VOLTCRAFT VC-14378990

VOLTCRAFT WBS-120 Thermal Imager User Manual

Model: VC-14378990

1. Introduction

Thank you for choosing the VOLTCRAFT WBS-120 Thermal Imager. This device is a compact and powerful thermal imaging camera designed for use with Android smartphones via a USB-C® connection. It provides accurate temperature measurements and thermal imaging from -20°C to 400°C, with a resolution of 120 x 90 pixels and a 25Hz refresh rate, making it ideal for various applications including electrical inspections, HVAC diagnostics, building inspections, and more. Please read this manual thoroughly before operating the device to ensure safe and efficient use.

2. Safety Instructions

Always observe the following safety precautions to prevent injury or damage to the device.

- Do not point the thermal imager directly at extremely high-intensity energy sources (e.g., the sun, lasers) as this may damage the detector.
- Do not expose the device to extreme temperatures, humidity, or corrosive environments.
- Avoid dropping or subjecting the device to strong impacts.
- Do not attempt to disassemble or modify the device. Repairs should only be performed by qualified personnel.
- Ensure the USB-C port on your Android device is clean and free of debris before connecting the thermal imager.
- Use the device within its specified operating temperature range (-20°C to 400°C).
- Keep the lens clean using a soft, lint-free cloth. Do not use abrasive cleaners.

3. Package Contents

Please check the package contents upon unpacking. If any items are missing or damaged, contact your retailer.

- VOLTCRAFT WBS-120 Thermal Imager

- Protective Case
- User Manual (this document)

4. Product Overview

Familiarize yourself with the components of your VOLTCRAFT WBS-120 Thermal Imager.

Figure 4.1: Front view of the VOLTCRAFT WBS-120 Thermal Imager, showing the USB-C connector and the thermal lens.

Figure 4.2: Back view of the VOLTCRAFT WBS-120 Thermal Imager, highlighting the compact design and USB-C connector.

Figure 4.3: Top view of the VOLTCRAFT WBS-120, showing the thermal lens and the USB-C connector in an upright position.

Figure 4.4: The VOLTCRAFT WBS-120 Thermal Imager alongside its transparent protective case.

5. Setup

Follow these steps to set up your VOLTCRAFT WBS-120 Thermal Imager for first use.

1. **Download the App:** Search for the official VOLTCRAFT thermal imaging app on the Google Play Store. Install the app on your Android smartphone.
2. **Enable OTG Function (if necessary):** Some Android devices require the "OTG" (On-The-Go) function to be enabled in their settings for external USB devices to be recognized. Check your phone's settings if the device is not detected.
3. **Connect the Device:** Carefully plug the USB-C connector of the VOLTCRAFT WBS-120 into the USB-C port of your Android smartphone.
4. **Launch the App:** Open the installed VOLTCRAFT thermal imaging app. The app should automatically detect the connected thermal imager and display the thermal image.
5. **Initial Calibration:** The device may perform a brief self-calibration upon first connection or when ambient temperature changes significantly. This is normal.

6. Operating Instructions

This section provides guidance on operating the VOLTCRAFT WBS-120 Thermal Imager with its dedicated application.

6.1 Basic Operation

- **Live Thermal View:** Once connected and the app is open, the screen will display a live thermal image.
- **Temperature Measurement:** The app typically displays the temperature of the central point, as well as the hottest and coldest points within the field of view.
- **Palette Selection:** Most thermal imaging apps allow you to change the color palette (e.g., Iron, Rainbow, Grayscale) to better visualize temperature differences. Access this option within the app settings.
- **Image Capture:** Use the app's interface to capture thermal images or record thermal videos. These will be saved to your smartphone's gallery.

6.2 Advanced Features (App Dependent)

The specific features available may vary depending on the version of the VOLTCRAFT app.

- **Emissivity Adjustment:** For accurate temperature readings, especially on different materials, adjust the emissivity setting in the app. Refer to the app's help section for common emissivity values.
- **Temperature Alarms:** Set high or low temperature alarms to be notified when temperatures exceed or fall below a specified threshold.
- **Spot/Area Measurement:** The app may allow you to add multiple spot meters or define areas for temperature analysis.
- **Reporting:** Some apps offer features to generate basic reports from captured thermal images.

For detailed instructions on specific app features, refer to the in-app help or the app's dedicated user guide.

7. Maintenance

Proper maintenance ensures the longevity and accuracy of your thermal imager.

- **Cleaning the Lens:** Use a soft, clean, lint-free cloth to gently wipe the thermal lens. For stubborn dirt, a small amount of lens cleaning solution designed for optical lenses can be applied to the cloth (not directly to the lens). Do not use abrasive materials or solvents.
- **Cleaning the Body:** Wipe the device body with a soft, damp cloth. Do not immerse the device in water or use harsh chemicals.
- **Storage:** When not in use, store the thermal imager in its protective case in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Firmware Updates:** Periodically check the VOLTCRAFT app for any available firmware updates for the thermal imager. Updates can improve performance and add new features.

8. Troubleshooting

If you encounter issues with your VOLTCRAFT WBS-120, refer to the following common problems and solutions.

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Device not recognized by phone.	• Loose connection. • OTG function disabled. • App not installed or running. • Incompatible phone model.	• Ensure the USB-C connector is fully inserted. • Check phone settings to enable OTG. • Install and open the VOLTCRAFT app. • Verify phone compatibility with the product specifications.
Thermal image is blurry or unclear.	• Dirty lens. • Device not calibrated. • Operating outside temperature range.	• Clean the thermal lens gently with a soft cloth. • Allow the device to self-calibrate (disconnect and reconnect if needed). • Ensure ambient temperature is within operating limits.
Inaccurate temperature readings.	• Incorrect emissivity setting. • Distance to target too far. • Reflective surfaces.	• Adjust emissivity in the app based on the material being measured. • Move closer to the target if possible. • Be aware that highly reflective surfaces can affect readings.

If the problem persists, please contact VOLTCRAFT customer support.

9. Specifications

Parameter	Value
Model Number	VC-14378990
Temperature Range	-20°C to 400°C
Infrared Resolution	120 x 90 pixels
Frame Rate	25 Hz
Interface	USB-C® (for Android)
Dimensions (L x W x H)	2.8 x 1.6 x 5.2 cm
Weight	21 grams
Manufacturer	VOLTCRAFT

10. Warranty and Support

VOLTCRAFT products are designed for reliability and performance.

10.1 Warranty Information

This product comes with a standard manufacturer's warranty. Please refer to the warranty card included in your product packaging or visit the official VOLTCRAFT website for detailed warranty terms and conditions specific to your region. Keep your proof of purchase for warranty claims.

10.2 Customer Support

For technical assistance, troubleshooting, or service inquiries, please contact VOLTCRAFT customer support.

- **Online Support:** Visit the official VOLTCRAFT website for FAQs, software downloads, and support

contact information.

- **Contact Information:** Specific contact details (phone, email) can usually be found on the VOLTCRAFT website or in your product documentation.

When contacting support, please have your product model number (VC-14378990) and purchase details ready.