

# INSTRUCTION MANUAL



**Read and understand** all of the instructions and safety information in this manual before operating or servicing this tool.

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## Product Description

The EML250-ID is a handheld locating device which detects the presence and location of buried electronic markers with the capability to write to and read Tempo programmable ID markers.

The EML250-ID is rechargeable using the USB-C port and can import and export data via USB-C or Bluetooth to a mobile device with the Locator Link application.

## Components

The EML250-ID kit includes the following:

- EML250-ID Locator (with Rechargeable Li-Ion Battery pack installed)
- AC Charger Adapter with interchangeable plug types
- User Guide



1. Battery Compartment
2. USB-C Charge Port
3. Marker Holder
4. Antenna Foot

# Safety

## Important Safety Information



### SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

#### **⚠ DANGER**

Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

#### **⚠ WARNING**

Hazards which, if not avoided, **COULD** result in severe injury or death.

#### **⚠ CAUTION**

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.



#### **⚠ WARNING**

**Read and understand** this material before operating or servicing this equipment. Failure to understand how to safely operate this tool could result in an accident causing serious injury or death.

#### **⚠ WARNING**

- Use this unit for the manufacturer's intended purpose only, as described in this manual. Any other use can impair the protection provided by the unit.
- Use accessories that are appropriate for the application.
- Inspect the accessory before use.

Failure to observe these warnings could result in severe injury or death.

#### **⚠ CAUTION**

- Do not attempt to repair this unit. It contains no user-serviceable parts.
  - Do not expose the unit to extremes in temperature. Refer to "Specifications."
- Failure to observe these precautions may result in injury and can damage the unit.

# Getting Started

## Battery

Before turning on the EML250-ID for the first time, briefly charge the unit for at least 5-10 seconds to activate the internal battery and enable power-up. For optimal performance and runtime, fully charge the locator before locating markers.

For best results and shortest charging time, use the charger provided, or a USB-C charger with Power Delivery (PD) and a minimum of 45W.

## Onboarding

When powering on the EML250-ID for the first time, you will be prompted to either sync the settings from your mobile device with Locator Link app or manually select your preferred GNSS Accuracy Confidence Level, Date/Time, and EU Mode On/Off. It is recommended that the Locator Link app is already downloaded and configured with your preferred settings:

1. Download the Locator Link app.
2. Configure desired preferences in settings menu.
3. Pair your mobile device to the EML250-ID using Locator Link.

Once paired, preferences and the correct date and time will automatically sync to the locator.

## Date/Time

Please note that the EML250-ID cannot keep accurate time while powered off, so it's best to either pair the Locator Link app to the EML250-ID each time it is powered on or manually set the date and time in the Settings menu before recording Write, Read, or Pin events.

## EU Mode

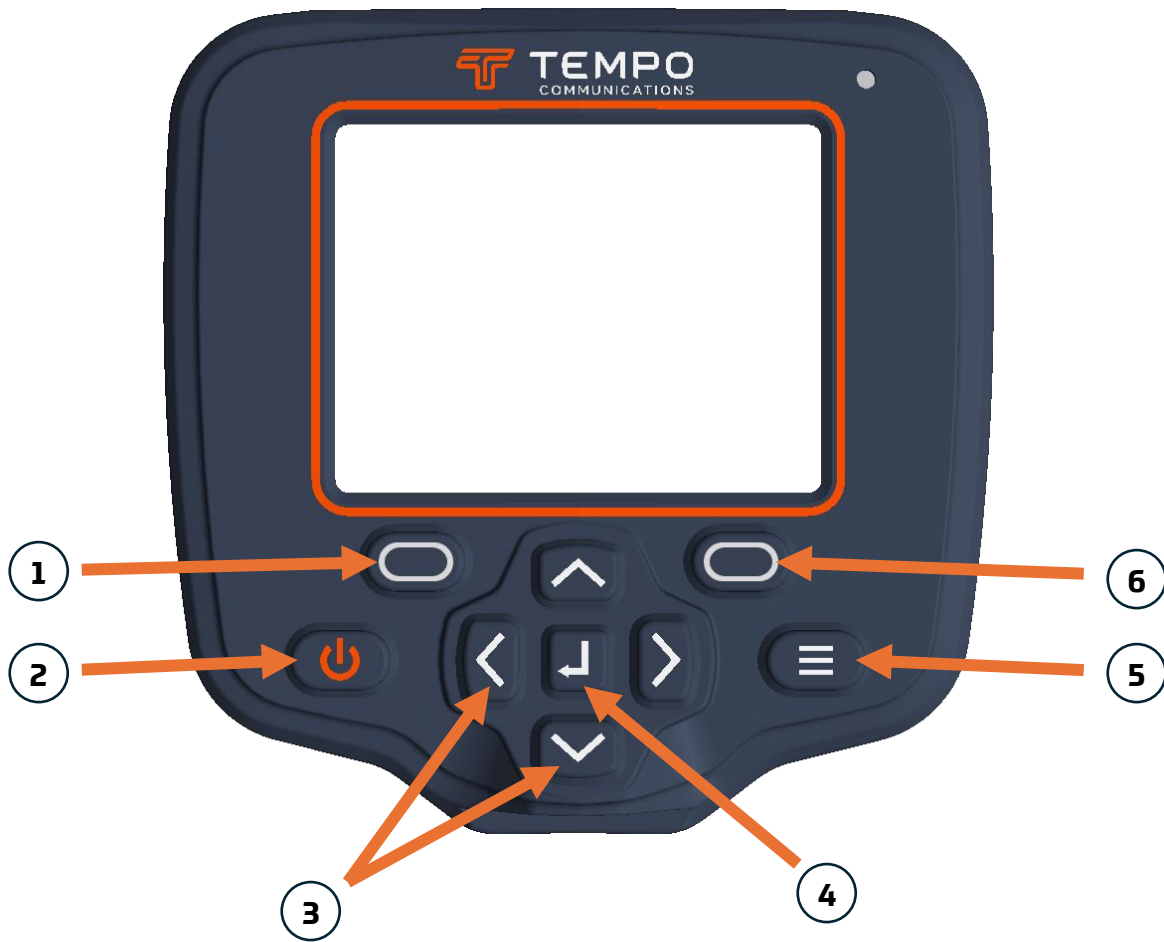
EU Mode controls which power marker frequency the EML250-ID detects. The setting must be configured correctly based on your operating region:

