Rallye CAP™

Made in USA

Foreward

Dear Rally Competitor,

Thank you for purchasing the ICO Racing™ Rallye CAP™ instrument. We hope you enjoy this new ICO Racing™ product.

For over 20 years ICO Racing™ has been the undisputed leader in the design and manufacture of electronic navigation instruments for off-road motorcycle racing applications.

ICO Racing™ is proud to have created the most widely used rally and enduro computers in the world: the Rallye VRL™ and the CheckMate™. Virtually every champion in the world, from the club-level to factory teams, has used our products to win.

Regards,

The ICO Racing Team

www.icoracing.com

Acknowledgements

Contents

Installation

Connect to 12V Battery

Connect the RED wire to the battery's positive side and the BLACK wire to the ground.

There is polarity protection to prevent damage to the instrument in case the wires are reversed, but the instrument will not work if the wires are reversed.
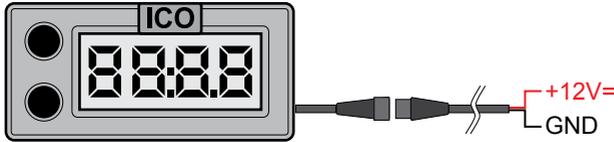
⚠️ Attempt to avoid routing the wires directly against the ignition coil and spark plug wiring.

Connect Thumb Switch

Connect the grey 3-pin connector to the thumb switch.

Thumb Switch   GPS Receiver
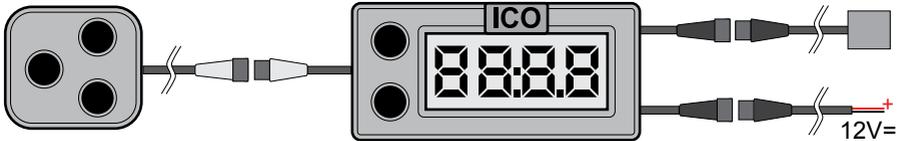
Connect GPS Receiver

Connect the black 4-pin connector to the GPS receiver.

Mount the GPS receiver as close to horizontal as possible. The GPS receiver performs best when it has a clear view of the sky. Gently secure the GPS receiver with plastic cable ties.

⚠️ NOTE: When any GPS powers up for the first time, or in a new location, it can take several minutes to receive a signal. Please be patient. During this time, a small LED inside the GPS receiver will remain constantly on. Once a signal is acquired, the small LED inside the GPS receiver will begin flashing.

Overview of Operation

There are two basic modes - Edit mode and Race mode.

Edit Mode

Edit mode is used to setup the instrument to your preferences, and to view and reset the Trip distance, and to view Full distance. Once the motorcycle moves a short distance, it is in Race mode and Edit mode cannot be accessed again until the unit is turned off and back on.

Race Mode

Race mode has these primary pages:

- Distance
- Compass (CAP) Heading (if enabled)
- Current Speed (if enabled)
- Clock (if enabled)

Race mode also allows access to Peak Speed, which is the maximum speed reached during the ride.

Functions

Race Functions:

- Display distance
- Display compass (CAP) heading
- Display speed
- Display peak speed
- Display GPS clock

Edit Functions:

- Units selection (kilometers or miles)
- Show/hide compass (CAP) heading
- Show/hide speed
- Show/hide clock
- AutoCal™ Automatic Calibration (on/off)
- Time Zone Setting (UTC) for GPS clock
- Trip distance - distance ridden since the last reset
- Full distance - total distance on the instrument

GPS Receiver

The ICO Racing™ Rallye CAP™ instrument is a highly accurate, GPS-based race computer.

For the instrument to work properly, the GPS receiver needs a clear view of the sky and time to acquire a satellite fix. When you turn the Rallye CAP™ on, the LCD display will flash while the GPS receiver is acquiring a satellite fix. Once the display stops flashing, you may begin your ride.

