TowerOne

Contents

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Quickstart

Load a roadbook and/or waypoint files.

Wifi
Turn on the Towerone Wifi Access Point by opening the menu
Upload the files using the web interface

USB
Insert a flash drive with the files into the USB port
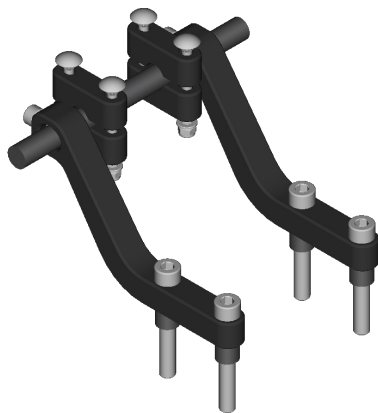copy the files to the Towerone using the menu

Select the files to navigate.
Towerone supports both combined and separate files for the roadbook and waypoints
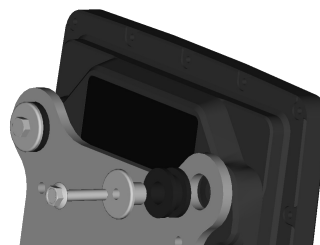
Ride!

Mechanical Assembly

Mount Arm Assembly

The mount arms accommodate handlbar clamps that use M8 bolts on 38-40mm spacing. The bolt length should be checked for proper thread engagement in the bar clamp.

Isolator Assembly

If the supplied isolator plate is not used, another plate or bracket with 5mm thickness can be used. The mounting holes are 16mm diameter on a 120x150mm rectangular pattern. Please provide clearance for the buttons on the side and the cables on the bottom.

Electrical Connections

Left
A standard rally 3 pin remote

Center
An ICO 4 pin remote or a standard rally roadbook switch

Right
A standard rally 3 pin remote or a wheel sensor

Output
Buzzer

GPS
GPS antenna. Mount it at least 20cm/8" from any RF transmitters

Power
Connect to 12V power. Recommended fuse is 5 to 10 Amps.
Reversed polarity will not function but will not cause damage.

Left,Center,Right are grey connectors.
Output and GPS are black connectors.
Power is a red connector.

USB
Connect a flash drive to upload roadbooks.
Do not leave the drive installed while riding.

Buttons

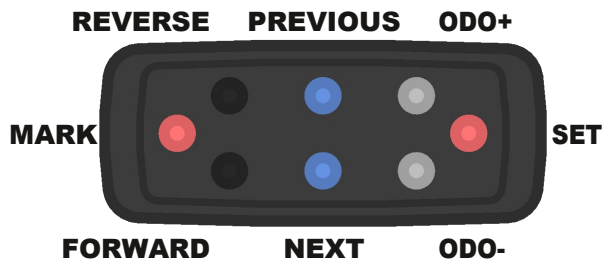The buttons on the display are in the back, behind their icon on the front panel.
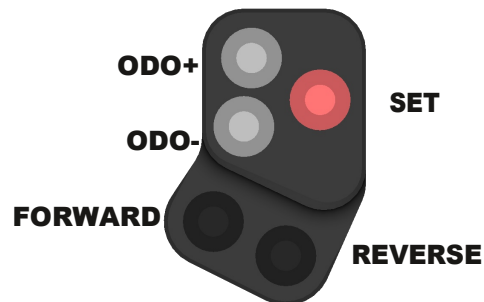
FORWARD and REVERSE refer to the roadbook
BRIGHT and DIM refer to the display backlight
PREVIOUS and NEXT refer to the selected waypoint

Pressing ODO+ and ODO- together is treated as a press of SET
Pressing FORWARD and REVERSE together is treated as a press of MARK

Menu

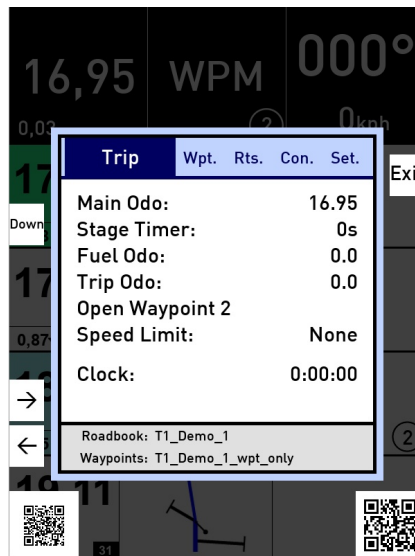**Enter and exit the menu by pressing the Menu button**

Hints for the menu functions are shown on the screen adjacent to their buttons

QR codes
Displayed when Wifi is active. The left is for connecting to the TowerOne, the right is for bringing up the TowerOne's web page.

Roadbook and Waypoints
The name of the currently loaded roadbook and waypoint files.

Trip Page

Main Odo
The device's main odometer.

Stage Timer
A timer that starts when you first move after manually resetting the odometer.

Fuel and Trip Odo
Odometers that are not adjusted with the Main Odo. They can be reset independently in this menu.