- **EU Mode ON:** Enables detection of Europower Red/Blue markers (134 kHz). Disables detection of Power Red markers (169.8 kHz). Use in Europe and regions where 169 kHz operation is restricted.
- **EU Mode OFF:** Enables detection of Power Red markers (169.8 kHz). Disables detection of Europower Red/Blue markers (134 kHz). Use in North America and regions where 169 kHz operation is permitted.


To change EU Mode: go to Menu → Settings → Device → EU Mode and select ON or OFF.

**Note:** This product is CE compliant only when operating in EU Mode. Altering the operating frequencies or increasing the output power of this device may void CE marking and conformity with EMC Directive 2014/30/EU. Users are responsible for ensuring all modified devices comply with local regulations and do not cause harmful interference.

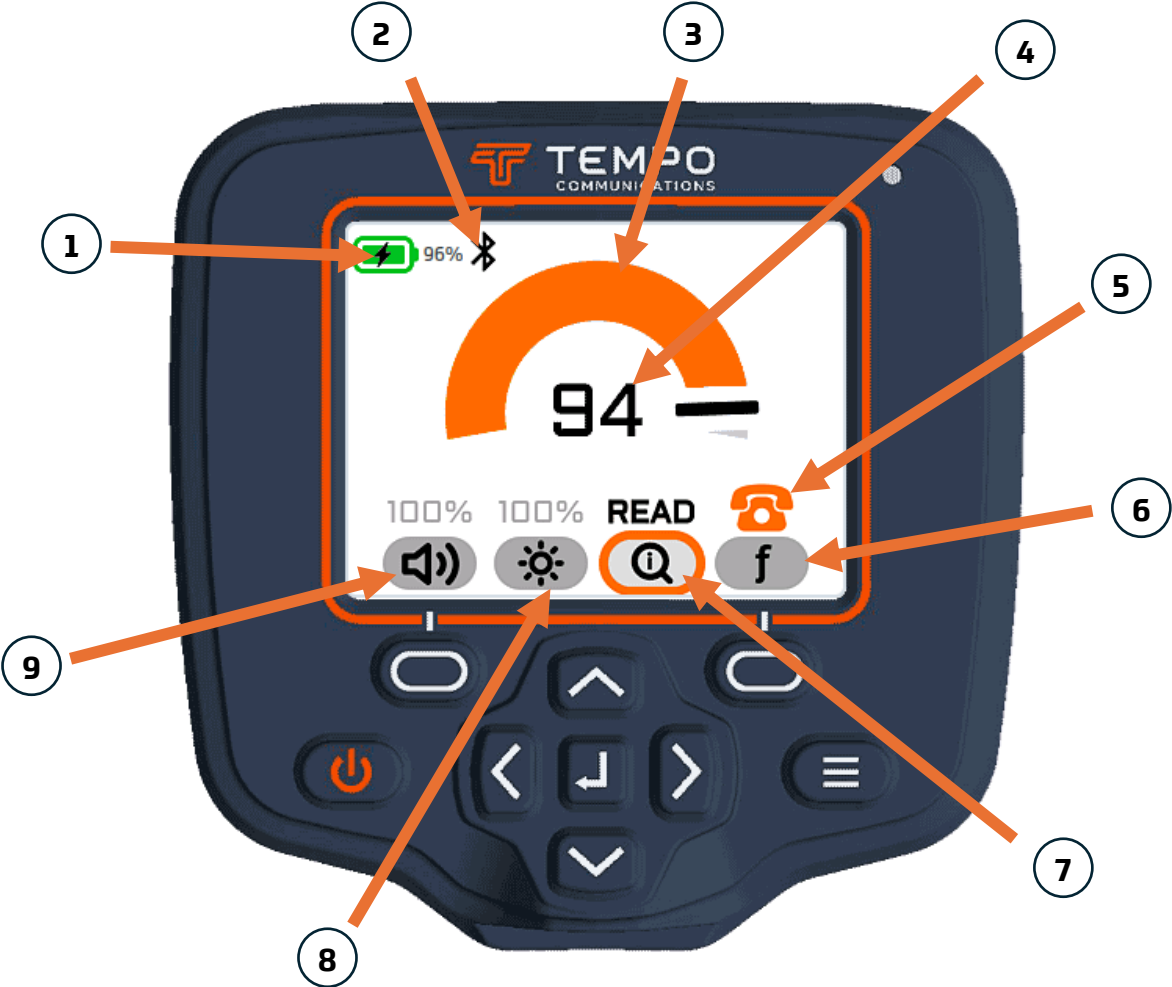
# Keypad



- 1. Left Softkey / Toggle Mute
- 2. Power ON/OFF
- 3. Directional keys
- 4. Enter key

- 5. Main Menu key
- 6. Right Softkey / Toggle  
Single Frequency Mode **f** vs. Scan Mode 

# Display



- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1. Battery Charge Level/Status</li> <li>2. Bluetooth Connectivity Status</li> <li>3. Color-coded Signal Strength Meter</li> <li>4. Signal Strength (00 - 100)</li> <li>5. Color-coded Marker Frequency Icon</li> </ul> | <ul style="list-style-type: none"> <li>6. Toggle Single Frequency Mode <b>f</b> / Scan Mode </li> <li>7. Action (Read  / Pin  / Write </li> <li>8. Brightness Adjustment </li> <li>9. Volume Adjustment  / Mute </li> </ul> |
|---|---|

## Writing to ID Markers

Marker data is written using Templates. Templates consist of text lines which can include Keywords which use less available data. Once the Template is completed, save and title the Template.

### Templates

Templates are written to markers. Create new or edit existing Templates of data to be written to markers by providing Data Types and corresponding Values/Details.

Selecting TEMPLATES from the Main Menu brings up a list of saved Templates.

