ACEWELL Motorcycle/Scooter/ATV Computer ACE-295X or ACE-295X Plus for UK User Manual

www.acewell-meter.com

ENGLISH (UK)

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Thanks for purchasing the ATV/Motorcycle computer; this manual is specifically designed for ACE-295X or ACE-295X Plus series. Each series has different models, each model has different LED indicators. You may find that the photo has a set of LED indicators different from your computer, the photo is for reference only.

PANEL DESCRIPTIONS

1. Tachometer Scale
2. Bar-tachometer
3. Bar fuel gauge/temperature gauge
4. 1st row: Speedometer
5. 2nd row: Other functions
6. LED Indicators
7. RESET Button
8. MODE Button

⇦	Left-Direction Indicator/Green		Engine Oil/Red
≡D	Main-Beam Headlamp/Blue	N	Neutral Gear/Green
⇨	Right-Direction Indicator/Green	R	Reverse Gear/Red
⚠	Hazard Warning/ Red	D	Drive Gear/Green
P	Parking/Green		Engine Coolant Temperature/Red
⇦⇨	Direction Indicator/Green		Rear Fog Lamp/Amber
⇦1⇨	Trailer Flashers/Green		Engine "Not In Use"/ Red

FEATURES

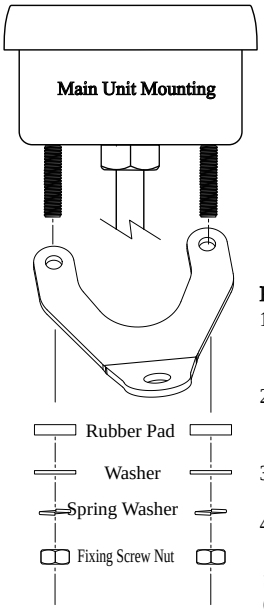
- Multi-functional LCD ATV/MOTORCYCLE computer includes analogue and digital tachometer, speedometer and clock.
- Computer built-in 4 to 6 LED lights for different purpose indicators.
- LCD has 2 rows digital and analogue rpm bar-graphic displays with blue backlight.
- Bar-graph tachometer has scale of 12,000 rpm, digital tachometer is up to 19,900rpm.
- Fast processor so can connect to pulse type gearbox speed sensors.
- Fuel gauge includes +/- 100, 250 and 510Ωoptions for fuel sender input resistance, as well as "fuel gauge off" mode.
- Ten level backlight brightness can be manual adjust from 0, 1, 2...9.
- End user is able to adjust odometer when the odometer is less than 30km /18.6 miles.
- Wide wheel circumference setting rang: 1-3999mm.
- Contains main unit, speed sensor, rpm sensing wire, magnet kits, wiring harness and/or *temperature sensor.
- Vibration (8G) and mechanical shock (100G) tested.
- Water resistant tested 100%.
- On some models the backlight can be controlled separately from the ignition power.

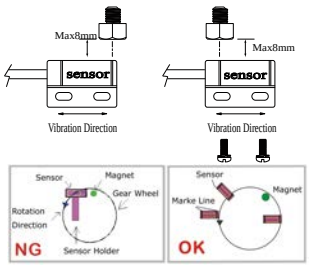
SPECIFICATIONS

FUNCTIONS	SYMBOL	SPECIFICATIONS
Bar Tachometer		500-12,000 rpm
Speedometer	km/h or mph	2-399 km/h (248 mph)
Trip meter 1&2	TRIP 1&2	100-19,900rpm
Odometer	ODO	0.0 – 999,999 KM, 0.0-621,387 Miles
12/24 Hour Clock	AM/PM or "xx:xx:xx"	0:00' – 11H59'59"/23H59'59"
Digital Tachometer	RPM	100-19,900 rpm,100rpm increment
Temperature meter	℃/℉	+25℃-180℃ / 77℉-356℉
Average speed	AVG	2-399 km/h (248 mph)
Riding timer	RT	0-99H59`59``
Total Riding Timer	TT	0-99H59`59``
Hour meter	HRT	0-9999H59'
Maximum speed	MAX	2-399 km/h (248 mph)
Maximum RPM	MAX RPM	100-19,900 rpm,100rpm increment
*Max. Temperature	MAX ℃/℉	+25℃-180℃ / 77℉-356℉
Bar-Fuel gauge		+/- 100Ω, 250Ω, 510Ω, off or rES mode
Bar Temperature		1-7 Bar-graphic or off mode
Backlight adjustable	LEDXXX	0-9 level

Power Input: DC 12V
Tachometer Sensor: CDI or Ignition Coil Signal
Speed Sensor: Reed switch / 2 wire Hall-effect Sensor
Wheel circumference setting: 1mm-3999mm (1mm increment)
Speed input divider setup: 1-199 Pulses
Dimensions: Ø64mm x 40mm
*Temperature Sensor: Thermistor Sensor

INSTALLATIONS & PARTS



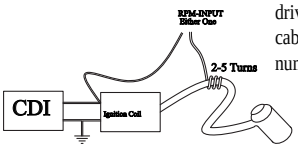


Reed Speed Sensor and Magnet:

1. This sensor is universal sensor for motorcycle, find a rotating part to install magnet (for example disk, sprocket or driveshaft) and a location to install the sensor where it 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. The magnet must not travel down the body 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.