If the GPS signal is lost during a ride, the LCD display will flash. Keep riding. The unit has algorithms which will calculate the accumulated distance once a new fix is acquired. During signal loss, the display will flash the last known distance, CAP heading, and speed.

> NOTE: When any GPS powers up for the first time, or in a new location, it can take several minutes to receive a signal. Please be patient. During this time, a small LED inside the GPS receiver will remain constantly on. Once a signal is acquired, the small LED inside the GPS receiver will begin flashing.

AutoCal™ Automatic Calibration

When following routes which have been accurately laid out using a GPS or calibrated odometer, your Rallye CAP™ will closely match the route distance without adjustment.

Some routes may have been created using less accurate methods. Therefore, we have included the ICO Racing™ AutoCal™ feature. This feature, enabled by default, will automatically synchronize the distance to match the route you are following.

Simply adjust the distance (bump up, bump down) as you ride, and AutoCal™ will "learn" about the error in the route. Each time an adjustment to the distance is performed, the instrument will do an automatic adjustment to convert GPS distance to the route distance.

AutoCal™ has many safeguards which prevent the instrument from making an unusual adjustment. It has been proven in many, many years of Dakar competition.

If you get lost and then return to the course and make an adjustment, the instrument WILL NOT make a correction. It will ignore the adjustment and continue as if you had not made the mistake.

At the start of each day's ride the instrument resets the AutoCal™ adjustment. It will use the GPS distance until a manual distance adjustment is performed along the course. It then begins adjusting to that day's course.

Button Symbols

Below are the symbols we use in this manual to illustrate button actions.

	Bump	=	A quick press and release of the button
	Press	=	Momentarily hold button then release
	Hold	=	A long hold of the button until the display changes

Thumb Switch   ## *Instrument Head*

Thumb Switch				Instrument Head
Bump middle button		**=**		Bump both buttons
Bump top button		**=**		Bump top button
Bump bottom button		**=**		Bump bottom button
Press middle button		**=**		Press both buttons
Press top button		**=**		Press top button
Press bottom button		**=**		Press bottom button
Hold middle button		**=**		Hold both buttons
Hold top button		**=**		Hold top button
Hold bottom button		**=**		Hold bottom button

