startup.

Configuration	Content
None	Do nothing
IS-APP	/mnt/user/isapp_run.sh
EMG Launcher	/usr/bin/emg_launcher /usr/bin/touchmonitor_startup.sh
Custom*	/mnt/user/startup.sh

*   If you select Custom, the system runs /mnt/user/startup.sh at start up.

By default, /mnt/user/startup.sh does not exist so nothing would run at first.

Create /mnt/user/startup.sh and define the processes to run.

1.6.10 Write Protection

Temporarily turns off write protection of the machine. To write to a read-only area, turn off this setting. The new setting takes effect immediately after you change the value.
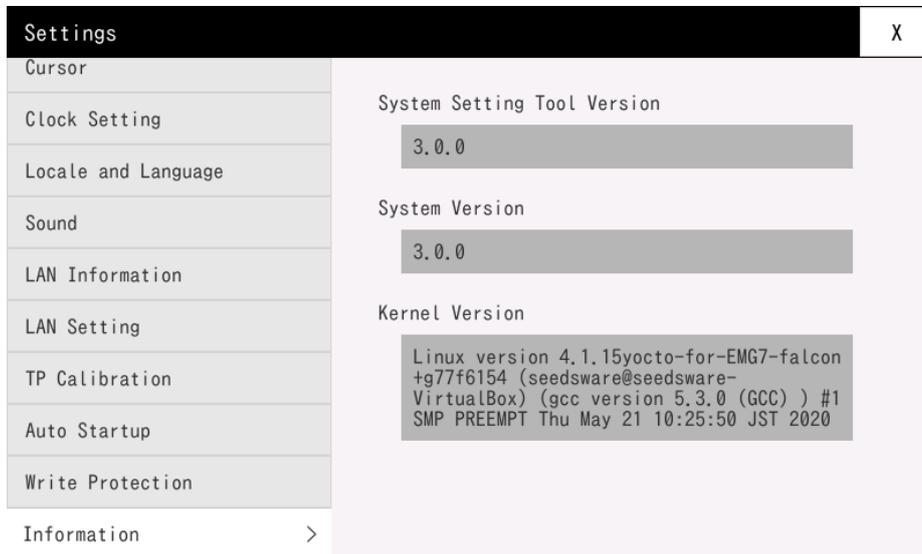
> ⚠️ **Note**
>
> **If you turn off write protection to write to a read-only folder, turn on write protection again as soon as complete the write. If you leave write protection off, the system might be damaged by an unexpected problem or malfunction, resulting in abnormal operations.**

```
Settings                                              X
Cursor
                        Write Protection
Clock Setting
                          OFF     ON
Locale and Language
Sound                   * If you want to write to read-only area, you need to
                        disable Write Protection.
LAN Information
                        * After rebooting, it will return to enable.
LAN Setting

TP Calibration

Auto Startup

Write Protection    >

Information
```

Item Name	Contents
Write Protection	Turn write protection on or off. • ON: Write protection is on (read-only) • OFF: Write protection is off (writable) * Write protection is automatically turned on again when you restart the system.

1.6.11　System Information

Displays the machine's system information.

```
Settings                                          X
Cursor
                        System Setting Tool Version
Clock Setting
                            3.0.0
Locale and Language
                        System Version
Sound
                            3.0.0
LAN Information
                        Kernel Version
LAN Setting
                            Linux version 4.1.15yocto-for-EMG7-falcon
TP Calibration              +g77f6154 (seedsware@seedsware-
                            VirtualBox) (gcc version 5.3.0 (GCC) ) #1
Auto Startup                SMP PREEMPT Thu May 21 10:25:50 JST 2020

Write Protection

Information              >
```

Item Name	Contents
System Setting Tool Version	Displays the version of this tool (/usr/bin/emg_setting).
System Version	Displays version of the machine system.
Kernel Version	Displays the version of Linux Kernel.

2 Wallpaper Registration

Chapter Contents

2.1   Overview

This section describes how to register and unregister the wallpaper of the machine

*If you set "Desktop" to hidden (stop pcmanfm), the wallpaper will no longer be displayed.