Press the Right Softkey to bring up a context menu:

- Create New
- Duplicate
- Delete

Templates are created and edited using a virtual keyboard. Text can be continuously entered on one line or broken up into multiple lines without any strict character limits — only a storage limit for each marker.

### Keywords

When entering words or phrases, **Keywords** will appear below the keyboard.

Keywords are commonly used words or phrases which offer data savings. Rather than type in all characters, use Keywords to maximize the amount of information that can be stored onto an ID marker. Templates can store up to 40 Keywords without any custom text, 121 characters without the use of any Keywords, or a combination thereof to densely pack an ID marker with useful information.

## Initializing the Write Function

Once you have an existing Template, you can Write to an ID Marker.

To write data to a Marker-ID:

1. Position the Marker-ID in the cradle at the foot of the EML250-ID locator.
2. In Locate Mode, navigate to the Action tile and use the Up/Down arrows to select WRITE, then press Enter.
3. Highlight the desired Template and press Enter to review it.
4. Press the Right Softkey, then select "Write to Marker" and press Enter.
5. The locator will display write progress. Once complete, a write log entry is saved automatically.

The WRITE log entry will capture: record number, write date/time, serial number, marker type, marker frequency, and the data written to the marker.

ID Markers can be repeatedly re-written an unlimited number of times. Once buried at least 1 ft (30 cm), they will be out of range for re-writing.

**Important:** Metallic objects can interfere with writing to a marker. Ensure the locator is at least 30 cm (1 ft) from any metallic objects or other markers during the write process.

## Locating/Detecting Markers












When searching for buried markers, use the main Locate mode which shows the Signal Strength Meter in the middle of the display.

