Printed Matter No. 6159925540_EN
Issue No. 03
Date 04/2020
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Tracking base

Product Instructions

Model	**Part number**
Tracking base	6158133350

Download the latest version of this document at
http://www.desouttertools.com/info/6159925540_EN

⚠ WARNING

Read all safety warnings and instructions

Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference

Table of Contents

Product Information

General Information

⚠ WARNING Risk of Property Damage or Severe Injury

Ensure that you read, understand and follow all instructions before operating the tool. Failure to follow all the instructions may result in electric shock, fire, property damage and/or severe bodily injury.

- ► Read all Safety Information delivered together with the different parts of the system.
- ► Read all Product Instructions for installation, operation and maintenance of the different parts of the system.
- ► Read all locally legislated safety regulations regarding the system and parts thereof.
- ► Save all Safety Information and instructions for future reference.

Warranty

- Product warranty will expire 12 months after the product is first taken into use, but will in any case expire at the latest 13 months after delivery.
- Normal wear and tear on parts is not included within the warranty.
  - Normal wear and tear is that which requires a part change or other adjustment/overhaul during standard tools maintenance typical for that period (expressed in time, operation hours or otherwise).
- The product warranty relies on the correct use, maintenance, and repair of the tool and its component parts.
- Damage to parts that occurs as a result of inadequate maintenance or performed by parties other than Desoutter or their Certified Service Partners during the warranty period is not covered by the warranty.
- To avoid damage or destruction of tool parts, service the tool according to the recommended maintenance schedules and follow the correct instructions.
- Warranty repairs are only performed in Desoutter workshops or by Certified Service Partners.

Desoutter offers extended warranty and state of the art preventive maintenance through its Tool Care contracts. For further information contact your local Service representative.

For electrical motors:

- Warranty will only apply when the electric motor has not been opened.

Website

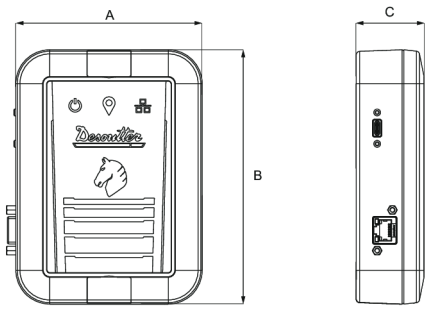
Information concerning our Products, Accessories, Spare Parts and Published Matters can be found on the Desoutter website.

Please visit: www.desouttertools.com.

Information about spare parts

Exploded views and spare parts lists are available in Service Link at www.desouttertools.com.

Dimensioning



	mm	in.
A	110	4.33
B	150	5.90

	mm	in.
C	40	1.57

CAD files

For information about the dimensions of a product, see the Dimensional drawings archive:

https://www.desouttertools.com/resource-centre

Overview

Virtual cable

Virtual cable is a Desoutter solution based on the UWB (Ultra-Wide Band) technology.
It prevents the operator to use the tool outside a predefined area, named **Working space**.

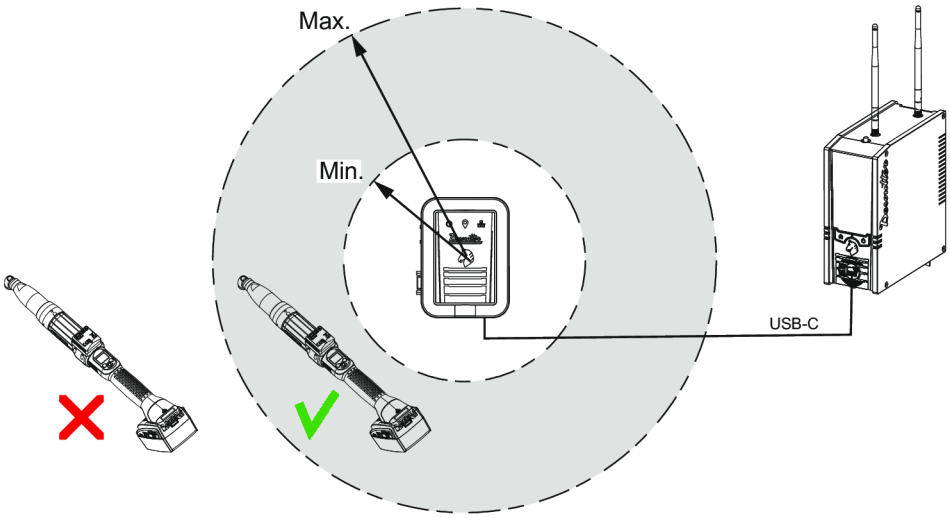
It is composed of a **Master tracking base** connected to CONNECT and of tools equipped with **trackers** (EABC e-LINK and EPBC ranges).