Race Modes

Distance

```
⌐00.0
```

Edit Mode

```
Edit
```

CAP Heading

```
123°
```

Speed

```
- 00
```

Peak Speed

```
⊢000
```

Clock

```
12:34
```

Distance

```
⌐00.0
```
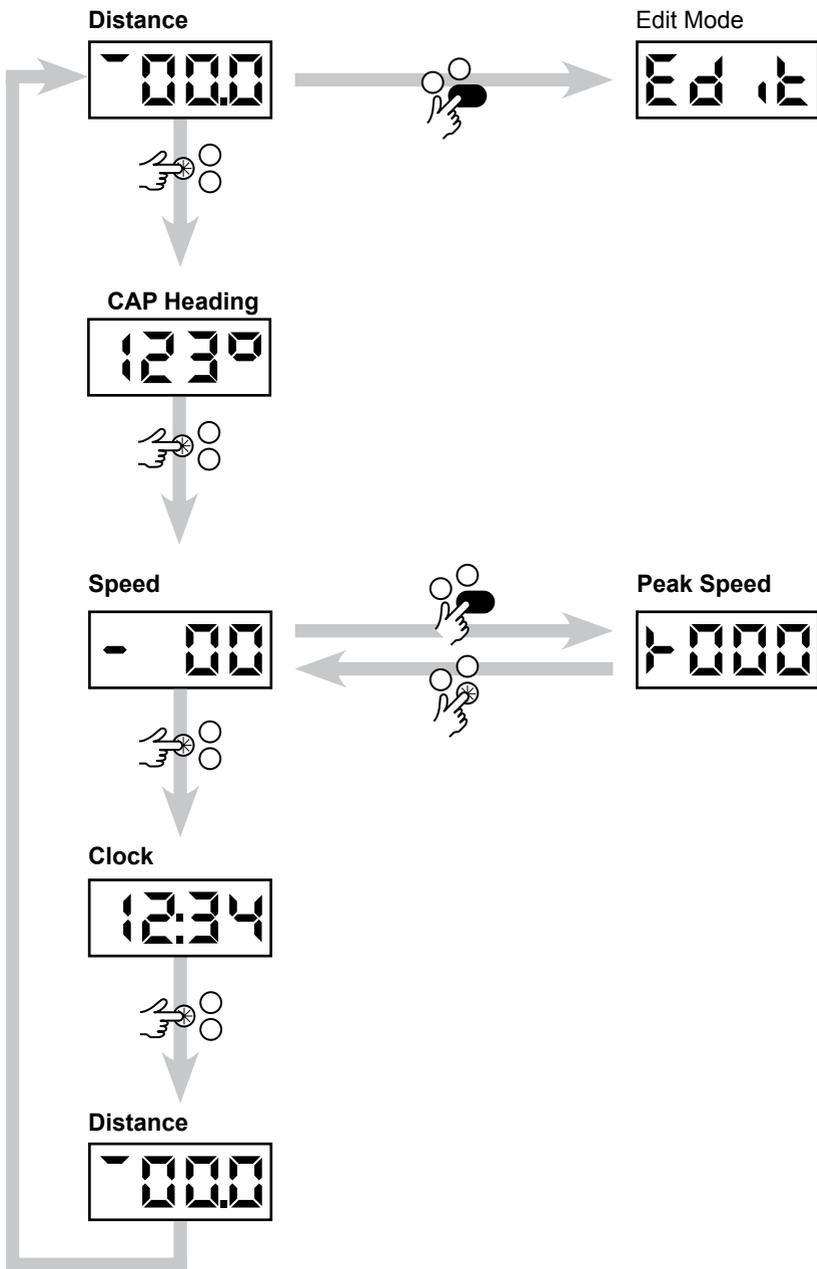
Distance Display

Adjusting the distance

Distance

327.8

+0.1 or +0.01   or   +

-0.1 or -0.01   or   -
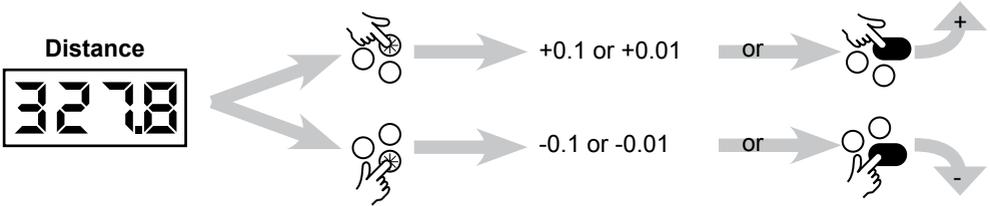
Moving the decimal point

The precision of the odometer display can be selected (000.0 or 00.00):

Distance

327.8   →   27.82   →   327.8

Hold BOTH bottom buttons at the same time until the decimal stops flashing.

Zeroing the distance

Distance

327.8

Long hold middle button

Zero Distance

000.0
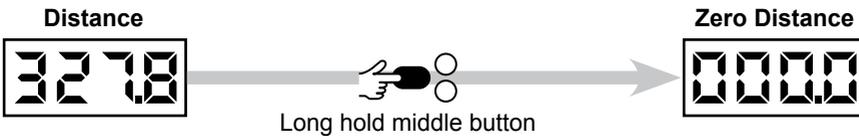
CAP Heading Display

The CAP heading display shows your current heading.

CAP Heading

123°

Speed Display

Current Speed

```
-  38
```

The speed display shows your current speed.

View Peak Speed

Current Speed

```
-  38
```

While at Current Speed display holding a bottom button will change the display to Peak Speed.