The Signal Strength Meter rises to indicate a buried marker is below. The nearer to the marker and the more directly over the marker, the higher the meter will rise.

When in Locate mode, use the Left and Right Softkeys respectively to Mute/Unmute and toggle Scan or Single Frequency modes. When in Scan Mode, the locator will detect multiple types of markers at different frequencies (different color markers) including all types, if desired.

## Compatible Markers<sup>1</sup>

Icon	Color	Utility	Frequency
	Purple	Non-Potable	66.35 kHz
	Orange/Black	CATV	77 kHz
	Yellow	Gas	83 kHz
	Yellow/Black	Fiber Optic	92 kHz
	Orange	Telephone	101.4 kHz
	Green	Sanitary	121.6 kHz
	Red/Blue	Europower <sup>2</sup>	134 kHz
	Blue	Water	145.7 kHz
	Red	Power <sup>3</sup>	169.8 kHz

1. EML250-ID detects non-programmable markers of other brands at above frequencies but only reads data from Tempo ID markers.

2. Europower markers are detectable when in EU Mode only.

3. Power markers are not detectable when in EU Mode. Use of the red Power marker locate mode may be restricted by radio licensing requirements for short-range devices in the EU and other countries. Users must ensure that this mode is only activated in regions where operation at 169 kHz is permitted.

## Scan Mode and Single Frequency Mode

The EML250-ID can search for all marker frequencies simultaneously (Scan Mode) or focus on a single known frequency (Single Frequency Mode). Use the Right Softkey to toggle between modes from the Locate Mode home screen.

## Scan Mode

Scan Mode searches all available marker frequencies simultaneously. To use Scan Mode:

1. Press the Right Softkey to activate Scan Mode.
2. When a marker is detected, the signal strength display will reflect the marker's color and the corresponding utility symbol will appear above the Scan/Freq tile.

## Single Frequency Mode

Single Frequency Mode targets one specific marker type. To use Single Frequency Mode:

1. Navigate to the Scan/Freq tile using the Left/Right directional arrows.
2. Use the Up/Down arrows to scroll through available marker frequencies, or press the Right Softkey to switch between Scan and Single Frequency modes.

Note: If EU Mode is ON, the locator will not detect Power markers (169.8 kHz). If EU Mode is OFF, the locator will not detect Europower markers (134 kHz). See the EU Mode section for details.

Use the Left and Right directional arrows to select one of the functions/settings at the bottom of the screen (Volume, Brightness, Read/Write/Log, Frequency). Use the Up and Down arrows to adjust each of the settings. Pressing the Enter button on the Action button (Read/Write/Pin) activates that function:

- Read: Read ID Marker serial number and any saved data
- Write: Bring up Templates menu to select Template to be saved to ID Marker
- Pin: Log available GPS coordinates and marker signal strength

## Reading ID Markers

When a Tempo ID Marker is detected, its serial number and all stored data can be retrieved. To read an ID Marker:

1. In Locate Mode, navigate to the Action tile using the Left/Right directional arrows.
2. Use the Up/Down arrows to select READ and press Enter.
3. The locator will display progress (e.g., “Reading Marker Data... 12%”, “Reading Mobile coordinates data 75%”).

The READ log entry will capture: record number, read date/time, serial number, marker type, marker frequency, any stored marker data, and GPS coordinates from both the mobile device and any connected external GNSS receiver.

If no mobile device is connected, the locator will prompt: “No mobile device data received. Do you want to save history without mobile device data? Select Save or Retry.” Once complete, select the Right Softkey to review the read log entry, or the Left Softkey to return to Locate Mode.

**Important:** Metallic objects can interfere with reading a marker. Ensure the locator is at least 30 cm (1 ft) from any metallic objects or other markers for optimal performance.

## “Pinning” Markers

The PIN function records the location data and signal strength of a marker without reading it. This is ideal for non-ID markers such as the OmniMarker II or Spike Marker, which contain no serial number or stored text.

To pin a marker:

1. In Locate Mode, navigate to the Action tile using the Left/Right directional arrows.

2. Use the Up/Down arrows to select PIN and press Enter.

3. The locator will gather location data. Progress will be displayed on screen.

The PIN log will record: record number, pin date/time, marker frequency, signal strength, and GPS coordinates from any connected mobile device or external GNSS receiver. If no mobile device is connected, the locator will prompt: "No mobile device data received. Would you like to retry the mobile read? Select Cancel or Retry."

Once complete, select the Right Softkey to review the pin log entry, or the Left Softkey to return to Locate Mode.

