

# Chrono Labeler

## User Manual

The **Chrono Labeler** is a minimalist device featuring a single physical button and three status LEDs.

It connects to your local network via Wi-Fi to synchronize time and print date-stamped stickers using paired Bluetooth Low Energy (BLE) printers.

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### Status LED Reference Guide

#### Blue LED: Wi-Fi Indicator

- **OFF:** Wi-Fi is powered down.
- **Flashing:** Access Point (AP) mode ready for initial configuration.
- **Blinking:** Connecting to your local network router.
- **Steady ON:** Successfully connected to your router.

#### Yellow LED: NTP Network Time Indicator

- **OFF:** Time invalid (unconnected router or unreachable NTP server).
- **Blinking:** Connected to router, synchronizing time from the internet.
- **Steady ON:** Time synchronized successfully; device is ready to print

#### Green LED: Printer Activity Indicator

- **OFF:** No active communication with a printer.
  - **Blinking:** Connecting to the target printer following a print instruction.
  - **Steady ON:** Actively streaming data to the printer.
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### Physical Button Operations

- **Change Wi-Fi Modes:** Press and hold for over 1.5 seconds to cycle through modes (AP Mode, Router Mode, or OFF).
- **Print DATE/Time Sticker:** Click once during normal operation.

**Note:** Both the Blue and Yellow LEDs must be **Steady ON** for the button to respond. If the connection to a printer fails or times out (12 seconds), the command is dropped without error codes.

## Initial Wi-Fi Setup

Follow these steps to connect the device to your local network:

1. **Verify AP Mode:** Ensure the blue LED is flashing. Press and hold the button for at least 1.5 seconds to change modes if needed.
2. **Connect via Smartphone:** Connect to SSID **Chrono Labeler** using the default password "Blopa1961".
3. **Open Web Interface:** Open Firefox or Chrome and navigate to <http://10.0.0.1>.
4. **Access Settings:** Click the **Configure Wi-Fi** link.
5. **Set Network Credentials:**
  - **SSID:** Type your network name or click **Scan Wi-Fi Networks** to select it.
  - **Password:** Input your router's password.
6. **Set IP Routing:** Leave the IP field blank for automatic **DHCP** addressing, or input a fixed static IP, Gateway, and Subnet Mask.
7. **Set Reconnection Timeout:** Input a value in minutes under **Retry** (0 configures indefinite retry loops).
8. **Set Startup Mode:** Select **Connected to Router** under *Wi-Fi Startup Mode* for automated boot connection.
9. **Save Configuration:** Click **SAVE**.

**Note:** Once saved, you can access the interface on your local network via browser at <http://chronolabeler.local> or its assigned IP address.

You can create a Chrono Labeler direct access icon in your smartphone from Firefox or Chrome (see option "Add App to Your Home Screen").

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## Printer Profile Management

The system stores up to **12 custom configurations** managing text sizes, margins, fonts, and specific printer targets.

### Pairing a BLE Printer

1. Navigate to the **Configure Printer** menu page.
2. Select your target profile and edit parameters as required.
3. Click the **PAIR** button and wait for the hardware scan to complete.
4. Select your BLE printer from the discovered device list to toggle status to **Paired**.
5. Click **SAVE**.

### Profile Logic & Behavior

- **Creating Profiles:** Select an existing template matching your physical print engine (TP-110 or TP-220), alter the profile name string, and click **SAVE**.
- **Overwrites:** Saving a profile matching an existing name replaces it automatically. If the storage space is capped at 12 records, saving an entry replaces the currently highlighted profile index without warning.

- **System Defaults:** Deleting all operational profiles automatically reloads 3 default factory configurations, requiring you to re-pair your hardware. At least one profile must exist always.
- **Primary Target Designation:** The last saved profile is designated as the system-wide fallback target whenever the physical hardware button is pressed. It is perfectly acceptable to SAVE an unmodified profile to define it as the default.

## Adjusting Date and Time Formats

Navigate to the **Date and Time configuration** page to select localization strings (e.g., MM/DD/YY, DD/MM, 12-hour AM/PM formats, or 24-hour modes). Click **PREVIEW** to generate a true What-You-See-Is-What-You-Get (WYSIWYG) render and evaluate your changes.

## Main Web Interactivity

- **Printer Selection:** Select active configurations directly from the drop-down menu. When you change printers the status will change to disconnected (or **Not Paired** if the printer in the selected profile isn't paired). The print button will be grayed out if the selected printer is not paired.
- **Custom Labels:** Fill text into the **Text to Print** fields to push custom text instantly using your selected fonts (no accents support in current version).
- **Emulated Print Button:** Clicking the dashboard's web **PRINT** button while leaving the first text line field blank sends a default time/date stamp payload to your printer, just as if you had pressed the hardware button.
- **Print Again:** Once a sticker has been printed the connection will remain active unless you change or turn off the selected printer, which means that if you print another sticker it will be output faster (notice that the green LED will not blink because the printer is already connected).