A510S
Operation Manual

REV 1.1

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1 General information

Congratulations on purchasing your A510S. We hope that this versatile and user-friendly laser will assist you for many years to come.

Although it is easy to use, we recommend that you read this manual to ensure that you enjoy hassle free operation and get the best out of your laser.

1-1 Description

The A510S is an automatic visible laser that can be used for leveling, vertical alignment, plumbing and squaring. Applications include installing suspended ceilings, intricate floorings, partitions and a variety of outdoor alignment work.

Advanced features include:

- Automatic self-leveling in both horizontal and vertical modes
- Choice of three beams: rotating plane, scanning, chalk line
- Easy electronic calibration
- Square shot that is left and right adjustable
- Motorized wall mount and optional mount for grade plane
- Setting of manual grade in X and Y axis

1-2 Potential Operational Hazards

The A 510 S is a Class 3a laser and is manufactured to comply with the International Rules of Safety standard IEC285. Although the power of the emission of the beam does not exceed 5mW in Class 3a, the following precautions are recommended:

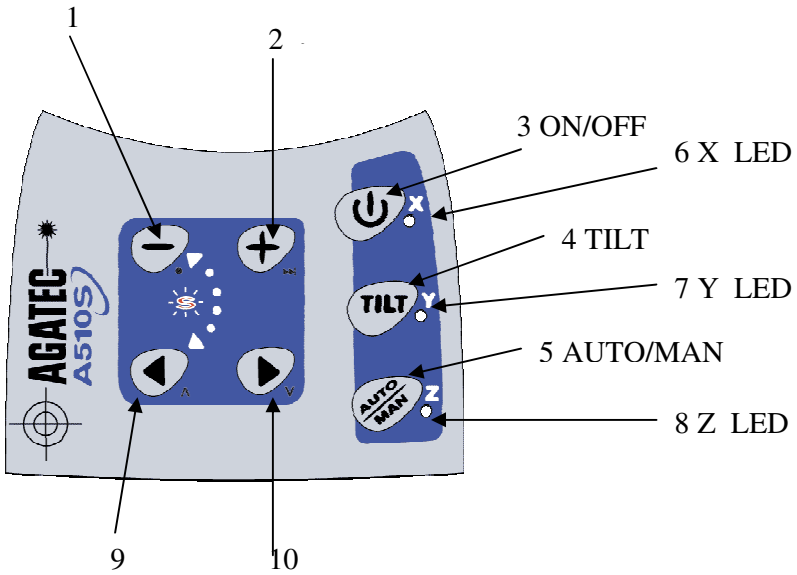
- DO NOT stare directly at the beam
- DO NOT set up the laser at eye level
- If necessary warn surrounding workers or passers by of the laser
- Wear protective eye glasses