The Master tracking base can manage up to 7 additional tracking bases which control their own working space.
Each tracking base can manage up to 8 trackers.

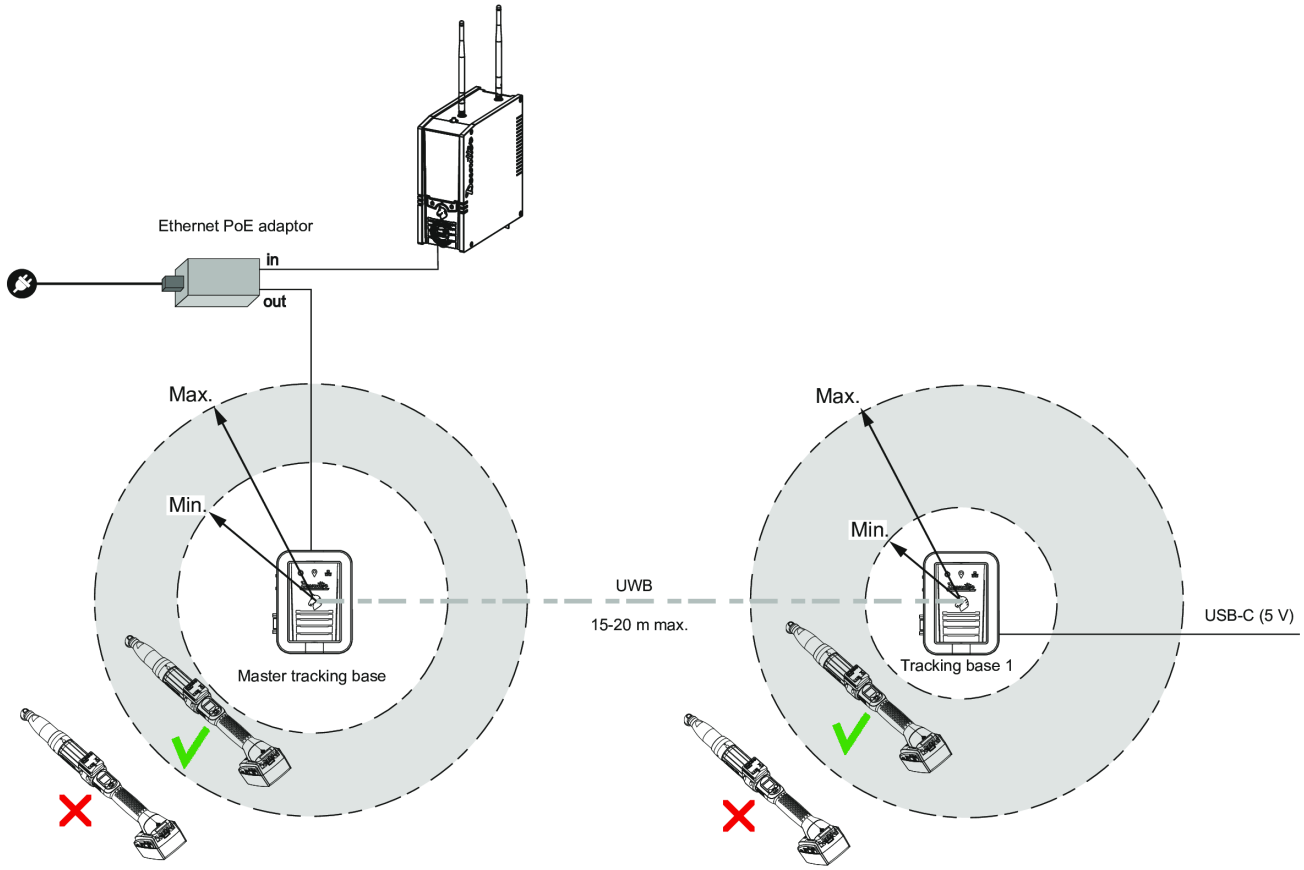
All devices (tracking bases, trackers) must be inside 15/20 m (49/65 feet) radius from the Master tracking base.

