

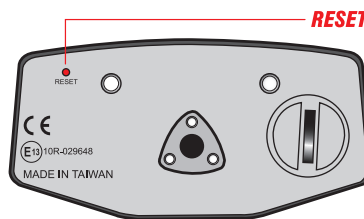
ACEWELL® ATV/Motorcycle Computer

ACE-1500 User Manual

Thanks for bought the ATV/Motorcycle computer, please read the manual before you install the computer.

English

E 13 10R-029648



PANEL DESCRIPTIONS

1. Tachometer Scale
2. Bar Tachometer
3. 1st row: Current & Max. Speedometer
4. 2nd row: Other functions
5. RESET Button
6. MODE Button
7. Bar Fuel Meter
8. RPM Warning Indicator
9. Fuel Gauge Warning LED

FEATURES

- Displays bar-graphic tachometers, speedometer, bar fuel meter and one additional function at the same time.
- Powered with either the internal CR2032 battery or the bike's battery.
- Bar-graph tachometers with selectable 10,000rpm or 20,000rpm redline.
- Allows end user to adjust odometer when the odometer is less than 30km / 18.6 miles..
- Fuel gauge includes +/-100, 250 and 510 Ohm options for fuel meter input resistance, as well as "fuel gauge off" mode..
- Includes bracket, RPM sensing wire, speed sensor, fitting kits and wiring harness.

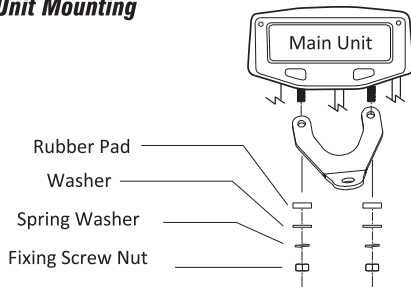
SPECIFICATIONS

Function	Simbolo	Specifications
Bar Tachometer		500-10,000 rpm 1,000-20,000rpm options
Speedometer	km/h/MPH	2.4-399.9 km/h (248.5 MPH)
Trip meter 1&2	Trip 1&2	0.0-999.9 KM/Miles
Odometer	ODO	0 - 999999 KM, 0-62499 Miles
12/24 Hour Clock		0:00'-11H59'/23H59'
Average speed	AVG	2.4-399.9 km/h (248.5 MPH)
Riding Time	RT	0-99H59'59"
Hour meter	RT	0-9999H59'
Total Hour Meter	TT	0-999999H
Digital Tachometer	rpm	100-19,900rpm
Maximum Tachometer	MAX RPM	100-19,900rpm
Bar-Fuel Meter		100Ω, 250Ω, 510Ω or OFF options
Maximum speed	MAX	2.4-399.9 km/h (248.5 MPH)

Power Input	DC 12V
Tachometer Sensor	CDI or Ignition Coil Signal
Speed Sensor	Reed Sensor (Internal or Bike's power) or Hall sensor (Bike's power application) only
Wheel circumference setting	1mm-3999mm
Power Consumption	50uA at clock mode 1mA at on status without backlight and all sensors off 2mA at all sensors on status without backlight 15mA at on status with 3 sec backlight 25mA at on status with continue backlight
Dimensions	110.0mm x 55.0mm x 21.5 mm)

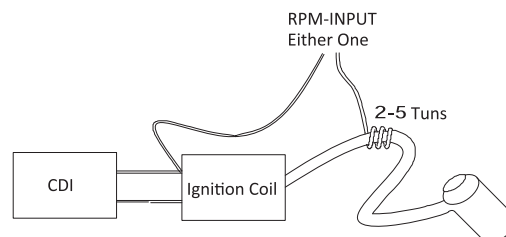
INSTALLATION & PARTS

Main Unit Mounting



RPM sensing wiring Mounting

1. Signal intensity from ignition coil is dependent on vehicle type.
2. Circles 2-5 turns around ignition coil, with more turns creating steadily stronger signal, fewer turns creating weaker signal.
3. The RPM circuit is designed for most bikes, however partial bikes' signal is too strong if the RPM looks like much more than actual RPM and unstable, please serial connect the attached 1M Ohm resistor to solve it.

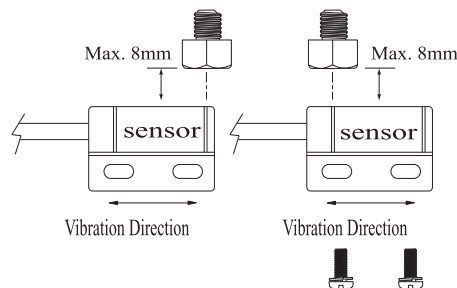


Speed Sensor Mounting

Acewell has several speed sensors; the unit includes one of them or not speed sensor in case the model has to be connected to gear box to get speed signal.

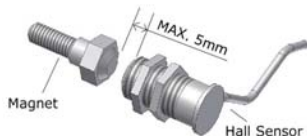
Reed Speed Sensor and Magnet:

1. This sensor is universal sensor for motorcycle, find a rotatable part to install magnet and a location can install sensor and can be aligned to the magnet.
2. Align the center of the magnet to either of the sensor marking lines or the side of the sensor.
3. Installing the sensor parallel to the vibration direction creates optional anti-vibration effect.
4. Make sure the gap between the magnet and the sensor is within 8mm.