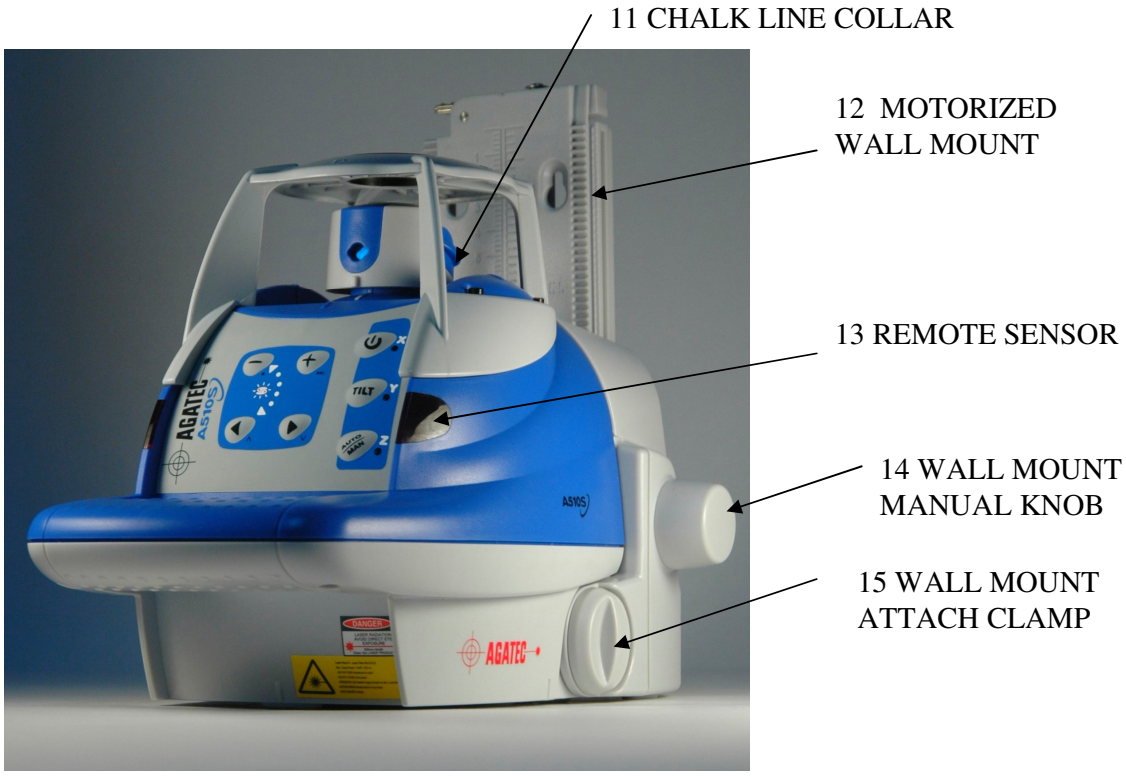
1-3 Technical Specifications

Recommended Use	300 m diameter
Accuracy	2.4mm at 30m
Levelling Accuracy	0.010% +/- 3 mm at 30 m.
Levelling Range	+/- 10%
Manual Grade on X and Y axis	+/- 8%
Rotation speed	0,60,150,300,450,600 rpm
Scanning Angle	From 2° to 36°
Laser Diode	635 nm < 2mW Class IIIa
Power	2 D Size alkaline batteries or rechargeable batteries
Battery life	40 hours with rechargeable batteries. 160 hours with alkaline batteries
Weight	1.5 Kg

1.4 Instrument overview

Keypad





1.5 Function Summary

1) Turn on the A510S – Press On/Off on the keypad (3).

2) Stop the rotation – Press on key -- (1) for a few seconds

3) Move plane to left – Press on < (9)

4) Move plane to right – Press on > (10)

4) Chalk line on/off – Push or pull the Blue collar on the Rotor head. (11)

5) Start / Stop scanning mode – Press simultaneously on – (1) and < (9)

6) Increase scanning angle – Press on + (2) when A 510 S is in scanning mode.

7) Decrease scanning angle – Press on -- (1) when A 510 S is in scanning mode.

8) Put 'Tilt' (H.I. Alert) on – Press on 'Tilt' (4)

9) For manual mode (X axis) - Press Auto/Man (5) and one LED will blink.

10) For manual mode (Y axis) - Press Auto/Man (5) then Tilt (4). (Two LEDs will blink)

11) For manual mode on Y axis and automatic mode on X axis Simultaneously press on Auto/Man (5) and hold for a few seconds. LED (8) will flash at first then come on steady.

(12) For wall mount mode: Press and hold on Scanning keys {– (1) and < (9)} for several seconds. All 3 LED's will flash when the wall mount is active. Use the < and > keys to raise and lower the wall mount.

2 How to use your A510S Laser

See 1-4 for a keypad and laser overview.

When first turned on the laser will conduct a self-test. The beam will blink while it is self-levelling. Once it has levelled the head will start to rotate.

2-1 Automatic/Manual Key

- Auto: Automatic levelling.

- Man: Manual mode.

Automatic is the default mode when the laser is turned on. Once the laser has leveled the head will start to rotate.

Manual Mode means that the head will be in constant rotation. This means that the beam will rotate even if the instrument is not leveled. It can therefore be used on inclined planes such as stairs, roofs or when manual grade setting is required.

WARNING: In manual mode you will need to *check regularly* back to your reference point to confirm the accuracy of your readings.

2-2 Tilt Key

Tilt: H.I Alert mode. The Tilt function is also known as the H.I (height of the instrument) Alert. This feature stops the laser automatically and sounds an alarm if the laser is jarred or moved, preventing inaccurate readings.

To activate this function push the Tilt key (18) after turning the instrument on. The H.I Alert feature is available 30 seconds after the instrument has self-levelled. Only use this feature in automatic and semi-automatic mode.

The red light indicator near the Tilt key will blink when operating in this mode. The LED will blink fast when the laser is still self-levelling. The LED will blink slowly when the laser is levelled and when the Tilt function is on.

If the laser is disturbed, the head will stop rotating and the red light will be on continuously. If this occurs turn the laser off, wait 5 seconds, and turn it on again after checking that the beam is still at its original reference.

2-3 Horizontal Set-up

1. The A 510 S laser can be used directly on the ground or on a standard 5/8x11 flat or domed tripod.
2. Press the On/Off key (3) on the laser keypad to switch the laser on. It will start its automatic leveling.
3. To select the manual mode, press on the "auto/man" button (5)
4. To select Tilt mode (H.I Alert), press on the 'Tilt' button (4).

5. NOTE! Remember that the Tilt function will be active 30 seconds after the A510S has finished its self-leveling.
6. If you wish to move the laser beam to a specific point, press on -- (1) until the rotation stops.
7. To increase or decrease the rotation speed of the head, press on -- (1) or + (2), Five different rotations speeds are available. You can choose the rotation speed which best suits the light conditions which you are working in.
8. To turn the laser off, press on On/Off key. (3)

2-4 Vertical Set-up

No accessories are needed to use your laser in the vertical position.
The A510S can be used directly on the ground.

