

# TKI Align Pro

## GNSS Receiver

### User Manual

Product Name: TKI Align Pro

Model Number: TKIALIGNPRO-001



# INTRODUCTION

This manual contains instructions for setting up and operating the Align Pro TKI GNSS receiver. It is recommended that you read this manual to become familiar with the specific functions of the device, even if you have prior experience with other GNSS (Global Navigation Satellite System) devices.

For a general introduction to GNSS technology, please visit our website: [www.mettatec.com](http://www.mettatec.com).

## OVERVIEW

Align Pro GNSS receiver integrates into a compact and robust unit:

- Bluetooth and USB communication technologies .
- Function: Works as a quick-setup RTK rover.
- Indicators: A single LED displays operating status, communication, and charge level.
- Connectivity: Connects wirelessly via Bluetooth to your mobile device (phone or tablet).
- Software: Operates with MettaGo software for RTK measurements.
- Data Logging: Records GNSS data to the linked mobile device for later email or USB transfer.

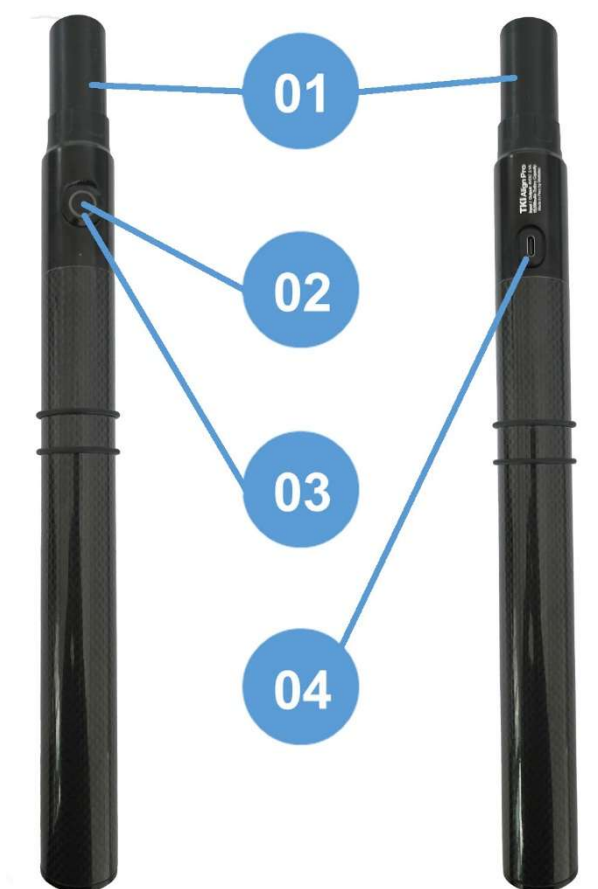
# 1 . TKI ALIGN PRO GNSS RECEIVER

## 1.1. CONTENT



| ITEM | CONTENT       |
|------|---------------|
| 01   | GNSS RECEIVER |
| 02   | USB-C Cable   |
| 03   | ADAPTER       |
| 04   | CASE          |