Specific Hall sensors:

Cable drive adaptors for most bikes originally fitted with cable driven speedometers or milemeters are available. When using these cables it is necessary to divide the circumference setting by the number of rotations of the cable per rotation of the wheel.



Hall Effective Speed Sensor and Magnet:

1. This is universal sensor for Bike front or rear wheel installation or motorcycle front wheel installation. For some fitments an accessory speed sensor holder may need to be purchased.
2. Find a rotating part to install magnet (for example disk, sprocket or driveshaft) and a location to install the sensor where it 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..

***Thermo Sensor and Sensor Tube:**

1. The unit includes a water temperature sensor; you have to purchase a suitable water pipe temperature sensor tube to install the sensor easily.
2. Cut the water pipe, insert the temperature tube into the pipe and secure it by attached pipe clamps.
3. Screw the sensor into the tube.
4. If your vehicle is fitted with a thermostat that stops water flowing to the radiator when the engine is cold, you will not get a reading until the thermostat opens.

SPEED SENSOR Mounting:

ACEWELL has several speed sensors; the unit may include one of them. If the model is intended to be connected to a gearbox electronic speed output to obtain the speed reading, no speed sensor will be included.

RPM Sensor Mounting:RPM Input, Either one

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

FUNCTIONS

BAR RPM: Bar Graphic Tachometer

1. Tachometer bar graphic displays up to 12,000 RPM.

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.

Shift Warning RPM

1. The function enables you to set up a shift warning RPM.
2. Backlight flashes when RPM reaches setting value, and stops flashing after you shift gear

MAX RPM: Maximum Tachometer

1. Displays highest tachometer achieved since last Reset operation.

km/h or mph: Speedometer

1. Displays speed meter up to 399 Km/H or 248 MPH.
2. The maximum frequency of software divider is 7K Hz.
3. The speed can be less than 399 km/h in case the setup is using software divider for speedometer, for example the maximum speed is 250km/h in case setup of software at 105P and the wheel circumference at 1277mm.

MAX: Maximum Speed Meter

1. Displays highest speed achieved since last Reset operation.

AVG: Average Speed Meter

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

TRIP 1 & 2: Trip Meter 1& 2

1. TRIP function accumulates trip distance since last RESET as long as bike/vehicle is moving.

ODO: Odometer

1. ODO accumulates total distance traveled.
2. ODO data is adjustable when it is less than 30km (18.6 Miles), after that it stored in memory and cannot be reset.

RT: Riding Timer

1. Calculates total running time since last RESET.
2. Counter automatically begins with movement.

TT: Total Riding Timer

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

HRT: Hour Meter

1. Calculates total engine operation time from last RESET.
2. Count automatically begins with engine starting.
3. HRT data is stored in memory, and couldn't be reset.

AM/PM :12/24 hour Clock

It displays 12 or 24 hour current time.

: *Bar Thermometer

1. Have 7 bars to indicate engine temperature.
2. The 4th bar counts from bottom be turned on and over temperature LED flashes when thermometer reaches the preset warning temperature, each +/-15℃ lights on/off a bar base on the 4th bar.
3. The bar-temperature flashes when the measured temperature is higher than the preset warning temperature.

℃/℉: Digital Engine Temperature Meter *

1. It displays -L-℃ or -L-℉ when temperature is lower than 40℃ or 104℉, and displays -H- ℃ or –H-℉ when temperature is over 180℃ or 356℉.
2. The LCD screen flashes the digits of temperature when the thermo sensor detects temperature higher than the maximum preset temperature.

MAX ℃/℉: *Maximum Temperature

1. Displays highest temperature achieved since last Reset operation.

Bar Fuel or Bar Temperature Gauge

1. Has 7 bars to indicate how much fuel remains or over temperature.
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.

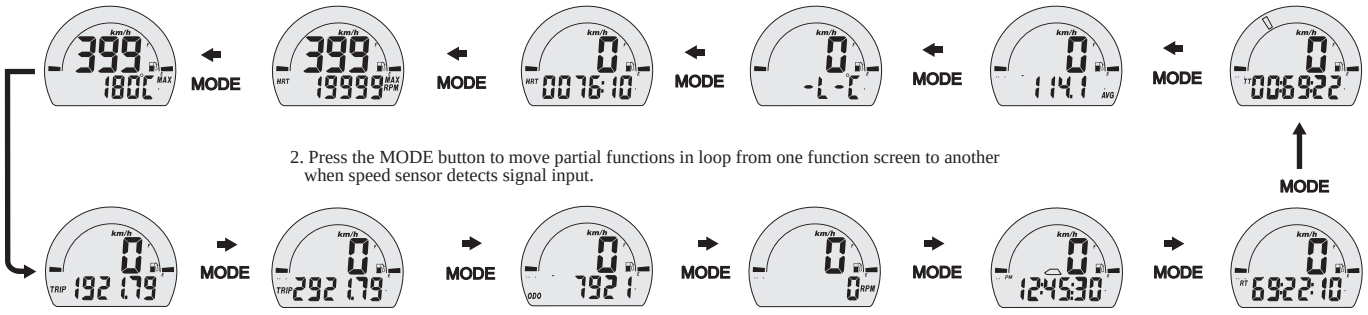
Bars	100Ω	250Ω	510Ω	-100Ω	-250Ω	-510Ω
7	0-10	0-25	0-50	100-90	250-230	510-460
6	11-20	26-50	51-100	89-75	229-200	459-380
5	21-35	51-85	101-180	74-60	199-150	379-300
4	36-45	86-110	181-230	59-45	149-110	299-230
3	46-60	111-150	231-300	44-35	109-85	229-180
2	61-75	151-200	301-380	34-20	84-50	179-100
1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