1. Place the instrument in vertical position.
2. Turn the laser on. Once the instrument is leveled, the head will start rotating.

2-5 Squaring

1. Put the laser on the ground and repeat steps 1 & 2 for vertical use.
2. Stop the head rotation by pressing (15) until rotation stops.
3. To position the rotating plane perpendicular to a reference line:

Without the included wall mount:

- Align the arrow located below the beam aperture with the index located on the head protection.
- Move the laser so that the beam is over the reference point on the ground, keeping the arrow and index aligned
- Align the beam projecting from the top of the head to your second reference point by using the key < (9) or > (10), or in using the remote control or the detector / remote. This beam is then 90° or square to the other vertical plane beam.
- Start rotating the beam by using the key + (2) for three seconds on the keypad or by using the remote control or the detector /remote.

With the included motorized wall mount:

- Put your laser on the ground so that the index located on the top of the adjustable plate is over your reference point. By using the remote control or the button located on the side of the wall mount, you can adjust the laser so that the beam is on the reference point.
- Align the beam projecting from the top of the head to your second reference point by using the key < (9) or > (10) or in using the remote control or the detector/ remote. This beam is 90° or square to the other vertical plane beam.
- Start rotating the beam by pressing key + (2) for three seconds on the keypad or by using the remote control or the detector / remote.

NOTE: It is very important to check while you are using the laser that it has not been moved and that your settings are still accurate.

2-6 Rotation Speed

Your A 510 S is equipped with a visible laser diode. It may be necessary to adjust the rotation speed according the ambient light conditions. Press on keys -- (1) or + (2) on the laser keypad in order to adjust the rotation speed of the laser. The different rotation speeds available are: 60, 150, 300, 450, 600 rpm.

The laser beam is more visible at slower speeds. It is possible to stop the rotation and point the beam manually to view the beam over a long distance.

2-7 Chalk Line Laser

The laser line is ideal for small distance applications. To use the laser line feature, push the blue collar located on the side of the rotor head so that the point becomes a line. This gives a precise and stable laser line for working directly on your reference plane. You can move the line by rotating the head manually or by using the remote control.

The DETECTOR CAN NOT be used in the CHALK mode.

2-8 Scanning

The scanning feature is used for interior applications and allows the user to see the beam when the laser is further away.

To use the scanning feature, turn the laser on. The laser should be put in 'point' mode and rotation should be off. (Press on key -- (1) for a few seconds)

If the laser is in chalk line mode, push the blue collar (11) down located on the side of the rotating head so that the chalk line becomes a beam.

<u>To switch the laser from beam to scanning mode:</u>

Press simultaneously on keys on – (1) and < (9) or Press on the scanning symbol of the remote control or of the remote / detector.

The beam will blink until the laser has self-leveled. Then, the scanning plane will stop blinking.

To decrease the range of the scanning plane, press -- (1) on the laser keypad.

To increase the range of the scanning plane, press + (2) on the laser keypad.

To move the scanning plane to the left, press < (9) on the laser keypad.

To move the scanning plane to the right, press > (10) on the laser keypad.

To turn the scanning off and come back to the point mode, simultaneously press keys -- (1) and < (9).

2-9 Manual Grade

The A510S can be used to make manual grades of up to 8% on both the X and Y axis.

Two modes are available:

- Complete manual mode: X and Y axis will be both manual
- Semi-manual mode: X in automatic / Y in manual

The manual mode will be mainly used to form inclined planes such as stairs, roofs and carports.

The manual mode can also be used while using the wall mount (optional motorized wall mount) or any other mount for inclined planes available.

Starting with Manual Grade

1. Turn your A510S on.
2. Press AUTO/MAN key (5) – The manual mode LED indicator (8) will start blinking fast. The head will start rotating.
3. Press key < (9) or > (10) to make a slope on the X-axis.
4. To switch to the Y-axis, press on the Tilt key (4). Both LEDs (7) and (8) will blink to inform you that you can make a grade on Y-axis.
5. Press on key < (9) or > (10) to make a slope on the Y-axis.

Starting with semi-manual mode

1. Turn your A510S on.
2. Press the Auto/Man key (5) for a few seconds. The led (8) will flash first then will be on steady. Your A510S will be automatic in X-axis and manual in Y-axis. **Please note that it is possible to use the Tilt function on the X-axis when Y is on manual.**
3. Press on key < (9) or (10) to make a slope on the Y-axis in keeping the Y-axis leveled.

Press the 'Auto/man' switch (5) to return to complete manual mode (X and Y axis in manual)

Press the 'Auto/man' switch (5) a second time to return to the automatic mode.

IMPORTANT: In manual mode, the head will rotate even if the laser is not levelled. The Tilt function is not available when your A510S is on manual mode. Please note however that it *is* possible to use the Tilt function on the X-axis when Y is on manual.