Extra UV are required to use this solution.

Example of installation -1 working space
The Master tracking base is connected to CONNECT via USB-C.



Example of installation - 2 working spaces
The Master tracking base is connected to CONNECT via Ethernet.
The tracking base is powered by an external USB-C (5 V).
The tracking bases are communicating via UWB.
Depending on the configuration of the workstation, the distance between the tracking bases cannot exceed 15-20 m (49/65 feet).



Technical data

Power supply

PoE: 48 V ⎓

USB-C: 5 V ⎓

Power consumption

PoE
20 mA
LPS (Limited Power Source) on PoE power supply
Maximum PoE power supplied: 15.4 W

USB-C
180 mA

Weight

0.280 kg

0.62 lb

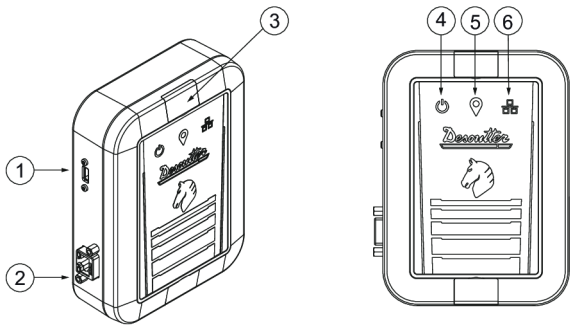
Storage and use conditions

Storage temperature	0° to +40°C (32 to +104 F)
Operating temperature	+5 to 40 °C (41 to 104 F)
Storage humidity	0-80 % RH (non-condensing)
Operating humidity	0-80 % RH (non-condensing)
Altitude up to	2000 m (6562 feet)
Usable in Pollution degree 2 environment	
IP54	

Wireless Communication specifications

Frequency: 3.2 – 6.75 GHz power - 0.831 dBm

Description



1	USB-C
2	Ethernet/Ethernet PoE
3	Mounting screw access door
4	Power supply indicator
5	UWB indicator
6	Ethernet indicator

Installation

Installation Requirements

Read before installing

- Trackers mounted on tools must be always visible by the tracking base.
- Avoid metallic structure between trackers and tracking base.
- All devices (tracking bases, trackers) must be inside 15/20 m (49/65 feet) radius from the Master tracking base.
- When the communication is set to USB, the Master Tracking Base cannot be positioned more than 5 m (16 feet) from CONNECT.
- Place the tracking base next to the center of the working space.
- Place the tracking base 2 meters (6.5 feet) maximum above the floor.

ⓘ Other UWB systems may interfere with communication used between trackers and tracking base.
The UWB radio channel used for communication can be modified by using CVIMONITOR.

Minimum firmware and software releases

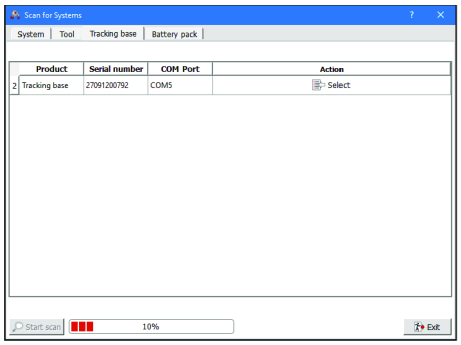
Product	Release
CONNECT	V 2.1.5.x
CVI CONFIG	V 2.3.4.x
CVIMONITOR	V 1.7.8.x

Defining the communications settings for the Master tracking base

Before installing the Master tracking base in the workstation, check its communication settings.

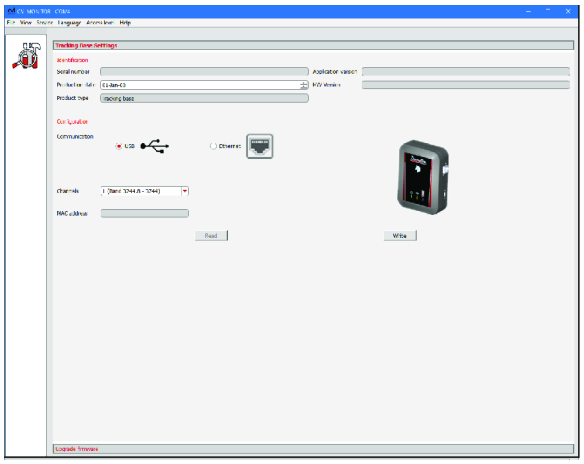
Plug the USB-C cable from the Master tracking base to the computer where CVIMONITOR is installed.