Hold a bottom button

Peak Speed

```
⊢ 62
```

This is the maximum speed reached since the beginning of the ride or since the number was zeroed.

Bump a bottom button to go to Current Speed

Current Speed

```
-  38
```


Zeroing Peak Speed

Peak Speed

```
⊢ 62
```

```
⊢00.0
```

*NOTE: The Peak Speed reading is automatically cleared at the beginning of each ride.

Clock Display

Clock

```
12:34
```

The Rallye CAP™ displays GPS time, adjusted to your local time zone. See Time Zone Setting (UTC) on page 15 for more information.

OdoQuick™ Feature

The Rallye CAP™ has an innovative feature for quickly checking your distance while navigating an off-piste (HP) section or while transiting a speed zone (DZ). While viewing the CAP page or the Speed page, you can momentarily access the distance page by bumping any top or bottom button. The display will show the distance for 1 second, then return to the CAP or speed page.

CAP Heading

```
123°
```

Distance

```
327.8
```

wait 1 second
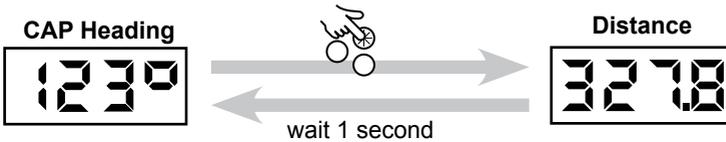
While the distance is momentarily displayed, you can also adjust it up or down. After 1 second without a button press, the display will return to the previous page.

Current Speed

```
- 38
```

Distance

```
327.8
```

```
327.7
```

Current Speed
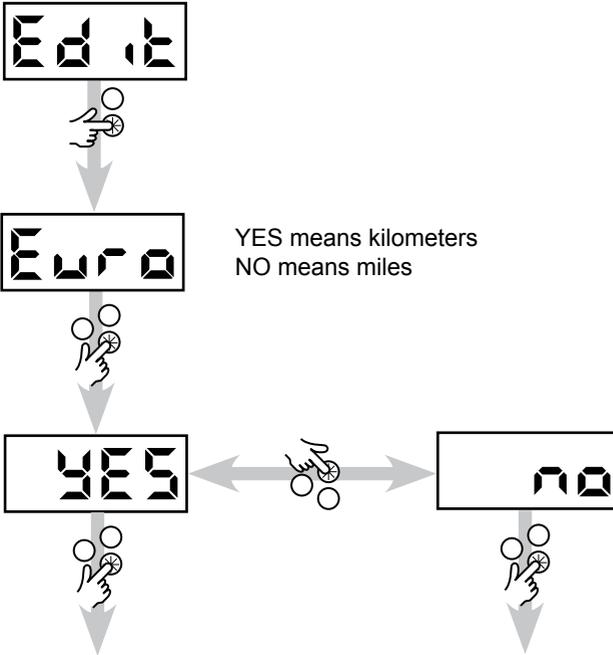
```
- 38
```

wait 1 second
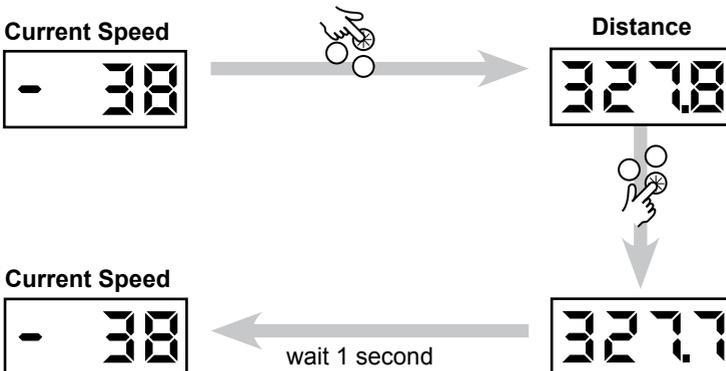
Edit Mode

When the instrument is first turned on, but before you have started your ride, a tick mark is shown in the first digit of the display to indicate that Edit mode is available.