2.10 Setting up a required grade on site.

The following instructions will help you through the process of setting your A510S to a known grade.

1. Setup laser on tripod within range of your jobs zero reference point. Turn laser on and allow to level.
2. For a single grade, the X axis should be perpendicular to the plane of the grade. The required grade will be put in the Y axis. This allows the use of semi

automatic mode were the X axis is automatically kept level. Tilt mode can also be used on the X axis in this case.

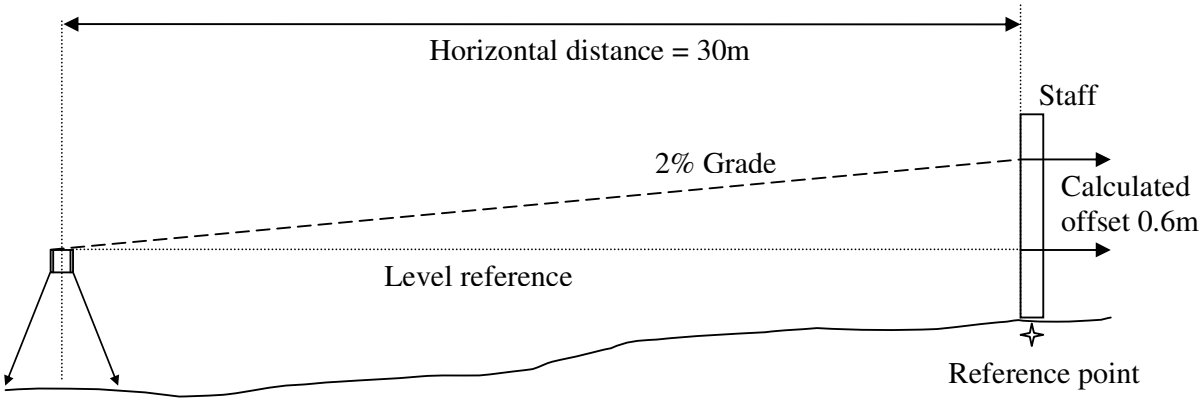
3. With the receiver mounted on a cut & fill rod / staff adjust the position of the receiver to give an on grade signal whilst the staff is plumb on the zero reference point. Mark or note your zero reference value indicated by the receiver.
4. Grade = Rise/Run where Grade is the desired slope as a percentage, Rise is the measurement from the zero reference to grade point and run is the distance from the laser grade axis to the grade point. For example see below.

SETTING UP A MANUAL GRADE ON SITE.

You will be setting up the laser on a spot 30 meters from the established reference point for the required slope.

Calculate the required offset from the horizontal that will be required to achieve the desired grade.
Example: For a 2% Slope with the centre of the laser over a point 30 meters from the established reference point. Desired elevation offset between 2 points = (Slope) * (Distance)

Desired elevation offset between 2 points = 2%(e.g 2/100) * (30M) = (2 x 30)/100 = 0.6M



STEPS.

1. Set laser up over a point measured 30 meters horizontally from the established reference point. Turn the laser on and allow it to automatically level. Steps.
2. For a single axis slope, align the Y axis (sides with the handle and wall mount on them) along the line to the reference point.
3. Using a laser receiver Mark / Take the level readings at the staff on the reference point.
4. Press and HOLD the Auto/Man key for a few seconds. The LED (z) will be on and will stop blinking. Your A510S will be automatic in X-axis and manual in Y-axis. **Please note that it is possible to use the Tilt function on the X-axis when Y is on manual.**
5. Position the laser detector at the calculated required offset distance above or below the marked level reference point on the staff.
6. Using the remote, Press on key < or > to make a slope on the Y-axis in the desired direction. The X-axis will automatically be kept level.

7. Adjust the slope with the remote until the required offset elevation is achieved as indicated by the ON Grade signal from the laser detector.
8. The laser is now set to the desired grade.

NOTE. If the laser is turned off or moved the above setup must be repeated. The laser will not hold the set grade.

5.

3 Power

3-1 Installing Alkaline Batteries

1. Remove the battery cap located on the rear of the instrument by using a coin or a screwdriver to undo the screw. Do this gently.
3. Insert two alkaline batteries (D size or LR20) ensuring that the polarity (+ or -) is correctly aligned. (Indicated in bottom of
3. Replace the battery cap using a coin or screwdriver. Again do this gently.

3-2 To replace alkaline batteries

When battery power is low, the laser head will stop rotating and the LED located near the on/off key will remain on to indicate low battery power.

Replace both alkaline batteries using the above (3-1) process ensuring that the polarity is correctly aligned.

3-3 Using rechargeable batteries

If your A510S is equipped with a rechargeable battery. This battery must be charged for 15 hours before first use of the instrument.

1. Insert the charger plug into the jack connector on the battery pack. This is located at the rear of the instrument.
2. Plug the charger into an electrical outlet (110 volts or 220 volts)
3. Charge it for 15 hours. DO NOT OVERCHARGE. DO NOT charge the battery for more than 20 hours.