Hall Effective Speed Sensor and Magnet:

1. This is universal sensor for ATV rear wheel installation or motorcycle front wheel installation as if you purchase a relative speed sensor holder.
2. Find a part can rotate to install magnet and a location can install sensor and the sensor can be aligned to the magnet.
3. Align the center of the magnet to center of side face of the sensor.
4. Make sure the gap between the magnet and the sensor is within 5mm.



Specific Hall sensors:

The sensor such as Honda CRF, XR....etc. can replace original sensor cable and fix it at the original position.

FUNCTIONS

BAR RPM: Bar Graphic Tachometer

The bar tachometer has 10,000rpm and 20,000rpm options.

RPM: Digital Tachometer

1. It displays digital tachometer up to 19,900RPM and displays 19,999rpm when tachometer is over 20,000rpm. .
2. Tachometer signal can pick up from either CDI or Ignition Coil Signal.

MAX RPM: Maximum Tachometer

Displays highest tachometer achieved after last Reset operation.

Km/H or MPH: Speedometer

Displays speed meter up to 399.9 Km/H or 248.5 MPH.

MAX: Maximum Speed Meter

Displays highest speed achieved after last Reset operation.

AVG: Average Speed Meter

It calculates average speed from last RESET. The AVG is calculated from TRIP be divided by RT.

TRIP: Trip Meter

TRIP function accumulates trip distance from last RESET as long as bike/vehicle is being ridden.

ODO: Odometer

1. ODO accumulates total accumulated distance traveled during bike moving.
2. ODO data is adjustable when it is less than 30km (Miles), after that it stored in memory and couldn't be reset.

RT: Riding Timer

1. Calculates total running time from last RESET.
2. Count automatically begins with movement.

⌚ RT: Hour Meter

1. Calculates total engine operation time from last RESET.
2. Count automatically begins with engine starting.

TT: Total Hour Meter

1. Calculates total engine operation time from the beginning of the bike.
2. TT data is stored in memory, and couldn't be reset.

⌚ : 12/24 hour Clock

Displays 12 or 24 hour current time.

⛽ : Fuel Gauge

1. Has 7 bars to indicate how much fuel remains.
2. Built-in 100, 250, 510Ohm, oFF, -100, -250 and -510 Ohm fuel sender resistance, the fuel bars will disappear when you select "oFF" mode.
3. The full bars are low resistance and empty bar is high resistance for 100, 250 and 510ohm; -100, -250 and -510 ohm are the inverse.
4. Last bar flashes to indicate low fuel level automatically.

Bars	100Ω	250Ω	510Ω	-100Ω	-250Ω	-510Ω
7	0-10	0-25	0-50	100-90	250-230	510-460
6	11-20	26-50	51-100	89-75	229-200	459-380
5	21-35	51-85	101-180	74-60	199-150	379-300
4	36-45	86-110	181-230	59-45	149-110	299-230
3	46-60	111-150	231-300	44-35	109-85	229-180
2	61-75	151-200	301-380	34-20	84-50	179-100
1	76-90	201-230	381-460	19-10	49-25	99-50
0-Flash	91-100	231-250	461-510	9-0	24-0	49-0

AUTO Power Off

1. The power will be turned off automatically after 3 minutes the unit does not receive any signal from speed, RPM or button operation in case it is using the internal battery CR2032.
2. The riding data will be kept in memory at each power off.
3. The power is always turned on at LAP mode until go out the LAP mode.

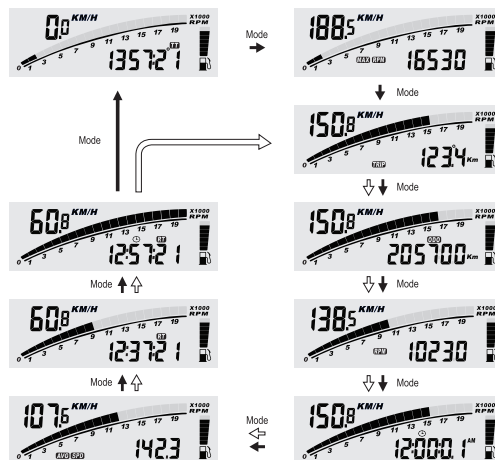
🔋 : Low Battery Indicator

1. The "🔋" icon flashes when the CR-2032 battery is at low power status to reminder you change the battery.
2. All setting is kept in memory not mater the power is connected to bike's 12VDC battery or using internal CR2032 battery only; In case the power is only the internal CR2032 battery, the unit can display riding data but can't be kept in memory when The "🔋" icon appears in order to avoid setting data be reset at low voltage , that means riding data from last memory until the icon appears is lost.
3. Remove the old battery. Replace with a new CR2032 with the positive (+) pole towards the battery cap.
4. Be sure to press RESET button at the rear side after installed the battery to sure all functions work smoothly.