## Main Menu



From the default Locate Mode, press the Menu button to bring up the Main Menu. Press either the Left Softkey (Back) or the Menu button again to return to Locate Mode. While exploring the menus, pressing the Left Softkey (Back) will return you to the previous menu while pressing the Menu button will return you all the way back to the Main Menu.

## Templates

Templates are written to markers. Create new or edit existing Templates of data to be written to markers by providing Data Types and corresponding Values/Details.

Selecting TEMPLATES from the Main Menu brings up a list of saved Templates.

Press the Right Softkey to bring up a context menu:

- Create New
- Duplicate
- Delete

Templates are created and edited using a virtual keyboard. When entering words or phrases, **Keywords** will appear below the keyboard.

## **Keywords**

Keywords are commonly used words or phrases which offer data savings. Rather than type in all characters, use Keywords to maximize the amount of information that can be stored onto an ID marker.

## **History**

Any data written to or read from a marker is logged in the Locator as well as any manually logged positions are tracked in the History Logs. These logs can be viewed, exported, or deleted.

Selecting HISTORY from the Main Menu will bring up a list of all Write, Read, or Pin events with the most recent at the top. These events can be filtered by type.

## **Exporting Log Data**

History logs (Read, Pin, and Write events) can be transferred from the EML250-ID to the Locator Link app and then exported in your preferred file format. See “Locator Link” section for more information.

# Settings

## Device

- **Saved Devices**
  - Previously connected devices
- **EU Mode**
  - ON
    - Enables locating of “Europower” Red/Blue (134 kHz) markers
    - Disables locating of “Power” Red (169.8 kHz) markers
  - OFF
    - Enables locating of “Power” Red (169.8 kHz) markers
    - Disables locating of “Europower” Red/Blue (134 kHz) markers
- **Show Onboarding**
  - ON - Next time the unit is turned on, it will walk through the process laid out in the “Getting Started” section, prompting the user to either sync settings from a Locator Link device or to manually select Accuracy Confidence Level, Date/Time, and EU Mode ON or OFF.

## Interface

- **Units**
  - Metric (meters) / Imperial (feet)

## System

- **About**
  - Model Number, Bluetooth ID, Software Version Number
- **Language**
  - English only (more languages to be added soon)
- **Date/Time**
  - Manually set the Date and Time if no mobile device is paired to the EML250-ID.

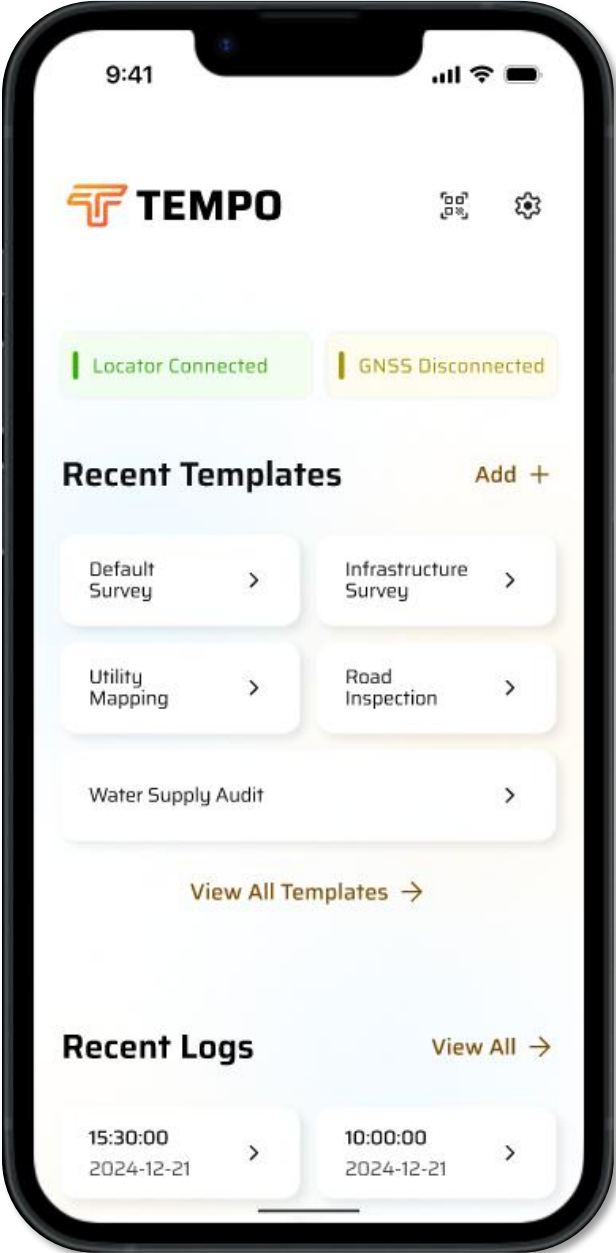
- **Location**
  - Decimal Degrees - Latitude/Longitude system where fractions of degrees are converted into decimals, e.g. 33.137638, -117.244119
  - Decimal Minutes - Latitude/Longitude system where fractions of degrees are converted to “minutes” (1/60 of a degree), e.g. 33° 8.2583’ N, 117° 14.6471’ W
  - Decimal Seconds - Latitude/Longitude system where fractions of *minutes* are converted into seconds (1/60 of a minute), e.g. 33° 8’ 15.5” N, 117° 14’ 38.83” W
  - UTM (WGS84) - Designed for high-precision mapping, it is based on a model which breaks the globe into flat zones and measures the distance from the equator and central meridian, e.g. Zone 11S, 477230.87 (Easting), 3666572.19 (Northing)
- **Accuracy Confidence Level** - *Selects how location accuracy is expressed as a radius — not how accurately the device located the marker. All three levels use the same GNSS data; only the reported radius changes. This setting affects both new records and existing history.*
  - 50% (CEP) - There is a 50% chance the true position falls within the displayed radius. Produces the smallest radius. Use when the radius gives you a quick sense of whether a record is in the right area — where a smaller circle is easier to work with than a more conservative one.
  - 68% ( $1\sigma$ ) - There is a 68% chance the true position falls within the displayed radius. A standard confidence level for general field use, where you want a realistic sense of location accuracy without overstating the uncertainty.
  - 95% ( $2\sigma$ ) - There is a 95% chance the true position falls within the displayed radius. Produces the largest radius. Use when you need to verify that a record meets a strict accuracy threshold — for example,