3-4 Recharging the batteries

The A510S can be charged when working, if electricity is available on the jobsite. Simply plug the charger in and continue working. If the battery is flat you can also replace it with alkaline batteries while waiting for the battery to charge up again.

For optimum battery life it is recommended to re-charge the battery after it has completely run out.

MAXIMUM CHARGING TIME IS 20 HOURS. DO NOT EXCEED THIS.

Ensure that you store and charge the A510S in a cool and dry place. Damage can occur if the laser and/or the battery is allowed to become too hot or become damp.

4 Checking and Adjusting your A 510 S

THIS CHAPTER IS VERY IMPORTANT. Here are a few simple instructions to check your A510S for correct calibration. Remember that the laser is a precision instrument and that it is important that you keep it calibrated and in proper condition.

The accuracy of your job is completely your responsibility and you should regularly check your instrument and before each job, no matter how big or small.

Follow the directions below for checking each axis for calibration. If the laser needs to be calibrated, follow the instructions below or take it to a professional service centre.

4-1 Horizontal checking

1. Place the laser on a flat surface 30 meters from a wall. Position the laser so that the X-axis is facing the wall.
2. Turn the laser on. When the laser is levelled, stop the rotation so that the beam is at a point.
3. Mark the location of the beam on the wall (X).
4. Rotate the unit 180°. After the laser has levelled, mark the location of the beam near the first mark (X')
5. Both measurements must be at the same place. At 30 meters, the marks should be no more than 3 mm apart. This is +/- 0.010% (+/- 10 mm at 100 meters)
6. If the marks are not close enough, the X-axis needs to be calibrated.
7. Make a mark on the wall halfway between X and X'. This mark will be the X calibration point.
8. To check the Y-axis, turn the unit 90° in order that the Y-axis is facing the wall. Repeat steps 2 and 3 and mark the beam (Y)
9. Rotate the unit 180°and mark the location of the beam again (Y').
10. Both marks Y and Y' must be at the same place. At 30 meters, the marks should be no more than 3 mm apart. This is +/- 0.010% (+/- 10 mm at 100 meters).
11. If the marks are not close enough, the Y-axis needs to be calibrated.
12. Make a mark on the wall halfway between Y and Y'. This mark will be the Y calibration point.

X and Y Axis Calibration General Information

The laser must be calibrated to bring the beam to the center of the two marks you have defined as above (4-1).

The calibration of the A510S is easily done using the laser keypad, the remote control or the detector / remote.

X axis calibration

1. To switch the A 510 S to the calibration mode, turn it off.
2. Turn your laser so that the X or X' axis is facing the wall on which you have made the X mark.
3. Then, simultaneously press on the keys On/Off (3) and Auto/man (5).
4. After few seconds, release the key On/Off (3).
5. Release the key Auto/man (5) when the Z LED (8) light indicator is on.
After releasing the key (5), the X LED (6) will blink fast to inform you that your A510S is ready to be calibrated on the X-axis.
6. Press on key < (9) to move the beam up or the key > (10) to move the beam down.

<u>Important:</u> DO NOT keep pressing the key up or down. ONE PRESS of the key is EQUIVALENT to 1MM UP OR DOWN.

If Y-axis does not have to be calibrated, you can save the X calibration information by pressing the key -- (1) on the keypad. (Saves data and turns laser off)

If you think to have made a mistake during this process, press on On/Off key (3) to turn off and come back to the prior calibration.

If Y-axis has to be calibrated, change the calibration axis in pressing the key + (2). The Y LED indicator (6) will blink to inform you that the Y-axis is ready to be calibrated.

Y axis calibration

1. Be sure that the Y LED indicator is blinking on the laser keypad.

   If not:

   - Turn off the A 510 S
   - Simultaneously press on on/off key (3) and Auto/man (5)
   - After few seconds, release the key on/off (3)
   - When Led (8) is on, release the key Auto/man (5)
   - Press on key + (2) in order that the Y LED indicator (7) is blinking

2. Rotate your laser so that the Y-axis is facing the wall (where you have noted the Y and Y' marks).
3. Wait until the A510S has levelled.
4. Move the beam halfway between the Y and Y' marks you have made during step 4-1. Use the < key (9) to move the beam up or the > key (10) to move the beam down.
5. To save the data, press on -- key (1).
6. To switch off the laser without saving the information, press on on/off key (3).

4-2 Vertical Checking and Calibration

Vertical Checking

1. Place the A510S in vertical mode on a flat surface at about 30 meters from a plumb line (plumb bob hanging on a string)
2. Turn on the laser so that the laser self-level in vertical mode.
3. Stop the rotation when the laser is self-levelled.
4. Move the beam manually or in using the remote control along the plumb line. If the beam is slanted and not vertical like the plumb line, the Z axis needs to be calibrated.