BUTTON OPERATIONS

MODE BUTTON

1. Press the MODE button to move all functions in loop sequence as "➡" path from one function screen to another when the speed sensor does not detect any signal input.
2. Press the MODE button to move partial functions in loop sequence as "⇌" path when speed sensor detects signal input.



RESET BUTTON

1. Press MODE button to the desired screen then press RESET button for 2 seconds to reset hour meter, MAX SPD, MAX RPM data from stored values to zero individually.
2. The data of Trip, AVG & RT can be reset at the same time when one of the 3 data functions is being reset.
3. ODO, clock and TT data cannot be reset.

SHIFT WARNING RPM OPERATION

1. Press MODE button to the RPM screen; pull on the throttle until the desired shift warning RPM.
2. Press RESET button to confirm and set up the shift warning RPM.
3. Bar-graphic tachometer and warning LED will flash to warning you shift gear.
4. Press RESET button for 2 seconds at the RPM screen to re-adjust the shift warning RPM.

Low Fuel Level Warning

Last bar and low fuel warning indicator flash to indicate low fuel level automatically.

Backlight of Internal/Bike's Powers

1. The computer built-in a CR2032 battery for off road bikes in case take away bike's batter to reduce weight.
2. You can use both internal battery and bike's battery at the same time.
3. The backlight is always turned on if you connect to bike's battery; backlight will be turned on 3 seconds then turn off automatically by each press of any button when using internal power status.
4. Once connect to bike's battery, button operations will be switch off when switch key power is off. User needs to turn on power switch key to operating buttons.

WHEEL CIRCUMFERENCE TABLE

1. The details below have been calculated using following formula:
Tire Diameter (inches) x 25.4(mm/inches) x 3.1416 = wheel circumference (in mm).
2. Identify the tire size of your ATV/Motorcycle when you need to change different tire size and key in the corresponding number shown in the following chart.

Tire Size	Circumference number (mm)	Tire Size	Circumference number (mm)	Tire Size	Circumference number (mm)
15 inch	1197	19 inch	1516	23 inch	1835
16 inch	1277	20 inch	1596	24 inch	1915
17 inch	1357	21 inch	1676	25 inch	1995
18 inch	1436	22 inch	1756	26 inch	2075

3. The computer calculates the wheel rotating length between 2 signals; you have to set the wheel circumference in case your sensor is a reed sensor or an universal hall sensor with magnet.
4. The setting value shall be changed by calculating the wheel circumference be divided by the ratio of wheel and speed cable gear, for example the wheel circumference has to be divided 5 in case 1 wheel revolution equals 5 turns of speed cable.
5. You can use more magnets, but the setting wheel circumference must be divided by the number of magnet you installed.

Clock, RPM, Wheel, Unit, fuel meter and Odometer SET UP

1. Setup operations include 12/24hour clock, bar rpm scale, shift warning RPM, numbers of engine rotation per signal, wheel circumference, units, fuel meter input resistance selection and odometer adjustment. These must be set up step by step. The computer will be automatic reversion to normal mode if no button operation for 75 seconds at any setting screen.
2. Press both MODE & RESET buttons to go into setting screen. In setting screens, each press RESET button to add the flashing digit by 1 or convert units, press MODE button to confirm the digit setting and jump to next digit or next setting screen to be set. Press MODE button for 2 seconds at any setting screen to finish the setting and go to normal mode.
3. It displays "12 or 24H and XX:XX-XX" symbols as well AM/PM in case you select 12H. Operates buttons as descriptions of item 2 to finish clock setting and jump to 10,000/20,000rpm scale setting.
4. It displays 10,000rpm scale, press RESET button to convert 10,000 or 20,000rpm. Press MODE button to confirm the setting and jump to shift RPM warning setting.
5. It displays the default "RPM 6500", the digit "6" flash. Follow the item 2 of button operation to finish the shift RPM warning setting and jump to engine specification setting.
6. It displays "RPM SPC-X.X", the default value is 1.0; there are 4 options: 1.0, 2.0, 3.0 and 0.5. It means the numbers of engine rotation per signal. For example the value 2.0 means the engine rotate 2 turns to output a signal.
7. Press RESET button to move in loop sequence from one to another value of the 4 values. Press MODE button to confirm the setting and go to wheel circumference setting screen.
8. In "cXXXX" display, "c" means "Circumference", following 4 default digits; flashing digit is digit to be set. Follow the item 2 of button operation to finish the wheel circumference setting and jump to unit setting.
9. It displays KM/H or MPH, each press of RESET button converts unit; press MODE button to confirm unit setting and jump to fuel sensor resistance.

10. It displays “ 100 r ” and fuel tank symbol, follow the item 2 to select 100, 250, 510, -100, -250,-510Ohm or oFF and jump to odometer setting.. The fuel meter bar will disappear if you select oFF mode.
11. It displays “ODO & 00000X km”, the “X” is tested odometer in factory, follow item 2 to setting a desired odometer and jump to clock setting or return to Normal Mode. This setting screen will disappear when the odometer is over 30km or your setting is over 30km.

