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ACS270 SmartDisplay User Manual

Software Version 1.49+ (ACS270)

Table of Contents

SmartDisplay Controls & Indicators

Function	Operation
On	"Long press" lower dial
Off	"Long press" upper dial
Set brightness	Turn upper dial when menu is not active.
Clock	Turn lower dial until display "Time.
Pace clock	Turn lower dial until display "Pace CLK".
Check Battery	Status light flashing: Blue:>75%, Green:20~75%, Red:<20%
Select menu	Turn lower dial
Reset Pace Clock	In Pace clock mode, short press lower dial to reset count to "00"
Set up Group No.	Turn lower dial until display "Group", turn upper dial to select the value, then "long press" lower dial until display "Saved".
Race Timing Resolution	Turn lower dial until display "Race", turn upper dial to select the value, then "long press" lower dial until display "Saved".
Reset device	Hold in both lower & upper dials until display shows "ACS270".

Note: There are two types of button presses. A "Short Press" is of less than 0.4 seconds duration. A "Long Press" is of greater than 0.6 seconds duration.

① - **Menu Button - ON Button** – *when device is off, 'long press' inwards to turn it on.* **Menu Item Selector** – *when device is on, twist knob to cycle through menu items.* **Battery Percentage Readout** – *'short press' inwards activates a visual reading of the display's remaining battery percentage.*

② - **SELECT Button – OFF Button** – *when device is on, twist knob to cycle through items in each menu (e.g. Group 1, 2, 3 or Squad 1, 2…) ' long press' the menu button to activate selected item.* **Status Readout** – *'short press' inwards to activate a Visual reading of each of the display's menu settings (Group, Squad and Channel).* **A long press on the Select button turns the LED display off.**

③ - **Status LED** - *will flash when LED display is on; blue with more than 50% battery, green when less than 50% but more than 25% and red when less than 25%.*

④ - **Charging LED** – *will glow red when connected to a power source and charging.*

⑤ - **LED Display –** *shows lap times, modes, lane numbers, start messages and settings.*

⑦ - **USB Socket –** *connection to computer for software updates and result recording.*

⑧ - **Charging Port –** *connect 5V power supply to charge LED Display.* *DO NOT CONNECT A LAPTOP POWERPACK AS DAMAGE MAY RESULT!*

1. Turning on and off

1.1: Turning unit on

If the unit is off (Status LED ③ not flashing), long pressing the lower dial will turn the unit on. The Status LED ③ will confirm that the unit is on by flashing. Upon start up the sign will display its Network ID, Group and the current mode it is set in.

1.2: Turning unit off

The unit will automatically turn off after approx. 45 minutes inactivity. Just before turning itself off it will display "Off!". The unit can be manually shut down by long pressing the Select Button ②. The unit will display "Off!" as it turns off, and the Status LED ③ will stop flashing.

1.3: Battery Status

When the unit's battery falls below 50%, the Status LED ③ will turn from blue to green. When the battery falls below 25%, the Status LED ③ will start flashing red. At this point we recommend charging the Unit.

1.4: Resetting the unit

The unit can be reset to default conditions by holding in both dials simultaneously for more than approx. 10 Seconds. When both dials are pressed, the display will show "Rebooting!". After a few more seconds the display will go blank and the status LED will flash through a cycle of colours. After booting, the Sign will display the model (ACS270) and the software version.