Z-axis calibration

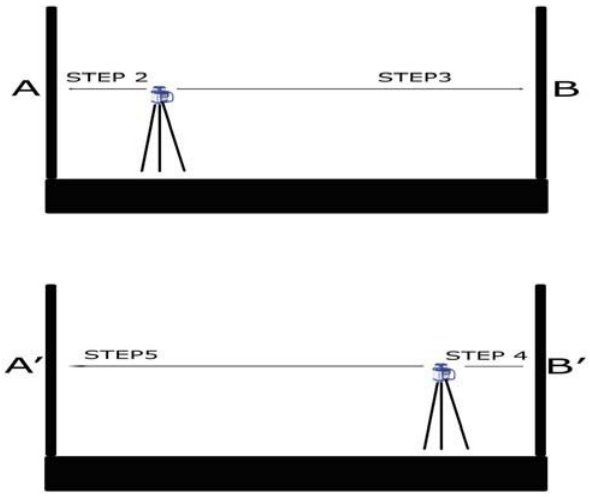
1. Turn the laser off.
2. Put the laser on vertical mode. Simultaneously press on On/Off (3) and Auto/Man (5).
3. After few seconds, release On/Off (3)
4. When LED (22) is on, release Auto/Man (5)
5. The Z led indicator (8) will blink in order to inform you that the A510S is ready to be calibrated on Z axis.
6. Move the beam in using the < key (9) or > (10) until the plane is parallel to the plumb line.
7. Move the beam manually or using the remote along the plumb line in order to proceed to the final check.

Press on -- key (1) to save the calibration information or press on On/Off key (3) if you want to exit without saving the information.

4-3 Checking for Cone Errors

1. Set up the A510S 1 meter from a wall (A) or a pole and 30 meters from another wall or pole (B).
2. Turn the laser on.
3. When the laser is levelled, stop the rotation and mark the location of the beam (center of the beam) on the near wall (A) using the detector if ambient light conditions are too bright.
4. Mark the location of the beam (center of the beam) on the far wall (B) in using the detector if ambient conditions are too bright.
5. Now place the laser 1 meter from the opposite wall (B'). When the A 510 S has self-levelled, line up the beam on the previous mark (B).
6. Mark the location of the beam on the wall near the first mark (A') using the detector if ambient light conditions are too bright.
7. Compare the two measurements. If the difference between aa'-bb' is more than 9 mm (4.5mm cone error), contact your local professional service center to examine your laser.

(See Diagram next page)



5 Care, Handling and Maintenance

CAUTION: The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. If you are unsure in any way take your laser to a professional service centre.

The A510S is a precision instrument, which must be handled with care. Avoid shock and vibrations. Always store and transport the laser and its accessories in the carrying case.

Although your A510S is weather resistant, you must always keep your laser and its accessories dry and clean after use. This will help to maintain battery life and general instrument condition.

Do not store your laser at temperatures below –20°C or above +80°C; electronic components could be damaged if this temperature range is not followed.

Do not store your instrument in its case if the instrument or the case is wet. Ensure that the case and the instrument are both completely dry before storing them.

To maintain the precision of your A510S, check it and adjust it regularly.

Keep the lenses of the apertures dry and clean. Use a soft cloth and glass cleaner to do this.

Ensure that you charge the batteries to ensure you always have one charged. However remember to only charge the battery when it is completely empty or very close to being so. Recharging batteries that are still useable will shorten their lifespan and reduce their capacity.

ABOVE ALL take good care of your A510S and it will return this care by serving you well in the field for many years.

6 Warranty

The A510S Laser is guaranteed against manufacturing defects for a period of one year. Any incorrect usage, subjection to shock or any other misuse or mistreatment will void this warranty. Under no circumstances will the liability of the manufacturer exceed the cost of repairing or replacing the instrument.

Disassembling the instrument by other than a qualified technician or technicians will also void this warranty.

Specifications are subject to change without notice.

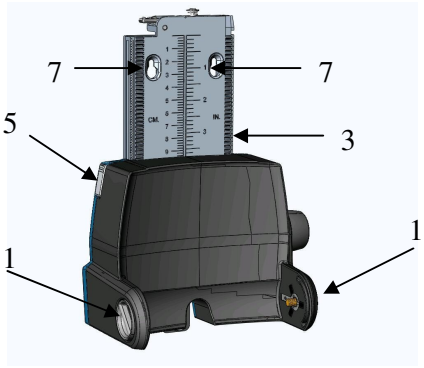
The manufacturer warrants its measuring instruments against all manufacturing defects for a period of one year from date of purchase. If during the warranty period, the product is considered as defective by the manufacturer, the latter will decide whether to repair or exchange the product. The only obligation and sole recourse of the buyer will be limited to this repair or exchange. The manufacturer, the distributor or the retailer will in no case be responsible for any incident or consequence, damage, etc relative to the use of those instruments.