In Edit mode you can set your instrument preferences and view the Trip and Full distances.
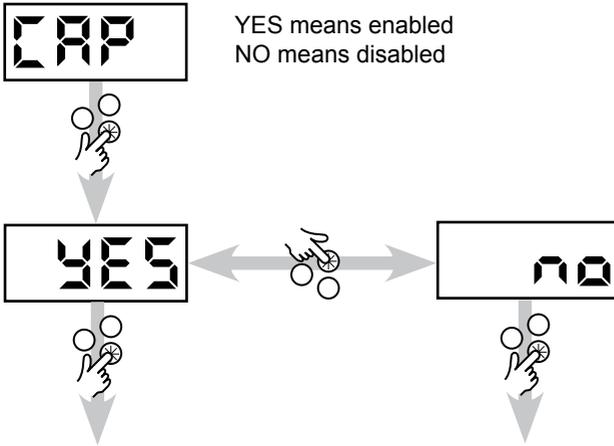
Distance

Units (KM or Miles)

The Rallye CAP™ can operate in kilometers or miles. To select kilometers, set EURO to YES. For miles, set EURO to NO.

YES means kilometers
NO means miles

CAP Heading Show/Hide

If you prefer to not show the CAP heading page, you can disable it.

```
CAP
```
YES means enabled
NO means disabled

```
YES  ⟷  no
```

Speed Show/Hide

If you prefer to not show the speed page, you can disable it.

```
SPEd
```
YES means enabled
NO means disabled

```
YES  ⟷  no
```

Clock Show/Hide

If you prefer to not show the clock page, you can disable it.

YES means enabled
NO means disabled

AutoCal™ On/Off

If you prefer to not use AutoCal™, you can disable it. See page 6 for more information about AutoCal™.

YES means enabled
NO means disabled

Time Zone Setting (UTC)

The Rallye CAP™ uses GPS time, adjusted to your local time zone. Once you set your time zone, the Rallye CAP™ clock never needs to be adjusted.

Bumping the top button will scroll through a list of all the official time zones in the world.

When you find your time zone, bump the bottom button to accept.

(Edit mode continued on next page)
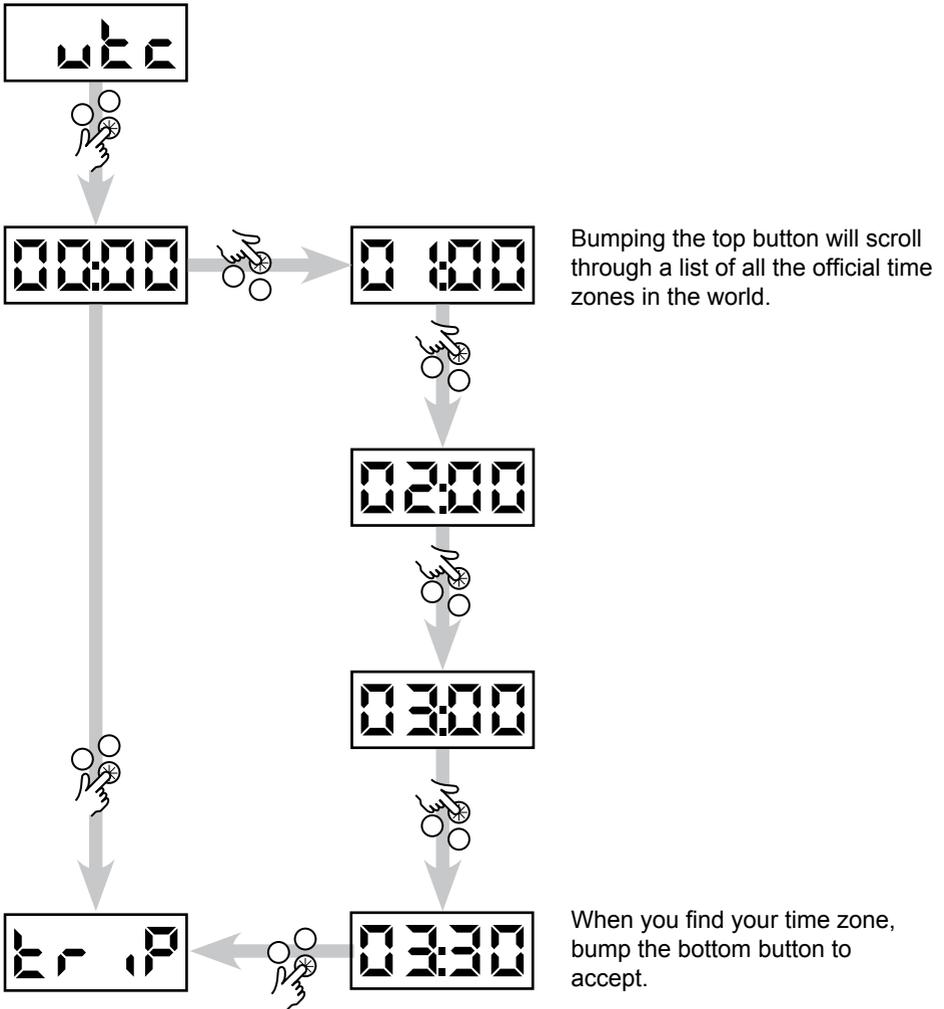
Trip Distance