confirming a radius is under a specific distance before trusting the coordinates for precise work or high-accuracy mapping.

- **Show Location Alert**

- Yes - A warning will be given if no GNSS coordinate data is obtained when attempting to Read an ID marker.
- No - No warning will be given if no GNSS coordinate data is obtained when attempting to Read an ID marker.

# Locator Link App



The free Locator Link app (available for iPhone/iPad and Android) provides a full-featured companion to the EML250-ID. It enables template creation and sync, history import and export, GNSS device pairing, and over-the-air firmware updates. No account creation and no subscription or additional fees are required.

## Setting Up

Locator Link will request permissions for Bluetooth, Location, Notifications, and Camera. Enable each of these settings to enable all of Locator Link's functions. Tap the Gear icon at the top right of the Home screen to view the permissions statuses and enable permissions.

## Bluetooth Pairing

To pair a mobile device with the EML250-ID for the first time:

1. Power on the EML250-ID.
2. In the Locator Link app, go to Settings and ensure Bluetooth is enabled and set to "Allow While Using App".
3. Tap "Locator Devices" and select the EML250-ID from the Available Devices list.
4. When prompted on the EML250-ID, select "Yes" to confirm pairing. The Bluetooth icon on the locator will turn blue and Locator Link will show "Locator Connected".

Once paired, the EML250-ID will be listed as a saved device. On future uses, tap "Locator Disconnected" from the Locator Link home screen to quickly reconnect.

## Firmware Updates

The EML250-ID firmware can be updated wirelessly (Over the Air) via the Locator Link app. Tempo recommends keeping the firmware up to date to ensure access to the latest features and improvements.

To update the EML250-ID firmware:

1. Ensure the Locator Link app is updated to the latest version.
2. In the Locator Link app settings, select "Locator Devices".

3. Select the EML250-ID from “Available Devices”.
4. Tap “Pair” in the Locator Link app and/or on the EML250-ID if required.
5. Tap “Update” in the Locator Link app to download and install the latest firmware.

## **Creating Templates in Locator Link**

Templates can be created and edited in Locator Link and then pushed to the EML250-ID:

1. From the Locator Link home screen, select “Add +” next to “Recent Templates”, or tap “View All Templates” then “+ Add”.
2. Enter template text using alphanumeric and special characters (max 118 characters or 38 Keywords). Use the Return key to move between lines.
3. Tap “Done”, review the template, then tap “Continue”. Name the template file and tap “Save”.
4. If connected to the EML250-ID, tap “Push to Locator” to sync the new template to the device.

## **Connecting to a GNSS Receiver**

The EML250-ID can record location data from the GPS/GNSS capability of a paired mobile device running Locator Link. For higher accuracy, an external GNSS receiver can also be paired. Location data is captured automatically during Read and Pin events.

To attempt to connect to a GNSS Receiver, tap either the GNSS Receiver Disconnected status bar from the Home screen or go to Settings (gear icon) and tap “GNSS Receivers.” Tap “Nearby GNSS Receiver Device” and Select the correct device from the list that appears (may take a minute or more to appear).