Launch CVIMONITOR. *Minimum firmware and software releases [Page 7]*

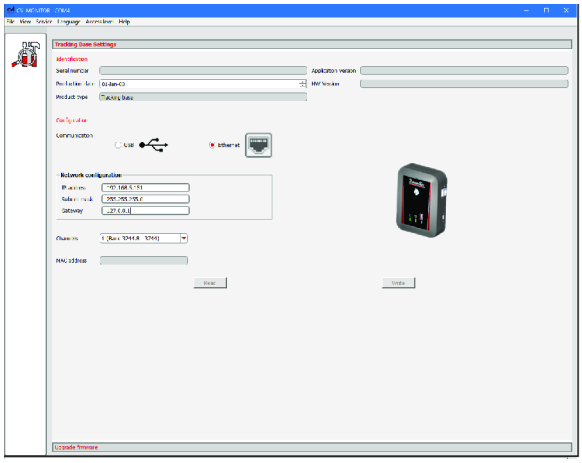


Click the tab **Tracking base**.

When the tracking base is displayed, click **Select**.



Select **USB** if the tracking base has to be connected physically to the USB port of CONNECT.
Click **Write**.



Select **Ethernet** if the tracking base has to be connected to the Ethernet port of CONNECT.
Enter the IP address of the tracking base (192.168.5.151 by default), its sub-net mask (255.255.255.0 by default) and the gateway (127.0.0.1 by default)..
Click **Write**.

ⓘ Write down the tracking base MAC address. This information is **mandatory** for virtual system configuration with CONNECT or CVI CONFIG.

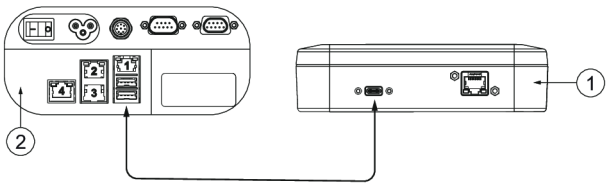
The UWB radio channel used is set to 4 by default (band 3328 - 4659.2 MHz). Other possibilities are:

- channel 2 (band 3774 - 4243.2 MHz)
- channel 3 (band 4243.2 - 4742.4 MHz)
- channel 5 (band 6240 - 6739.2 MHz)
- channel 7 (band 5980.3 - 3998.9 MHz)

Installation Instructions

Power supply and communication

Via USB-C



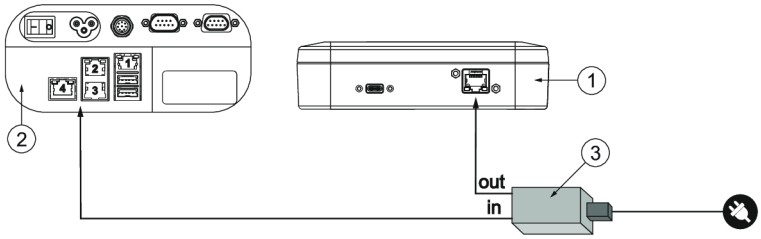
1	Tracking base
2	CONNECT inside panel

Plug a **USB3.0 A to C** cable (not supplied) to the tracking base and to any USB port of CONNECT.

ⓘ Both power supply and communication are provided.

Via external PoE injector

ⓘ The PoE injector is not supplied.



1	Tracking base
2	CONNECT inside panel
3	External PoE injector

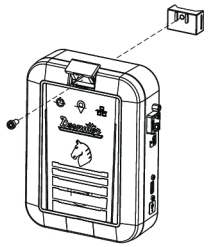
Plug an Ethernet cable to the PoE injector (in) and to the Ethernet port of the tracking base.

Plug an Ethernet cable to the PoE injector (out) and to CONNECT.

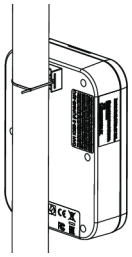
Installation

Before mounting the tracking base, refer to the instructions given in the chapter *Read before installing [Page 7]* in this manual.

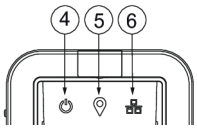
1. Open the mounting screw access door located on the front panel of the tracking base.
2. Place the M4 Torx screw and the bracket (supplied) as shown below.
   Tighten the screw by hand.