Hold in both dials to "reboot" the LED Display
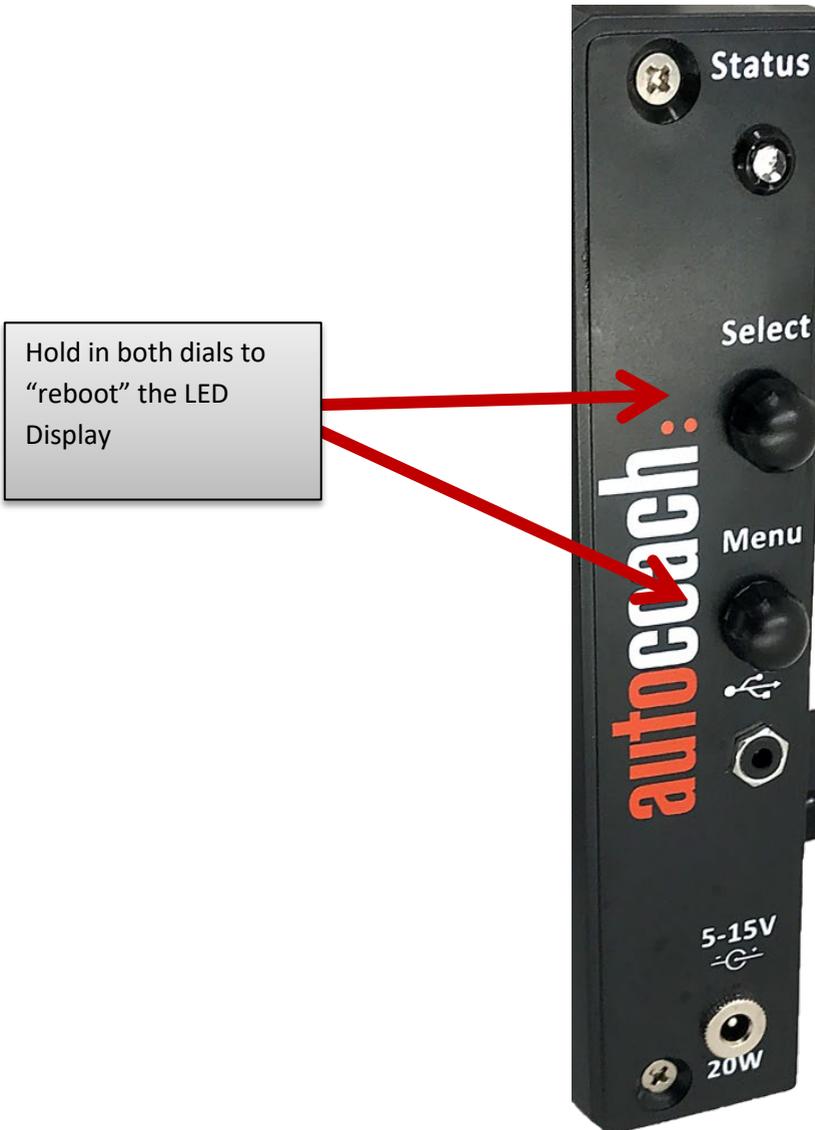
2. Connecting to your Stopwatch

1. To connect to your Stopwatch, first setup your Watch by turning it on and finding the Setup Mode. In Setup Mode, set your Channel number (e.g. Channel 15).*

2. Turn on your Display by pressing in the lower dial until the unit displays Network ID and group and the Status LED ③ blinks.

3. *Network ID and Channel Number MUST be the same for Stopwatches, Displays and Speakers to communicate with each other*.   Rotate the lower Dial until the LED Display shows "Chan #". From here, as in step 2, rotate the upper Dial to select the Channel number that matches your number used for the Performance Stopwatch (Default is Channel 15), then 'long press' the lower dial until the Display confirms your selection by reading "Saved".

4. Confirm your connection by starting a race in Race Mode on your Performance Stopwatch and looking for the start commands on your display. The display will also operate in Watch and Speed modes, allowing use of the stopwatch without the speakers sounding. The displays are capable of displaying velocity splits and stroke rates, as well as time splits and race placing. (See 4.4, 4.5 below)

*Please refer to the Performance Stopwatch User Manual for detailed instructions regarding your Watch

3. Connecting to Your Computer

Either as part of the installation, or as an emailed or downloaded file you can update the firmware of an AutoCoach device. Before upgrading, be sure to have at least 20 percent battery level remaining and please do not operate any controls or other programs on your computer whilst the upgrade is in progress! After a successful upgrade, the unit will then reboot. ***Please see the AutoCoach Manager User Manual (Help button) for more details.***
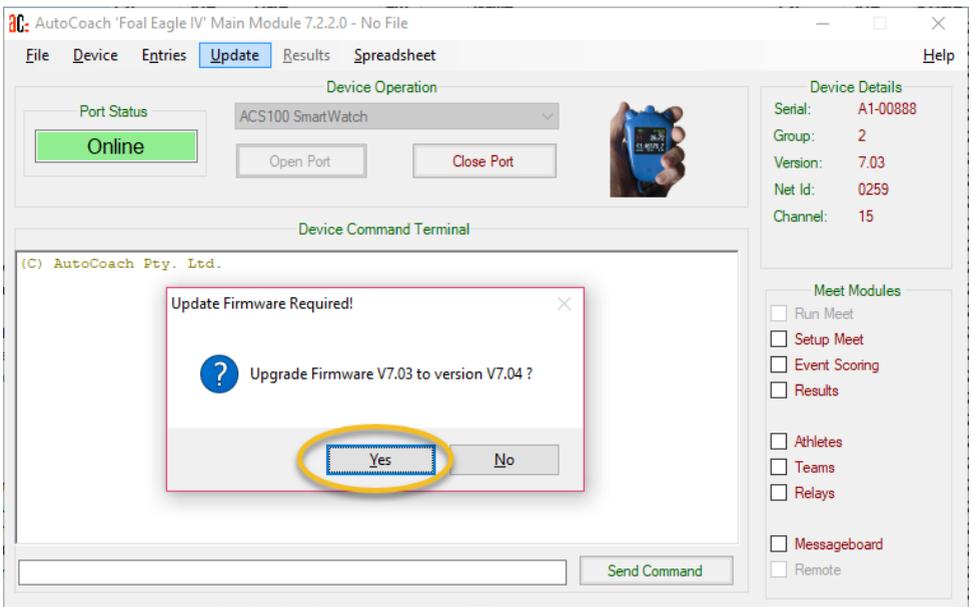
4. LED Display Information