Verify the connection status in the Locator Link settings. If pairing issues occur, try connecting the GNSS receiver directly through your mobile device's Bluetooth settings.

## Using a Mobile Device for Location

1. In the Locator Link app settings, select the EML250-ID listed under "Locator Devices" to pair the device.

2. In the Locator Link app settings, select your preferred units, accuracy confidence level, and location format.

## Using a GNSS Receiver

The EML250-ID can record location data from the GPS/GNSS capability of a paired mobile device running Locator Link. For higher accuracy, an external GNSS receiver can also be paired. Location data is captured automatically during Read and Pin events.

## Connecting to a GNSS Receiver

1. Tap either the GNSS Receiver Disconnected status bar from the Home screen or go to Settings (gear icon) and tap "GNSS Receivers."

2. Tap "Nearby GNSS Receiver Device" and Select the correct device from the list that appears (may take a minute or more to appear).

3. Verify the connection status in the Locator Link settings.

If pairing issues occur, try connecting the GNSS receiver directly through your mobile device's Bluetooth settings.

## Attaching Images

Up to 5 images can be attached to individual History records in Locator Link. Exporting of these images is not yet supported, but is coming soon.

## Importing Data to Locator Link

Open the Locator Link app and connect to the EML250-ID via Bluetooth, then:

1. From the Locator Link home screen, select “Tap Here to Import History Files”.
2. Select “EML History Files” and tap Import.
3. Choose “Copy History Files” (keeps logs on the EML250-ID) or “Move History Files” (transfers and clears logs from the EML250-ID).
4. Select “Move All” or choose specific history files, then confirm. Imported files are stored in Locator Link under “Local History Files” as Read/Pin History Files and Write History Files.

## Exporting Data from Locator Link

History logs can be exported from Locator Link in your preferred file format:

1. In Locator Link, select “View All” next to “Recent Imported Histories”.
2. Open “Local History Files” and apply any desired filters.
3. Select the desired files and tap “Export”.
4. Choose file format (CSV or JSON), rename the file if needed, and select your sharing method (email, GIS platform, cloud storage, etc.).

## QR Code Scanning

The EML250-ID includes a QR code scanning feature that allows the mobile app to quickly capture a marker's serial number and log a timestamp at the moment of scan. This provides a fast way to record which markers were deployed and when, without needing the locator unit.

QR code scanning does not read the custom data stored on the marker ball — only the serial number.

From the Home screen, tap on the QR Code icon next to the Gear icon. Any scanned markers will appear in a list here.

To scan a marker's QR Code, tap the Scan button near the bottom of the screen. The device's camera will activate and automatically capture any QR codes within view and add them to the top of the list.

Tapping an individual entry will give the option to Export or Delete (CSV or JSON).

Tapping the "Select" button at the bottom right of the screen will give the option to select multiple entries for Exporting or Deletion.

## **Maintenance**

To maintain the performance and longevity of your EML250-ID, follow the care guidelines below.

### **Charging**

Charge the EML250-ID after each use using the provided charger or a USB-C Power Delivery (PD) charger with a minimum of 45W. Fully charging the battery before use will provide up to 10 hours of operating time. Avoid storing the unit with a depleted battery for extended periods.

### **Cleaning**

Wipe the unit clean with a soft, damp, lint-free cloth. Do not use abrasive cleaners, solvents, or high-pressure water. Ensure the USB-C port is free of debris before charging. Do not submerge beyond rated IP specifications.

### **Storage**

Store the EML250-ID in a cool, dry location within the rated storage temperature range of -40°C to 70°C / -40° to 158°F.

To prolong the life of the RRC2040 rechargeable lithium-ion battery pack, it is not recommended to store the EML250-ID outside of a temperature range of -20°C to 50°C / -4°F to 122°F. Battery life is maximized when stored within -20°C to 25°C / -4°F to 77°F.

Keep the unit away from direct sunlight and extreme humidity during storage.

## Battery Replacement

To access the battery compartment, loosen the 8 flathead captive screws surrounding the label on the left side of the upper housing until the battery cover can be removed with the screws still retained.

Inside the battery compartment is the RRC2040 rechargeable lithium-ion battery pack and a plastic spacer to keep the battery in contact with the battery connection. This spacer can be removed to allow for a larger battery pack such as the RRC2040-2 (or equivalent) for around double the battery life.

If the RRC2040 is being replaced with another of the same size, place the plastic spacer with the foam side against the battery for easiest installation and removal.

When re-applying the battery cover, tighten the 8 screws one at a time to 1.4 Nm / 12in-lbs of torque to ensure a water-protected seal.