The Rallye CAP™ maintains an additional trip odometer in the Edit menu.

```
 tr iP
```

```
 348
```

Holding the middle button will reset the trip odometer to zero.

```
 0000
```

Full Distance

The Rallye CAP™ maintains a lifetime odometer in the Edit menu. This is the total of the number of km/miles over the life of the unit. The Full distance can only be reset by using the Factory Reset function.

```
 FULL
```

```
 348
```

Shut Off & Turn On

To indicate the end of the stage/day/ride, turn the unit off before disconnecting 12V power. AutoCal™, if enabled, is reset, as is Peak Speed and the Race distance.

From Race mode:

Hold both buttons on the instrument head until the word "OFF" appears.

Bump any button to turn the instrument on.

Since the instrument was manually shut off, it will display zero when turned on. This indicates the start of a new stage/day/ride.

Automatic Sleep

After 2 hours of no button activity or no movement, the instrument will automatically sleep. The GPS will power down.

Bump any button to turn the instrument on.

NOTE: Upon turn on after an automatic sleep, the previous distance will be displayed. You may resume from that distance, or the distance can be reset.

NOTE: AutoCal™ and Peak Speed will not reset on sleep. The Rallye CAP™ assumes you are still on the same stage/day/ride.

Factory Reset

The settings you select in the Edit mode are maintained even when there is no power. If you want to restore the factory defaults, you may perform a Factory Reset.

All user settings and odometers, including the full odometer, are reset.
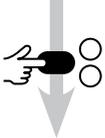
Hold the mode button while powering up the instrument. Keep holding until the word "RESET" appears.

Quick Reference and Defaults

Distance

`⁻00.0` →(Hold)→ `Edit`

Bump	
Hold	

CAP Heading

`123°`

Units (km/miles) `Euro` → `YES`

Show CAP (yes/no) `CAP` → `YES`

Show Speed (yes/no) `SPEd` → `YES`

Show Clock (yes/no) `CLOC` → `YES`

Enable AutoCal™ (yes/no) `Auto` → `YES`

Time Zone `utc` → `0:00`

Trip distance `triP` → `0000`

Full distance `FULL` → `0000`

Speed

`- 00` →(Hold)→ Peak Speed `⊢ 62` →(Hold)→ Zero Peak Speed `⊢ 00`

GPS Clock

`00:00`