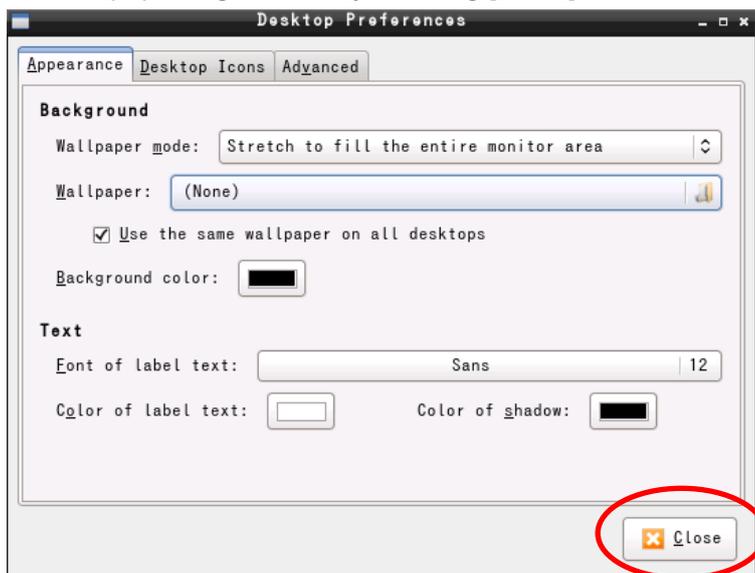## 2.2   Starting and Exiting the System Setting

This section explains how to start and exit wallpaper registration.

2.2.1   Starting Wallpaper Registration

Start wallpaper registration from [Start] menu > [Preferences] > [Desktop Preferences].

2.2.2   Exiting Wallpaper Registration

Exit wallpaper registration by touching [Close] in the bottom-right corner of the window.

2.3   Registering and Unregistering Wallpaper

This section describes how to register and unregister the wallpaper.

*   To change the wallpaper settings, temporarily turn off write protection. Turn off write protection in the System Setting Tool. For details, refer to "1.6.10 Write Protection".