## Troubleshooting

If you experience issues with the EML250-ID, refer to the common solutions below. If the problem persists, contact Tempo support (see Warranty and Support).

- **Unit will not power on:** Charge the unit for at least 5-10 seconds before attempting to power on for the first time. If the battery is fully depleted, the unit may come on with a dimmed backlight. Charge using the provided USB-C

charger or other USB-C PD charger (45W minimum) for several minutes before powering on.

- **Unit will not power off:** The EML250-ID will not power off while charging as the charger overrides the power circuit and allows operation while charging.
- **Signal noise / false positives:** Make sure there are no large metallic objects beneath the EML250-ID. Leaving the EML250-ID plugged into a charger will cause noise on the signal strength meter, but this will not affect Writing functionality. Nearby electrical lines or transformers should not otherwise affect the performance of the EML250-ID.
- **No marker detected:** Ensure you are in the correct frequency mode (Scan or Single Frequency) and that EU Mode is configured correctly for the marker type. Verify the marker is within detection range and that no metallic objects are interfering.
- **Cannot write to marker:** Only attempt to write to Tempo ID Markers. Ensure the Marker-ID is securely positioned in the cradle at the foot of the locator. Verify the locator is at least 30 cm (1 ft) from metallic objects and other markers. Confirm a template has been created and selected.
- **Cannot read marker:** Only Tempo ID Markers (within range) can be read by the EML250-ID. Acquire the maximum signal strength of a marker possible before activating the Read function. When attempting to read a marker, do not move the locator. Be sure to allow the EML250-ID up to 60 seconds to read markers at deeper depths.
- **Bluetooth will not pair:** Ensure Bluetooth is enabled on your mobile device and set to “Allow While Using App” in the Locator Link app settings. Make sure the EML250-ID is powered on and within range. Try removing the device from saved devices and re-pairing.
- **GNSS Receiver is not showing as an available device:** GNSS Receivers can sometimes take up to a minute or more to appear as an available Bluetooth device.

- **GPS/GNSS coordinates not recording:** Ensure Location permissions are enabled for the Locator Link app on your mobile device. Confirm the Locator Link app is connected to the EML250-ID. If using an external GNSS receiver, verify it is paired under “GNSS Receivers” in the Locator Link app settings.
- **Firmware update fails:** Ensure the EML250-ID battery is adequately charged before updating. Keep the Locator Link app and EML250-ID within Bluetooth range throughout the update process. If the update fails, retry from the Locator Link app settings.

# Specifications

## Battery

Rechargeable Li-ion battery pack (RRC2040).....	11.25V / 2950mAh (33.2Wh)
Typical Battery Life .....	10 hrs
Charge Operating Temperature .....	0°C to 45°C (32°F to 113°F)
Discharge Operating Temperature .....	-20°C to 60°C (-4°F to 140°F)
Battery Storage Temperature (max).....	-20°C to 50°C (-4°F to 122°F)
Battery Storage Temperature (recommended).....	-20°C to 25°C (-4°F to 77°F)

## Charging

Connector .....	USB 2.0 Type-C
Max Current.....	5 Amps
Max Voltage .....	30 Volts
IP Rating .....	IPx8
Fuse (F1).....	Littelfuse 0154003-DRTL, 3A, quick-swappable

## Environmental

Operating Temperature .....	-4° to 122°F (-20°C to 50°C)
Storage Temperature.....	-40° to 158°F (-40°C to 70°C)

## Physical

Length ..... 12.95in (329mm)  
 Width..... 9.48in (241mm)  
 Height ..... 30.55in (776mm)  
 Weight ..... 5.05 lbs (2.28 kg)  
 Foot IP Rating.....IP65\*  
 Housing IP Rating .....IP55

\* The EML250-ID has been independently tested to IEC 60529 standards for resistance to dust and water exposure. Following IP65 testing the entire unit powered on and functioned as intended with no damage or performance degradation observed. The antenna housing achieved IP65 (Dust-Tight and Water-Protected). The upper chassis achieved IP55 (Dust-Protected and Water-Protected).

**Performance**

ID OmniMarker Write Range ..... 1 ft. / 0.3 m  
 ID OmniMarker Detect/Read Range..... 5 ft / 1.5 m

## Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### CE

Declaration of conformity is available upon request via email to [support@tempocom.com](mailto:support@tempocom.com).

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

**This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:**

**(1) This device may not cause interference;**

**(2) This device must accept any interference, including interference that may cause undesired operation of the device.**

**L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:**

**1. L'appareil ne doit pas produire de brouillage;**

**2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.**

中国大陆代理商

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