Open Waypoint
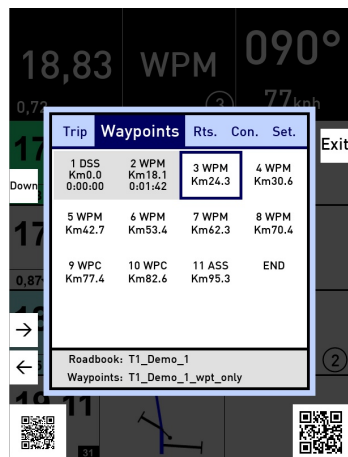Allows the current waypoint to be forced open.

Speed Limit
The current speed limit, it can be manually disabled.

Clock
The current time.

Waypoints

All the waypoints in the route are shown. Validated waypoints are highlighted in grey with the validation time shown. The currently selected waypoint is boxed in blue.

Routes

Pdf,Gpx,Zip,Enc
Files that are stored on the Towerone are selected here.

Options
PDF options take effect when loading the roadbook, Openrally options take effect immediately

PDF Trim Roadbook Pages
Remove header and footers from the pages of a roadbook.

PDF Index Roadbook Rows
Scan the PDF and index the forward/reverse scroll functions

Openrally Large Format
Rearranges the roadbook rows for easier viewing

Openrally Hide Hundredths, Small Hundredths, Small Hundreds
Changes the format of the distance field in the roadbook

Openrally Clear Roadbook, Clear Waypoints
Unload the current files from use.

Reset Progress
Changes all the validated waypoints back to unvalidated.

Erase All Route Files
Deletes all the roadbook and waypoint files saved on the Towerone. It requires entering a passcode to confirm.

Connect

Wifi
Enable Wifi
Turn on Wifi

Menu starts Wifi
Wifi turns on automatically when in the menu

Enable Wifi Password, Wifi Password
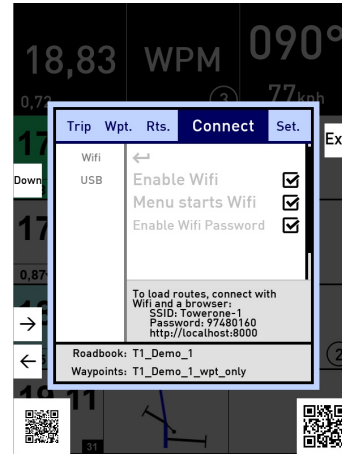Use secure wifi, the password is limited to an 8 digit number
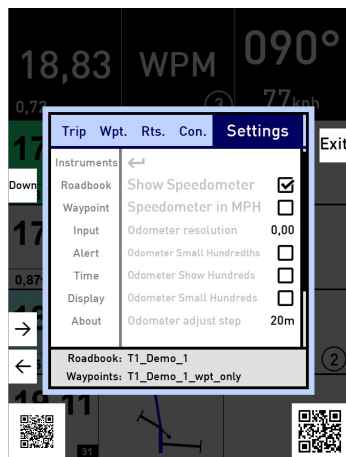
USB
Copy All
Copy all Pdf,Gpx,Zip,Enc files from usb drive to internal storage

Individual files
Copy file to internal storage. Checked files are already copied.

Settings

Instruments

Show Speedometer
Display speed below the compass

Speedometer in MPH
Display the speed in miles per hour instead of Kph. This only affects the speed display, it does not affect the speed or speed limit shown in speed zones, nor does it affect the odometer or distances.

Odometer Resolution
Show the odometer in either tenths or hundredths of a kilometer

Odometer Small Hundredths
Make the odometer hundredths digit smaller than the others

Odometer Show Hundreds
Show the hundreds digit in the odometer

Odometer Small Hundreds
Make the odometer hundreds digit smaller than the others

Odometer Adjust Step
How much to change the odometer for each press of Odo+ or Odo-.

Partial Odometer is primary
Switch the position of the partial and main odometer

Show Partial Odometer
Display the partial odometer

Enable Reversable Odo
Open an option in the Set screen to allow the odometer to count distance either up or down.

Settings

Roadbook

Show Previous Instruction
The first row of the roadbook is displayed with a dark grey cover. Roadbook Mark and Odometer Set functions operate on the second row.

Set Main Odo from RB
Pressing SET copies the full distance value from the current roadbook row to the odometer

Set Partial Odo from RB
Pressing SET copies the partial distance value from the current roadbook row to the partial odometer, instead of resetting the partial odometer to zero

Odo-RB Set Limit
If setting the odometer from the roadbook when the change is more than this limit value, turn the odometer digits red instead of setting the odometer. A second press of SET while the digits are red will set the odometer.