3. Run a Nylon cable tie (not supplied) through the bracket and fix it at the chosen location.
   For example:



How to read indicators



Item	Indicator	Description
4	Power supply indicator	This LED lights up in **green** and remains steady when the power supply is correctly provided.

Item	Indicator	Description
5	UWB indicator	- if case of a Master tracking base, the LED lights up in **green** and remains steady at the initialization when communication with both CONNECT and Virtual cable settings have been correctly done. - in case of standard tracking bases, the LED lights up in **green** and remains steady when the communication is done with the Master tracking base. The LED lights up in **red** as there is no communication between the trackers and the Master tracking base. The LED lights up in **blue** when communication between the tracking base and the Master tracking base has been lost.
6	Ethernet indicator	This LED lights up in **blue** indicating that the communication is done between the Master tracking base and CONNECT.

Operation

Configuration Instructions

How to set up Virtual cable

Read before starting

1. Tightening tools are equipped with trackers.
   Each tightening tool has been associated to a tightening unit and is ready to run a Pset.
2. Trackers have to be declared in CONNECT.
3. The Master tracking base has to be set up with CONNECT.
4. Working spaces can be set up by using CONNECT or CVI CONFIG.

ⓘ Note the MAC addresses of tracker and tracking base and keep them available.
The MAC address of the tracker is located on the front panel.
The MAC address of the tracking base is located on the label of the rear panel.

Declaring the tracker

Go to CONNECT.

Tap "Configuration > System > Peripherals > Tracking system > Trackers".
Tick the box **Locating tracker**.

Click the white box below to display the screen "MAC address".
Use the keyboard to enter the 6 last digits.

Tap this icon to validate.

How to set up the Master tracking base

Go to CONNECT.

1 - In case communication with CONNECT is via USB

Tap "Configuration > System > Peripherals > Serial/USB > USB".
Set the tracking system to USB 1 or USB 2 according to the physical configuration.

Tap "Configuration > System > Peripherals > Tracking system > Settings".
Tick the box "Enable tracking system".

Tap this icon to validate.

2 - In case communication with CONNECT is via Ethernet

Tap "Configuration > System > Peripherals > Tracking system > Settings".
Tick the box "Enable tracking system".

Select "Ethernet communication".
Enter the IP address of the tracking base (by default 192.168.5.151) .

Tap this icon to validate.

3 - Declare the tracking bases

Tap "Configuration > System > Peripherals > Tracking system > Tracking bases".

Tap this icon to add a tracking base.

Click "Tracking base name-1" to customize the tracking base.
Click the white box below to display the screen "MAC address".
Use the keyboard to enter the 6 last digits.

Tap this icon to validate.

4 - Check the communication between the Master tracking base and CONNECT

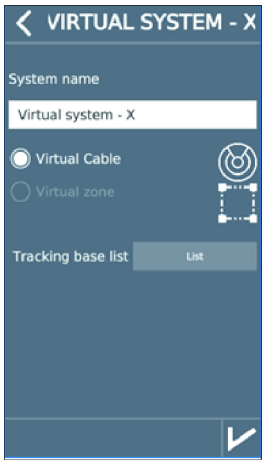
Tap "Configuration > System > Peripherals > Tracking system > Check".
Tap "Check".
When the communication is correct, a tick is displayed.

How to create a working space with CONNECT

1 - Create a Virtual cable system associated to a tracking base

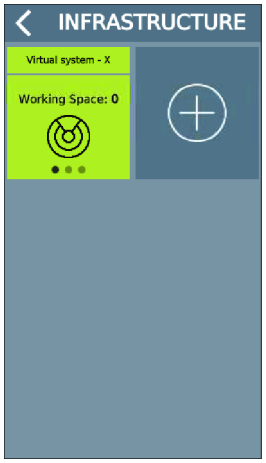
Tap "Configuration > System > Peripherals > Tracking system > Infrastructure".

Tap this icon.



Choose a name.
Tap the **List** button to open the list of existing tracking bases.
Tap the tracking base to select it. The box turns light grey.

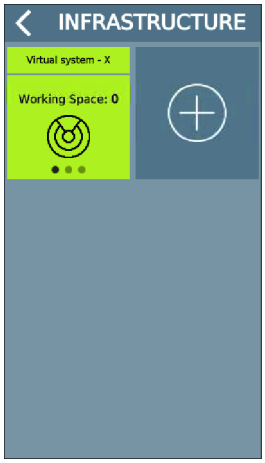
Tap this icon to validate.