## 1.2 . HARDWARE COMPONENTS AND FUNCTIONS



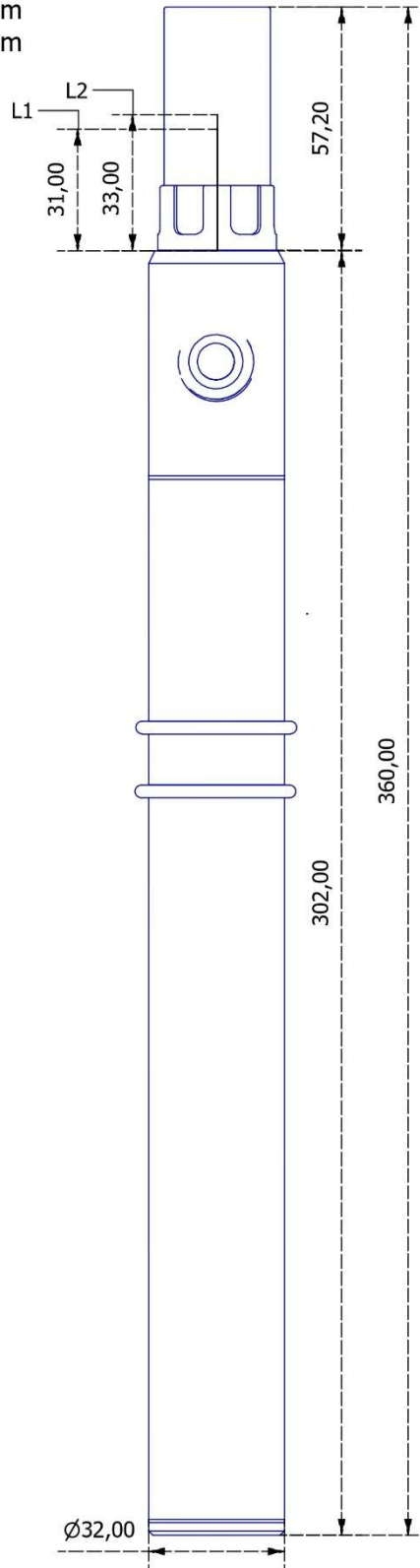
| ITEM | COMPONENT    | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 01   | GNSS ANTENNA | Allows the reception of multi-constellation GNSS messages for positioning.                                                                                                                                                                                                                                                                                                  |
| 02   | BUTTON       | <b>Power On</b> : Press for 2-3 seconds until the LED turns on.<br><b>Off</b> : Press for 2-3 seconds, until the LED turns off.<br><b>Factory Reset</b> : Press for 10 seconds or more, until the LED lights up.                                                                                                                                                            |
| 03   | LED          | Allows you to interpret the status, communication or load.<br><b>State mode</b> :<br>Blue LED in operation and Green LED in charging.<br><b>Mode of Communication</b> :<br>Blue LED and 2 flashes every 1 sec: iOS Mode<br>Solid Blue LED: Connected to an iOS device<br><b>Battery charge indicator</b> :<br>Flashing Green LED: 0 - 95%<br>Permanent Green LED: 95 - 100% |
| 04   | USB C port   | <b>USB Mode</b> : Update the GNSS receiver firmware using the desktop software.<br><b>Power Bank Mode</b> : To power other devices.                                                                                                                                                                                                                                         |

## Receptor GNSS TKI Align Pro

Offsets:

L1 Centro de Fase = 333 mm

L2 Centro de Fase = 335 mm



## TECHNICAL SPECIFICATIONS

| GNSS                       |                                                                                       |
|----------------------------|---------------------------------------------------------------------------------------|
| Channels:                  | 184                                                                                   |
| First fix time :           | 20 s (cold), 2 s (hot)                                                                |
| Frequency:                 | 1 Hz to 5 Hz                                                                          |
| Supported formats:         | RTCM3.X (input)<br>NMEA (output)<br>Raw Data in RINEX (for PPK and PPP-Static)        |
| Compatible constellations: | GPS (L1C/A, L2C)<br>GLONASS (L1OF, L2OF)<br>Galileo (E1B/C, E5b)<br>Beidou (B1I, B2I) |
| RTK Accuracy:              | Horizontal: 7 mm + 1 ppm<br>Vertical: 13 mm + 1 ppm                                   |
| PPK Accuracy:              | Horizontal: 6 mm + 1 ppm<br>Vertical: 1.2 mm + 1 ppm                                  |

| Design and Construction |                |
|-------------------------|----------------|
| Dimensions:             | 360 mm x 32 mm |
| Weight:                 | 275 g          |
| Operating temperature:  | -20°C to 65°C  |

| Connectivity and Energy |                    |
|-------------------------|--------------------|
| Bluetooth:              | 4.2                |
| Port:                   | USB-C              |
| Feeding:                | 5V DC              |
| Maximum Consumption:    | 500 mA             |
| Average Consumption:    | 200 mA             |
| Battery:                | 10000 mAh          |
| Autonomy:               | 9 h in normal mode |

## SAFETY WARNINGS

|                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Warning: Only use the supplied USB Type-C cable for power supply. Using incompatible power sources may damage the device.            |
|  Warning: Do not operate the device in explosive atmospheres or near flammable materials.                                             |
|  Warning: Ensure antennas are securely attached before powering on the device. Loose antennas may affect performance or cause damage. |
|  Caution: Avoid dropping the device. The rugged enclosure offers protection, but impacts may affect calibration.                      |

## FCC WARNING

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** 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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.