Set Marks RB
Pressing SET also marks the roadbook

Set Scrolls RB
Pressing SET also advances the roadbook to the next instruction

Mark Enabled
Allows marking the roadbook (placing a grey slash across the roadbook distance field)

Mark Also Scrolls RB
Pressing MARK also advances the roadbook to the next row

Mark Also Resets Partial
Pressing MARK also resets the partial odometer to zero

Bookmark Enabled
Allows the use of the bookmark function. On a roadbook row that is unmarked: hold MARK until the roadbook reversed back to the first marked row

Waypoint

Set Odometer at Wpt
Main odometer is automatically adjusted when the waypoint is validated

Auto Advance Wpt
The next waypoint is automatically selected when a waypoint is validated

Fast Advance Wpt
Auto Advance does not occur until after driving away from the validated waypoint

Settings

Input

Left,Center,Right Remote Inputs
Set the function of the three grey cables

Wheel Circumference
Set the circumference of the wheel (in mm)

Wheel Sensor Only
Use only the wheel sensor for odometer and speed input, the compass and waypoints still use GPS if available

RB Button Delay
How long to wait after the first press of FORWARD or REVERSE before repeated scrolling. Use a lower number for tactile switches and a higher number for toggle switches, especially ones that are worn.

Display

Auto Dim Display
When stopped and no buttons have been pressed for 5 seconds, reduce the display brightness one step from fully bright in order to save power

Show Clock
Display a stage timer and time of day clock at the bottom of the screen. The stage timer is reset when the odometer is reset, and starts after riding 50 meters

Instruments on Bottom
Place the instruments at the bottom of the screen instead of the top

Hide Instruments
Don't show instruments at all, only the roadbook

Alert

Alert Volume
Set the volume for the beeper

Test Alert
Beep once

Time

Set Local Time Zone
Change the time from GPS (UTC) time to the local time

About

Serial Number
Towerone Serial Number

Device ID
Internal CPU Serial Number

Software Version

Navigate without Waypoints

Full Odometer
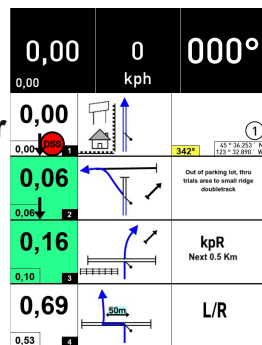Adjusts With Odo +/- buttons

Partial Odometer
Adjusts with Full Odometer

Resets to zero with a press on the Set button

Speed
Compass
Roadbook

Set Odometer to New Value

Hold Set to start
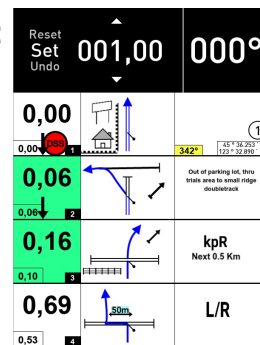Press Set to cycle arrow

Use odo+/- to cycle value

Hold Set to finish
Reset sets to 0.00

Set sets to chosen value

Undo restores original value

Navigate to Closed Waypoint

WPM:
Waypoint Type

KM18.1:
Waypoint Distance

2:
Waypoint Number

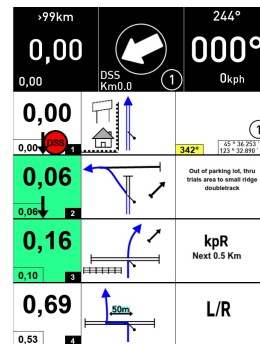## Navigate to Open Waypoint

>99km:
Distance to Waypoint

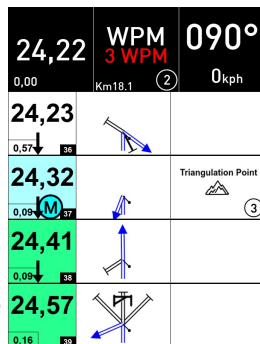### 244°
Bearing to Waypoint

Center Arrow:
Direction to Waypoint

Out of Order Waypoint

After missing a waypoint and then entering the opening radius of the next waypoint, an alert will appear.

In this case, Waypoint number 2 (WPM at Km18.1) was missed,and Waypoint 3 (WPM at 24.32) is close enought to open if it is selected.

Reverse Odometer

Hold SET to bring up set function, select Reverse. The odometer will now count down when you travel instead of up. ODO+ and ODO- are unchanged. To return to the normal function, hold SET and select Forward.
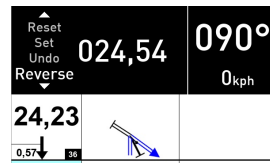
When the odometer is reversed, the display will be black on white and "Reverse Odo" will be displayed.

Software Update

Copy the new software to a USB flash drive or upload it to the Towerone using the Wifi interface.
It will be a file named t1update-<u>Version</u>-<u>Checksum</u>.zip

Turn off the Towerone
Press and hold MENU
Turn on the Towerone
Wait for the software recovery screen to start (about 10 seconds)
Release MENU
Use the ODO+/ODO- buttons to select the new version of software to use
Press NEXT to select the version
Press PREVIOUS to confirm the action

Pressing any other button will exit the recovery screen without making changes
The remote buttons have no effect