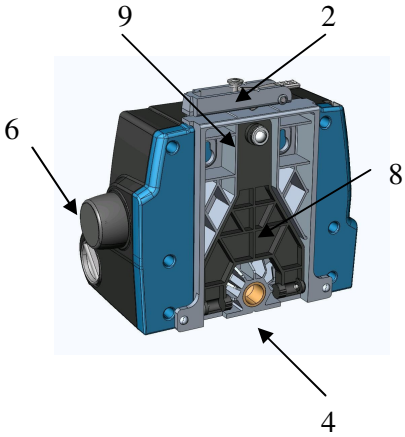
Limits and exclusions: the warranty will not apply to any damage resulting from negligence, accident, misuse, repair or storage or in case of abnormal use.

7 Accessories

7-1 Motorized Wall Mount

Your A510S can be used with the included motorized wall mount. The wall mount can be used to move the laser up or down on a ceiling grid or can be used to move the laser on the vertical plane.





1. Fixation clamp to the laser
2. Fixation clamp on ceiling grid
3. Adjustable plate
4. 5/8-11 tripod insert
5. Release clamp for adjustable plate
6. Manual use button
7. Holes for wall fixation
8. Adjustable plate for wall and ground stability
9. Adjustable screw

It is important to note that the laser can move a maximum of 50 mm up and a maximum of 50 mm down.

Fixing the wall mount on the A510S

Fix the wall mount on the A510S laser by turning the two screws located on both sides of the wall mount. The two screws must be clean as they are used as power connectors for the wall mount.

Using the wall mount on a ceiling grid

1. Release the clamp located on the top of the adjustable plate (2)
2. Put the adjustable plate on the ceiling grid and fix it in blocking the clamp (2). The ceiling grid should not exceed 3mm thickness.
3. To move the laser up or down

    - *Manually:*
        - Turn the button located on the side of the wall mount to manually move the laser up or down.
    - *With remote control:*
        - Press the scanning key of the remote control during few seconds.
        - Press the < key to move the laser up.
        - Press the > key to move the laser down.

    If the Tilt mode is on already, it will be automatically turned off during the elevation of the laser. After few seconds of non-use of the wall mount mode, the laser will automatically exit from the wall mount mode and will return to the mode used immediately before.

    If you are using the wall mount mode when the laser is in manual mode it is possible to construct a manual grade by pressing the 'speed control' key on the remote control.

4. To make your A510S more stable on the wall, spread the removable foot located inside the adjustable foot. When fixed on a ceiling grid you can use the screw to stabilize the A510S.

Using the wall mount on the floor

1. Put the A510S in vertical mode on the floor
2. Spread the foot located in the adjustable plate of the wall mount.
3. Adjust the foot screw so that the A510S is stable on the ground floor.
4. Press the scanning key of the remote control for several seconds to change to wall mount mode.
5. Press on < to move the laser up or > to move the laser down.
6. It is also possible to manually move the laser up and down by using the button located on the left hand side of the wall mount.

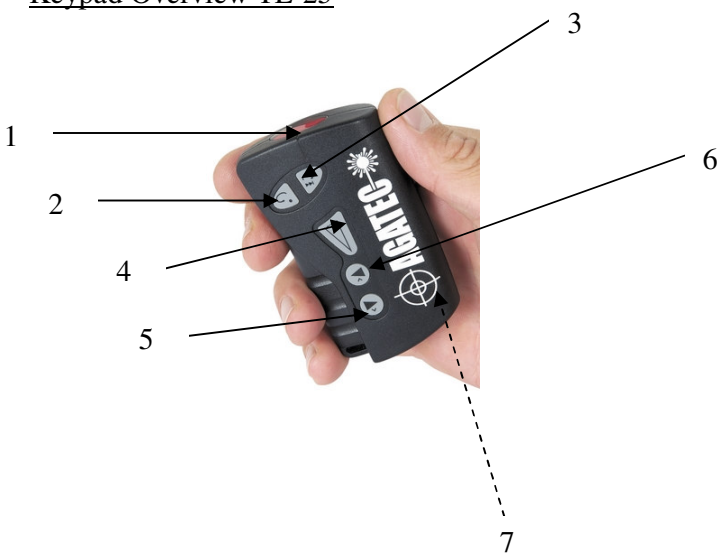
After few seconds, the laser will automatically exit the wall mount mode and will return to the prior mode of use (automatic, automatic with tilt or manual mode).

7-2 Remote Control TL-25

The remote control stops, starts or changes the directions of laser rotation and moves the square shot left or right. It also controls scanning and calibration and can be used to enter into the wall mount mode and move the laser and its wall mount up or down on a ceiling grid or forward or rear on the ground.

To open the battery compartment and change the battery, push the battery cap in the direction of the arrow.