To activate Race Mode, rotate the Menu Dial ① until the Display shows "Race 0.01" and then hold down the Menu Button until the Display confirms the selection by displaying "Save".

4.1: SmartWatch in Pace Mode

The display will show "1st Ready!" when Pace Mode is initiated on the watch and subsequently display the lanes and stopwatch accumulation.

4.2: SmartWatch in Race Mode

The LED Sign will display "Ready" when the starter's whistle is activated on the watch, "On marks!" when "take your marks" is activated and will start displaying lanes and the race times when the Smart Watch starts the race. "Abort!" will be displayed if the Smart Watch user decides to cancel the race. "False Start!" will be displayed if the starter sends a false start command.

Splits recorded by the watch will be displayed according to the corresponding lane and rounded to 0.01 seconds. Unless Race .1 is selected, times below 1 minute will be rounded to 0.01 seconds on the ACS270, or to the nearest .1 seconds for longer durations.

4.3: SmartWatch in Interval Mode

As per Pace Mode, the LED Display will read "On Marks" when the watch announces "Take Your Marks" and subsequently display the lanes and stopwatch accumulation after the "Go" beep.

Times recorded by the watches will be displayed in their corresponding lanes and rounded to either 0.1 or 0.01 seconds depending on your settings.

4.4: SmartWatch in Watch Mode

The LED display shows the primary information the ACS270 displays, allowing the coach to look at the display and watch the swimmer, and not look down at their watch. Also the Athletes can see the display, eliminating the need for the coach to yell out the result.

Stroke rate displayed on an ACS270

4.5: SmartWatch in Speed Mode

In addition to times and stroke rates, in Speed mode split times are not displayed, but split velocities are as shown below.

ACS270 displaying 1.23 Meters per second velocity split.

5. Other Menu Items

5.1: Time

To reach Time, rotate the lower Dial until the Display shows "Time".

Time Mode simply displays the current time of day as hh:mm:ss. Time mode will be suspended automatically when any connected SmartWatch starts a timing activity or event, and will automatically resume after the Watch has become inactive.

5.2: Pace Clock

To reach Pace Clock, rotate the lower Dial until the Display shows "Pace Clk".

For the ACS270 the Pace Clock will display two clocks showing seconds with a 30 second gap or separation between each clock/display.

To synchronise your Lap clock time with that of the swimming centre's, wait till the centre's pace clock is at 12 O'clock and then 'short press' the lower dial to reset your lap clock to zero seconds.

5.3: (ACS270) Multi Pace Clock – 5 Second steps

To reach Multi Pace 5, rotate the lower Dial until the Display shows "Pace 5". The display has the 2 right hand digits displaying traditional Pace Clock digits, the first 6 digits are colour coded time cycle counters, the slowest time cycle on the left side, each digit to the right is a 5 second faster time-cycle. Athletes just need remember the colour (time-cycle) and what digit they left on. E.g. Green 4. No mental arithmetic is therefore needed to swim any of the six different time-cycles

5.4: (ACS270) Multi Pace Clock – 10 Second steps

To reach Multi Pace 10, rotate the lower Dial until the Display shows "Pace 10". The display has right hand 2 digits displaying traditional Pace Clock digits, the first 6 digits are colour coded time cycle counters, the slowest time cycle on the left side, each digit to the right is a 10 second faster time-cycle. Athletes just need remember the colour (time-cycle) and what digit they left on. E.g. Green 4. No mental arithmetic is therefore needed to swim any of the six different time-cycles

In this example swimmer number 1 in the fastest of 6 groups is leaving, swimmer number 7 in the slowest group, swimmer number 8 in the second slowest, etc.

Digits 7 and 8, without colour, can be seen operating as a normal Pace Clock – that is 00 to 59. (25 seconds showing)

5.5: Group

To reach Group, rotate the lower Dial until the Display shows "Group". From here, use the upper Dial to choose a desired group and hold in the lower dial until the Display confirms the selection by showing "Saved".