2.3.1   Wallpaper Registration

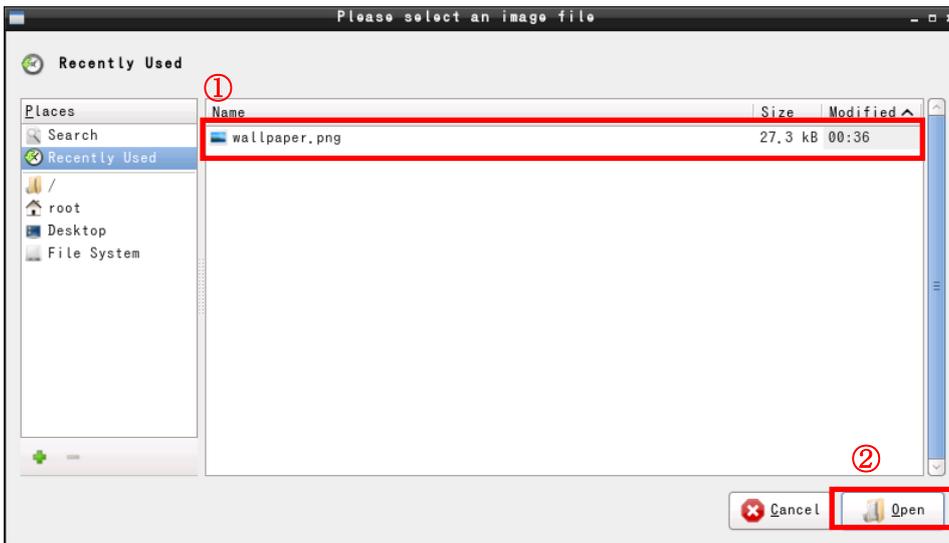This section describes how to register wallpaper.
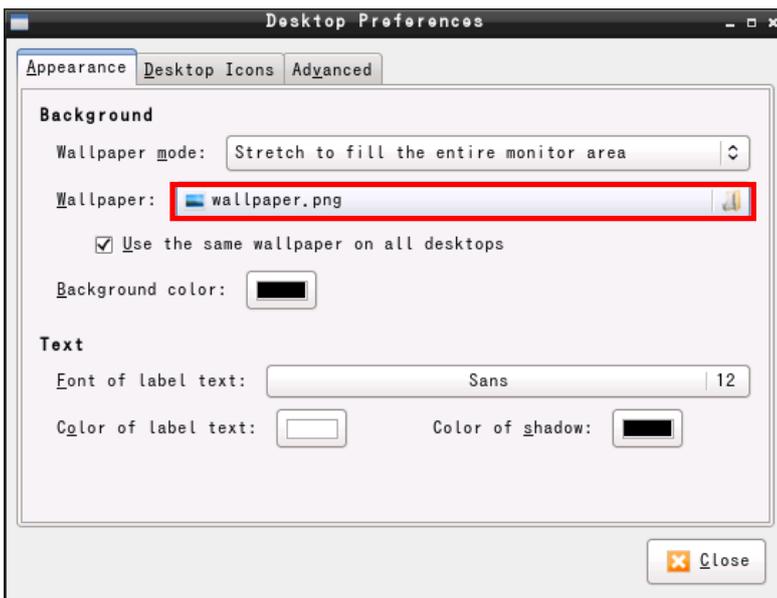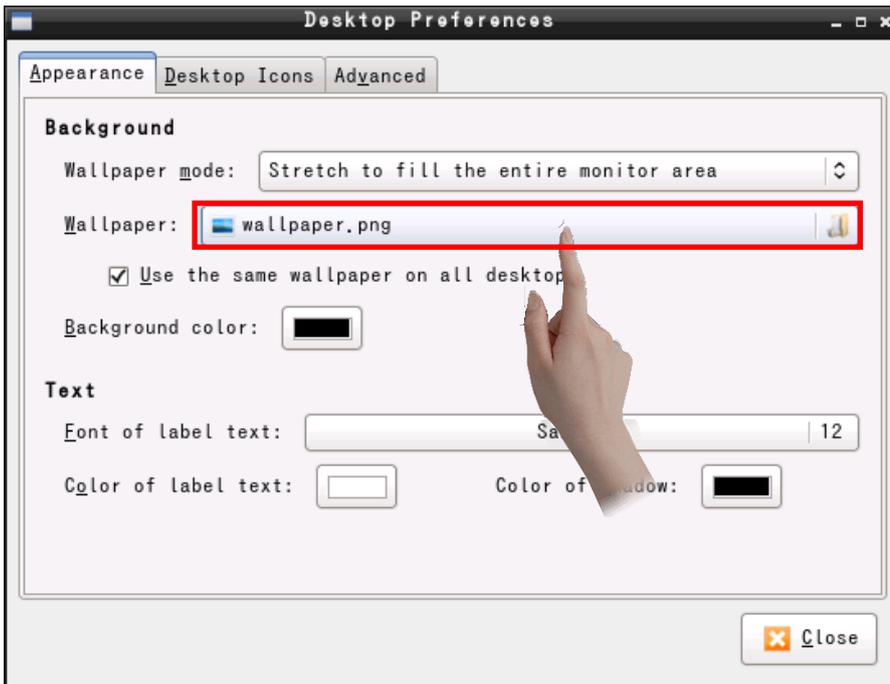
Open the Desktop Preferences screen
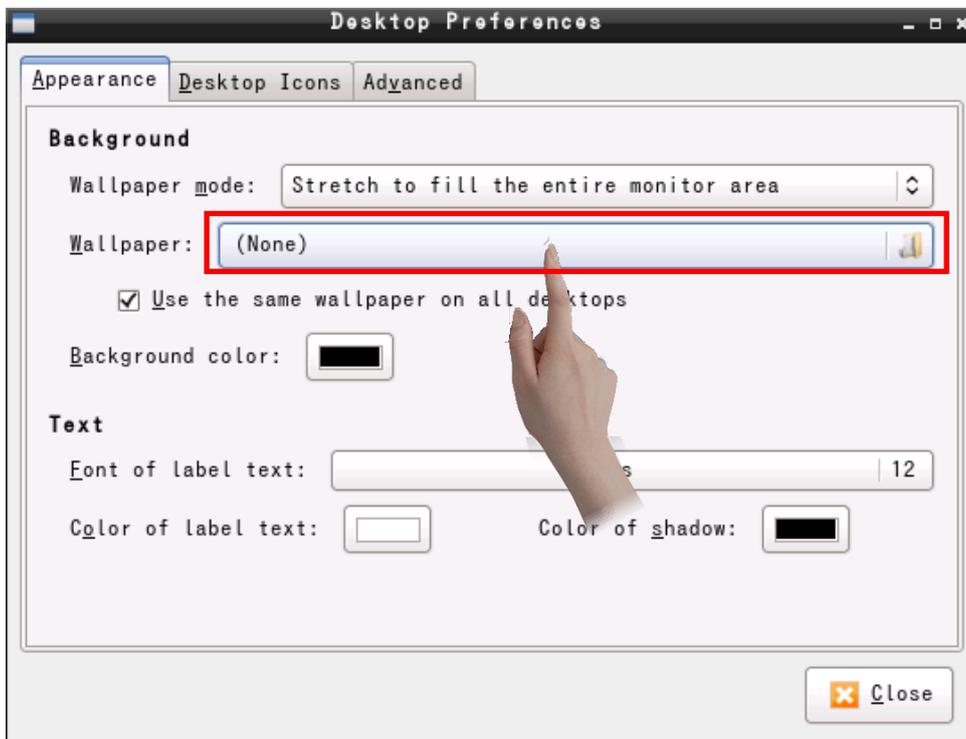
Touch [Wallpaper].

Select the wallpaper to register

Select the wallpaper to register, and touch [Open].

Registration is complete.