The Virtual cable system is created.

2 - Select which tightening unit to associate to the working space

Tap "Configuration > System > Peripherals > Tracking system > Infrastructure".

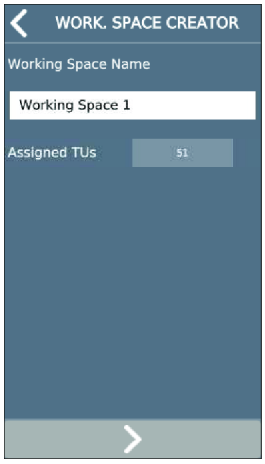


Tap the green tile.

 Tap this icon.

Customize the name of the working space.
Tap the **Empty list** button to open the list of existing tightening units.
Tap the tightening unit to select it. The box turns light grey.

 Tap this icon to validate.



The tightening unit has been selected.

3 - Activate the UV for the tightening unit using the working space

Go to CVI CONFIG.
Check that CONNECT is connected to the computer.

Create a working area, add CONNECT, check the IP address.

 Click this icon to update CVI CONFIG.

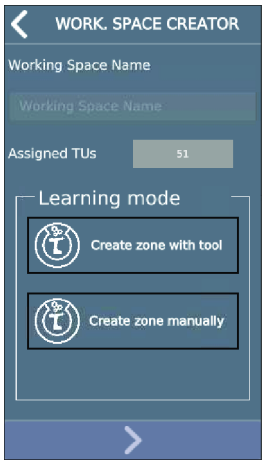
Go to "Feature management".
The feature "Virtual cable 1 working space" is present but not active.

 Click this icon.

 Click this icon to update the product.

4 - Finish the creation of the working space

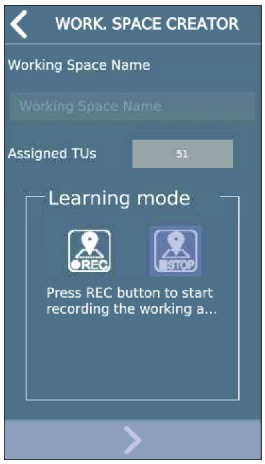
Repeat the activation of the tightening unit until the following screen.



Tap "Create zone with tool". The box turns light grey.

Tap this icon to go to the next step.

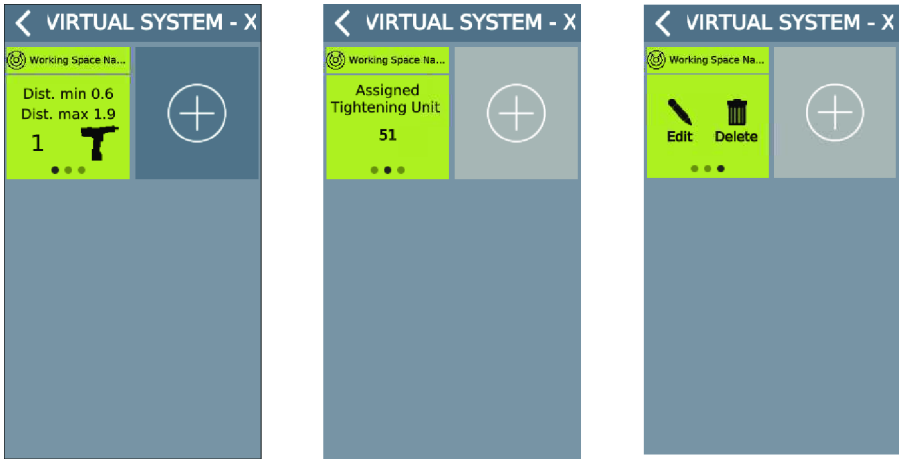
Check the tool is connected.
Unplug and plug the battery pack.



Click **REC**.
Move with the tool to the minimum distance and press the trigger.
Move then to the maximum distance and press the trigger.

Click **STOP**.

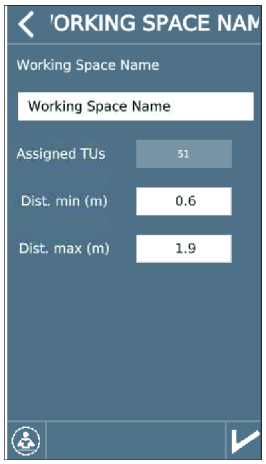
Tap this icon to go to the next step.