5. Bar flash if bar-tempertue is on and temperature is exceeded warning temperature setting.
6. Bar-graphic shows only bar-fuel warning in case both warning temperature and low fuel are on, the 2nd row LCD flash temperature information automatically.

BUTTON OPERATIONS

MODE BUTTON

1. Press the MODE button to move all functions in loop sequence 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 from one function screen to another when speed sensor detects signal input.

RESET BUTTON

1. Press RESET button acts as a revised button operation of MODE button.
2. Press MODE or RESET button to the desired screen then press RESET button for 2 seconds to reset TRIP 2, MAX SPD, MAX RPM and MAX data from stored values to zero individually.
3. The data of Trip 1, AVG & RT will all be reset at the same time when one of the 3 data functions is being reset.

SHIFT RPM WARNING 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.

WHEEL CIRCUMFERENCE TABLE

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

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

3. These values are approximate and will differ for different brands of tire, we would always recommend that you measure the distance travelled per revolution of the wheel in mm and enter this into the computer.
4. The computer calculates the wheel rotating length between 2 passes of the magnet; use this table to find the settings when you are using a reed sensor or an universal hall sensor with magnet to measure your speed.
5. If you are using a cable drive speed sensor then divide the number in the above table by the number of turns of the cable drive for each revolution of the wheel. For example if 1 wheel revolution equals 5 turns of speed cable then the wheel circumference has to be divided 5.
6. You can use more magnets, but the wheel circumference setting must be divided by the number of magnet you installed.
7. The computer has a built-in software divider setting from 1 to 199 for different speed signal application, refer to the divider setup, one means one wheel revolution creates one signal. You have to input the number of signal per wheel revolution to have a correct speed.

CLOCK, RPM, WHEEL, DIVIDER, UNIT, FUEL METER AND ODO SET UP

1. Setup operations include 12/24 hour clock, backlight brightness,shift warning RPM, numbers of engine rotation per signal, wheel circumference, signal divider, units, decimal, fuel meter input resistance selection and odometer adjustment. These must be set up step by step. The computer will be automatically revert to normal mode if no button is pressed for 75 seconds at any setting screen.
2. Press both MODE & RESET buttons to go into setting mode. In setting mode, each press of the RESET button increments the flashing digit by 1 or converts units. Press MODE button to confirm the digit setting and warning 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 backlight brightness setting.
4. It displays “Light and a flash digit”, the flash digit can be from 0, 1, 2…9 level setting, 0 is turned off backlight and 9 is the most brightness. Follow item 2 of button operation to finish the setting and jump to shift RPM warning setting.
5. It displays the default " r06500 ", the digit “0” flash. Follow the item 2 of button operation to finish the shift RPM warning setting and jump to engine specification setting.
6. It displays " SP 1r1P RPM", the default value is 1r1P; there are 5 options: 1r1P, 2r1P, 1r2P, 1r3P, 1r4P. “r” means the numbers of engine rotation, “P” means number of signals from engine. For example the value 2r1P means the engine rotate 2 turns to output one signal.
7. Press RESET button to move in loop sequence from one to another value of the 5 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 signal divider setting.
9. It displays "P-001" for signals to be divided. Follow item 2 of button operation to finish the setting and jump to unit setting.
10. It displays KM/H or MPH, each press of RESET button converts unit; press MODE button to confirm unit setting and jump to temperature unit setting.
11. It displays “ and ℃ or ℉ or oFF”. Follow item 2 of button operation to finish the setting and jump to warning temperature setting. The temperature meter will disappear and the bar-graphic shows for fuel meter only if you select oFF mode.
12. It displays “ and 105 ℃ or 221℉”, follow item 2 of button operation to finish the setting and go to fuel sensor resistance setting.
13. It displays “100r” and fuel tank symbol, follow the item 2 to select 100,250, 510ohm, oFF, -100, -250,-510Ohm or rES and go to odometer setting.. The fuel meter bar will disappear and the bar-graphic shows for bar-temperature meter if you select oFF mode. rES mode is for NTC type fuel sender on/off application.
14. It displays “ODO & 00000X km”, the “X” is from odometer testing in factory, follow item 2 to set a desired odometer value and jump to clock setting or return to Normal Mode. This setting screen will disappear when the odometer is over 30km (18.6Miles) or your setting is over 30km.