2.3.2　　　Unregistering Wallpaper

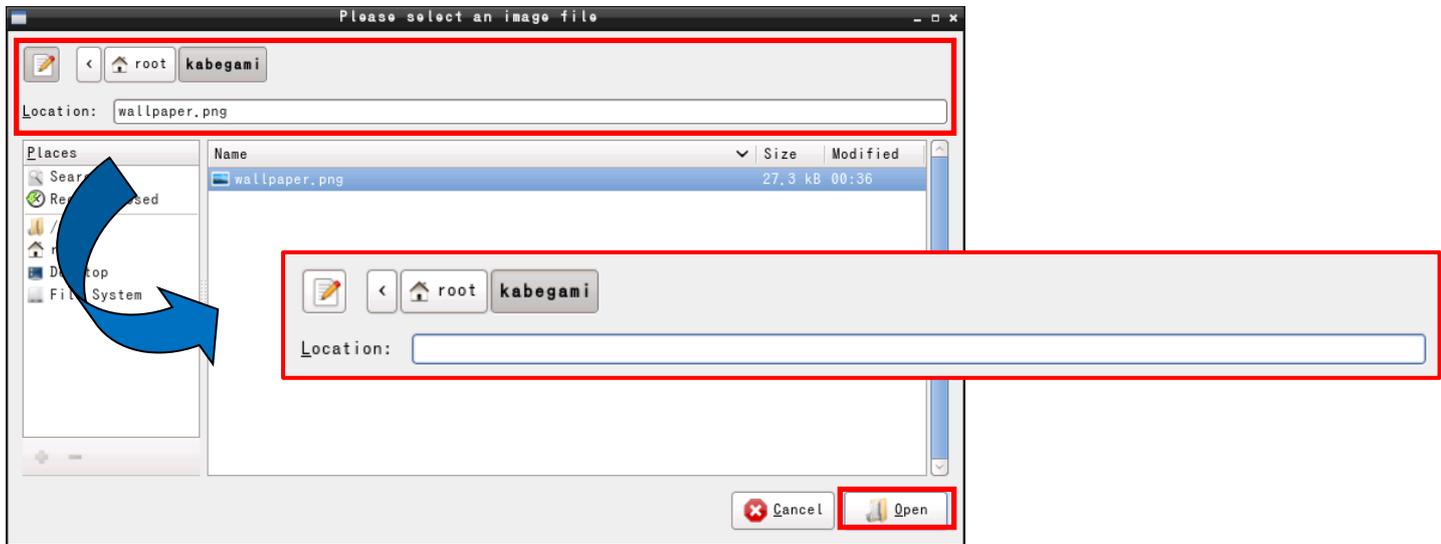This section describes how unregister wallpaper.

Open the Desktop Preferences screen
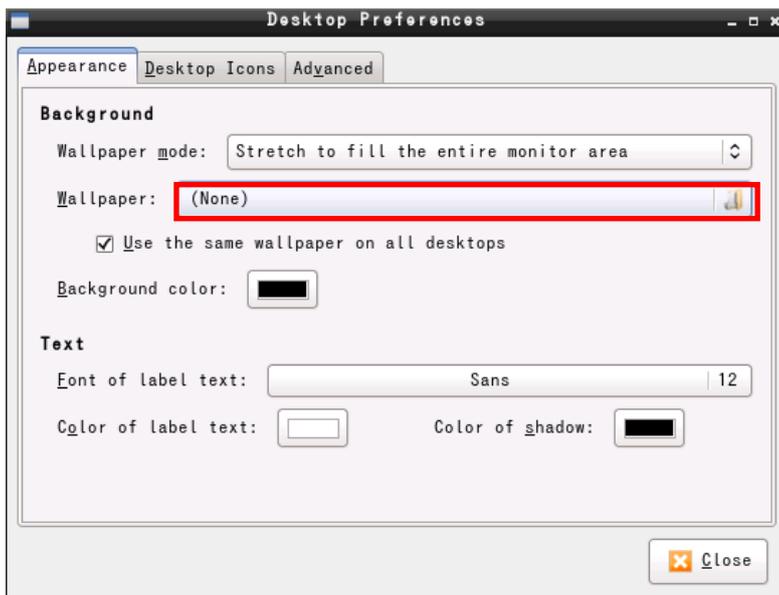
Touch [Wallpaper].

As shown in the image, use a keyboard or virtual keyboard to erase the contents of the [Location] field and touch [Open].

NOTE

To open the virtual keyboard for erasing the contents in a field, select [Start] menu > [Universal Access] > [Florence Virtual Keyboard].

The wallpaper is now unregistered.

Inquiries

If you have any questions, feel free to contact us.

<u>By E-mail</u>

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<u>FAQ</u>

🌐 www.dush.co.jp/english/support/faq/