The working space for this tightening unit is done.
Swipe the tile to the left to control that the tightening unit is correct.
Swipe again to **Edit** or **Delete** the working space.

4 - Fine-tune manually

Click **Edit**.



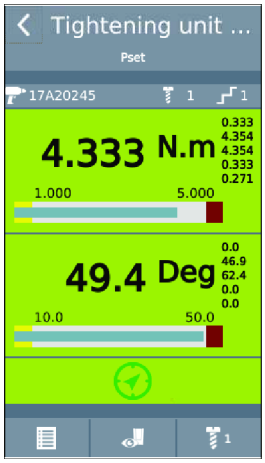
Click the figures and change them if required.

Tap this icon to validate.

Tap this icon to quit.

5 - Run a Pset to test the settings

Run a Pset in the working space.



See in the screen above, the green anchor attesting that the system is working correctly.

ⓘ When the tool is outside the working space, "E931" is displayed on the tool display. Press OK to quit.

Operating Instructions

Using the Virtual cable solution

The tool is enabled when the operator uses the tool inside the working space.

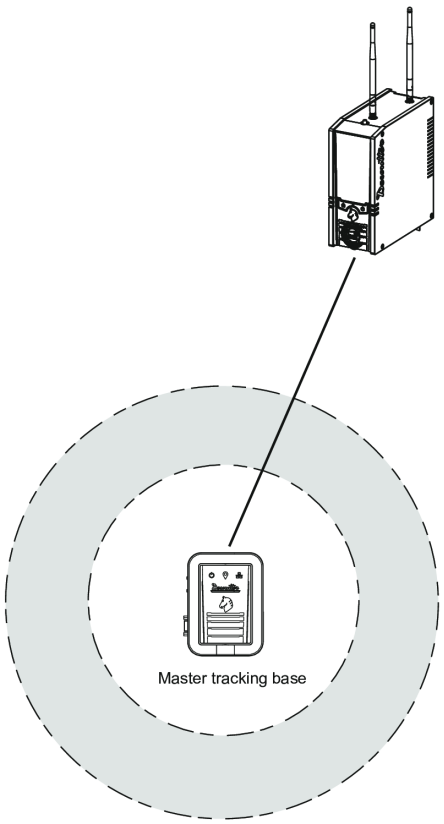
The tool is disabled if the operator goes outside the working space.
The user info "I931 - Tool locked by Tracking system" is displayed on both CONNECT and tool display. Tap "OK" to clear the message.

ⓘ If the tightening is running as the operator goes outside the working space, the tool is by default stopped. This behaviour can be configured with the parameter "Stop when ongoing tightening is outside working space" available in Tightening Unit settings in CVI CONFIG and CONNECT.

Troubleshooting

Trouble-shooting for Virtual cable

No communication between Master tracking base and CONNECT



Check first the status of the **Power supply indicator** of the Master tracking base.
This LED lights up in green and remains steady when the power supply is correctly provided.

Check then the physical communication between the Master tracking base and CONNECT.

In case **USB** communication is used:

1. Verify you have declared the correct USB port.
2. Verify you have declared the correct Master tracking base MAC address.
3. Check communication.

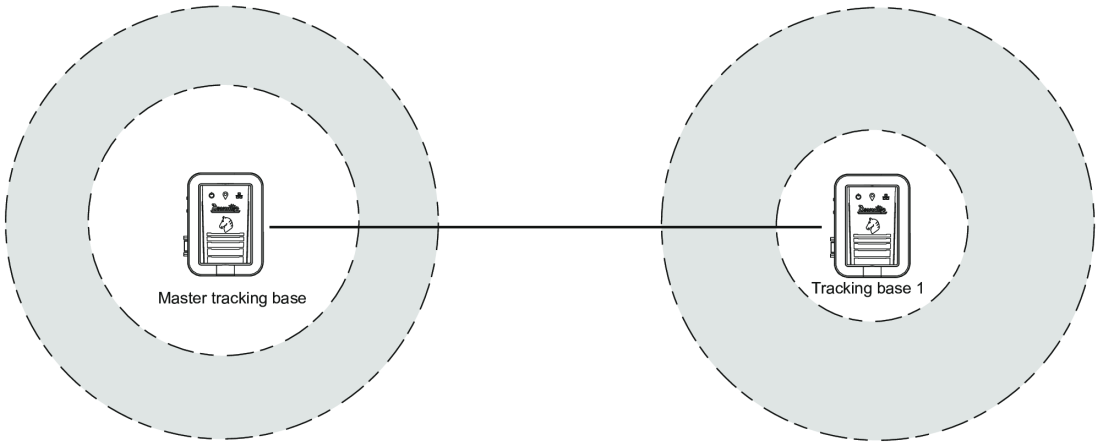
In case **Ethernet** communication is used:

1. Verify you have declared the correct IP address.
2. Verify you have declared the correct Master tracking base MAC address.
3. Check communication.

ⓘ The **Ethernet indicator** lights up in blue when the communication between the Master tracking base and CONNECT is established.

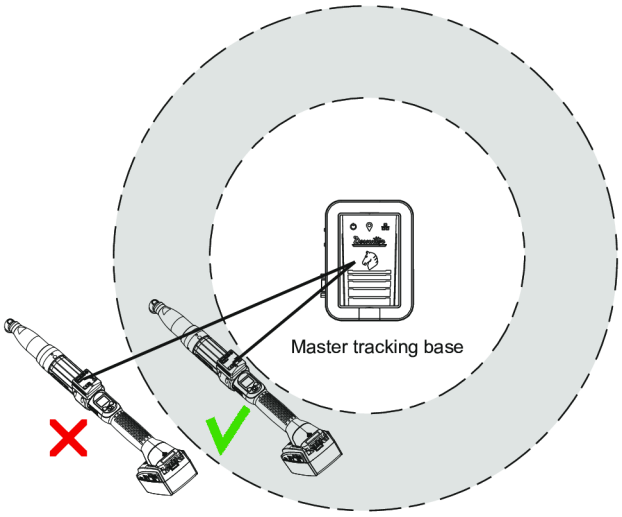
The **UWB indicator** lights up in green when the MAC address is correctly defined.

No communication between Master tracking base and additional tracking bases



1. Check the communication between CONNECT and Master tracking base. Refer to the previous section.
2. Check the status of the power supply indicator of the additional tracking bases.
   This LED lights up in green and remains steady when the power supply is correctly provided.
3. Verify that Master tracking base and additional tracking bases are using the same UWB radio channel.
4. Verify you have declared the correct MAC addresses of the additional tracking bases.
   When the communication is established, the UWB indicator lights up in green on all tracking bases.
   When the communication is lost, the UWB indicators light up in blue.

No communication with trackers



1. Check the communication between CONNECT and Master tracking base. Refer to the previous section.
2. Check the communication (if used) between the Master tracking base and additional tracking bases. Refer to the previous section.
3. Verify the status of the power supply indicator of the trackers. This LED lights up in green and remains steady when the power supply is correctly provided. If not, check the battery pack or tracker installation on the tool.
4. Verify you have declared the correct tracker MAC address.
5. Verify you have selected the tightening unit associated to the tool equipped with the tracker.

ⓘ When the communication with trackers is established, the UWB indicator lights up in green on trackers

Incorrect working zone

1. Verify you have declared the correct tightening unit associated to the working zone.

2. Verify that the working zone infrastructure is using the correct tracking base.
3. Verify the working zone definition (distance min. and distance max.).

Tool still locked in the correct working zone

1. Verify the communication between the Master Tracking base and trackers. Refer to the previous section.
2. Check the communication (if used) between the Master tracking base and additional tracking bases. Refer to the previous section.
3. Verify the communication with trackers. Refer to the previous section.
4. Verify the working zone definition. Refer to the previous section.
5. Verify that the "Virtual Cable" feature has been authorized for the tightening unit.

Original instructions

Founded in 1914 and headquartered in France, Desoutter Industrial Tools is a global leader in electric and pneumatic assembly tools serving a wide range of assembly and manufacturing operations, including Aerospace, Automotive, Light and Heavy Vehicles, Off-Road, General Industry.

Desoutter offers a comprehensive range of Solutions -tools, service and projects- to meet the specific demands of local and global customers in over 170 countries.

The company designs, develops and delivers innovative quality industrial tool solutions, including Air and Electric Screwdrivers, Advanced Assembly Tools, Advanced Drilling Units, Air Motors and Torque Measurement Systems.

Find more on www.desouttertools.com

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More Than Productivity