5.6: Channel

To reach Channel, rotate the lower Dial until the Display shows "Channel". From here, rotate the upper Dial to choose a desired channel and hold down the lower dial until the Display confirms the selection by showing "Saved".

5.7: Brightness

To reach Brightness, rotate the upper Dial for your desired brightness from 0 (Dim for indoor) to 30 (bright for outdoor use). Using a lower brightness setting will allow up to 5 times battery life for a given use. If the battery level is low, (Red flashing status LED) high brightness settings will not activate in order to preserve maximum remaining battery time.

6. Charging the battery

The Autocoach SmartDisplay can be recharged with the supplied AC Adapter (5V 4000mA).

From 0% Battery level, charging usually completes within 4 hours. We recommend recharging when the battery level is below 30%, in order to be confident that you have enough power for a day's usage.

When battery level falls below 10%, the LED panel will automatically change it's brightness level to zero, this will enhance battery life for the last part of your session.
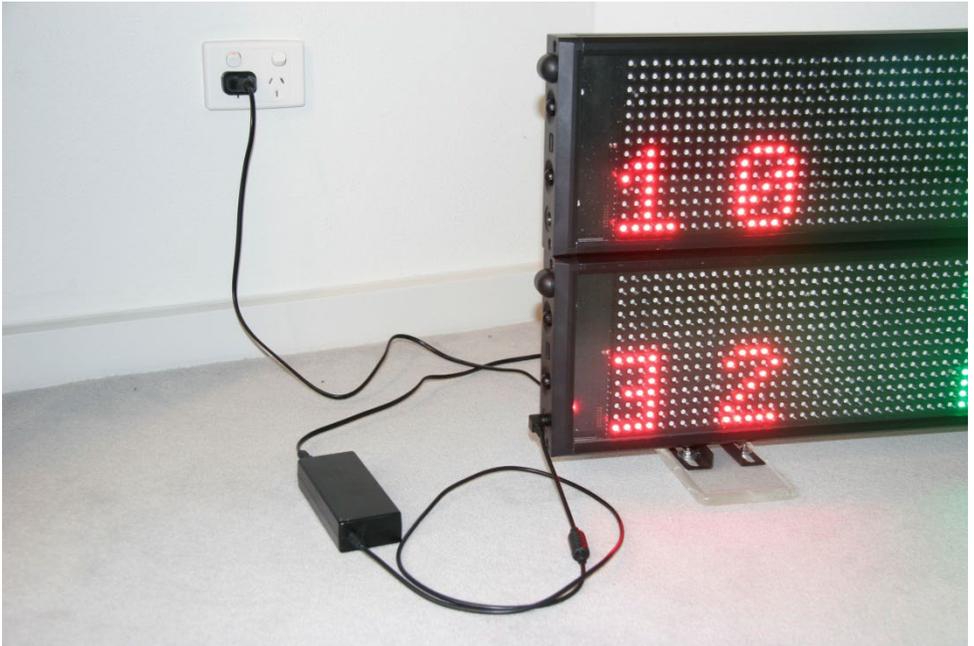
7. Caring for your AutoCoach device

7.1: Storage

Try to store in an as dry and cool place as possible. When in use always stand the LED Display on its base and take care not to drop the unit on hard surfaces. Protective carry cases are also available for both LED Display models. Don't put a wet display inside a case, wipe it dry to prevent corrosion.

7.2: Handling

The SmartDisplay is water RESISTANT, and NOT water proof. Do not submerge the unit! After use around splash areas, be sure to shake any water out of the unit and wipe off remaining droplets. Also the holes for USB port and battery charger must be covered when not used to prevent water splashing in. We recommend a small piece of gaffer or duct tape or Blu Tack over the holes.

7.3: Labelling

Please put a large sticker on your LED Display to ensure it is not accidentally taken or stolen. An increasing number of clubs now use AutoCoach equipment so if taking equipment to race meets or training camps, it is better to be well prepared! If you have more than one unit, we recommend labelling it with the squad or group number.

7.4: Resetting

If the program fails to respond or the device will not turn on, try performing a Reboot as per Section 1.4. Please record what you were doing when the problem happened and report to us in order for the problem to be investigated.

8. Mounting on a Tripod

Please attach bracket as shown in this image.

Use the 3 or 4 nuts / wing nuts to attach tripod bracket as shown above. Be careful not to over tighten the knob and place display on tripod in an area where no one will bump it or trip over the display! We recommend at least 3m from the pool for safety and reducing the chance of exposure to splashing water. If your Display has no mount bolts, it will need to be retrofitted. Please contact us for instructions.

FCC Caution.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.