Keypad Overview TL-25

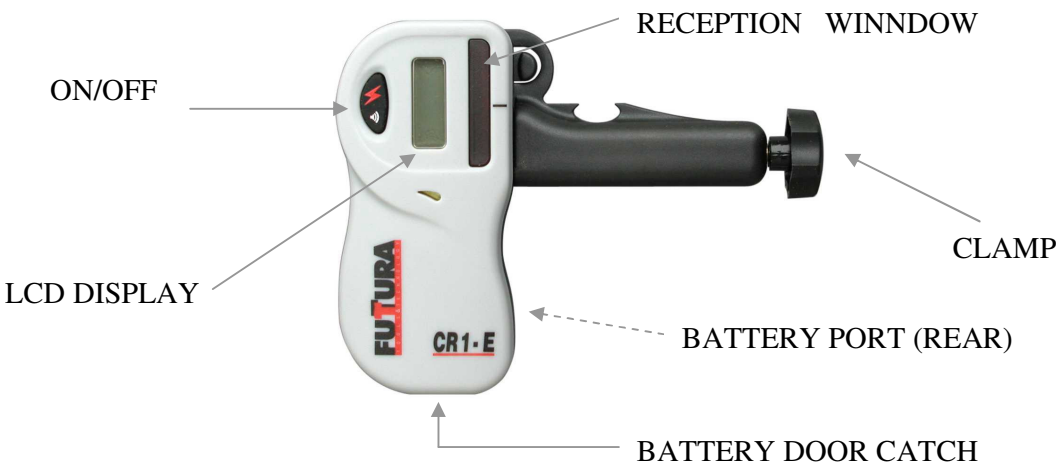


Key	Automatic	Manual
1	Transmit indicator LED	
2	Speed control left	Speed control left
3	Speed control right	Speed control right
4	Scanning on/off	Scanning on/off
4 (several seconds)	Turn on wall mount mode	Turn on wall mount mode
5	Point by point left when rotation is off ***Move the laser down on wall mount***	Set a positive slope ***Move the laser down on wall mount***
6	Point by point right when rotation is off ***Move the laser up on wallmount***	Set a negative slope ***Move the laser up on wallmount***
7	Battery compartment	

Italics correspond to function available when laser in on “wall mount” mode.

It is also possible to use the remote control for calibration purpose.
Follow instructions as indicated in part 3 of this manual.

7-3 CR1-E Detector



Specifications

Operating distance	150 meters
Accuracy (new model)	± 0.75mm
Capture window size	4cm
Sound	3 settings (high,low,off)
Power	2 AA batteries
Dimensions	11cm x 3cm x 5.5cm

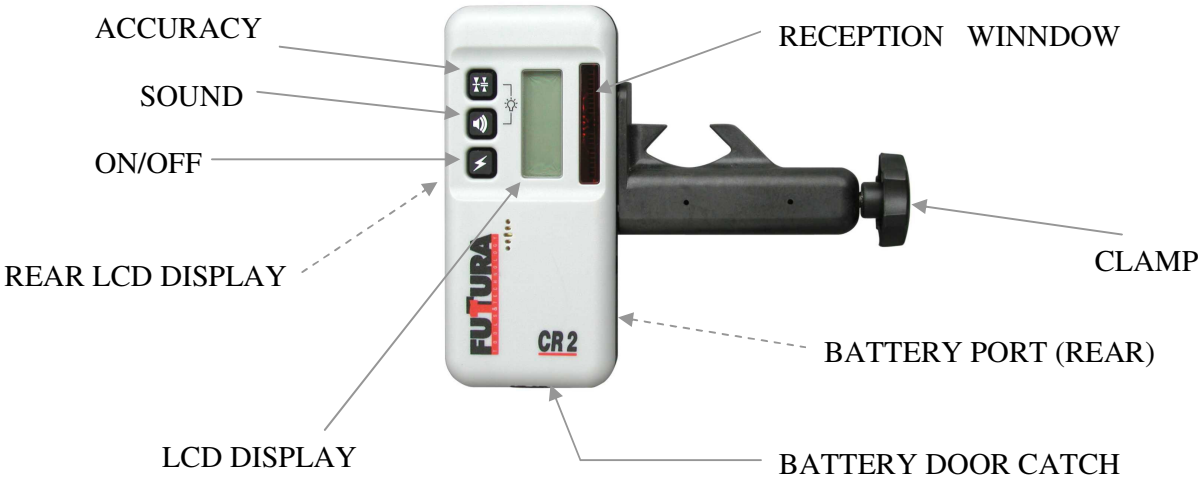
Operation

1. Press the on/off button once to turn on. Press and hold on/off button to turn off.
2. Press the on/off button briefly to change between high, low and off sounds settings.
3. Turn the capture window towards the laser beam and move the detector up or down according to the information given on the LCD display. An arrow facing down will inform you that you have to move the detector down. An arrow facing up will inform you that you have to move the detector up. When a horizontal line appears on the display, the detector is at the same level as the laser beam.

Batteries

The catch for the battery cover is located on the underside of the instrument. Prise the catch open with a screwdriver or similar object. Remove batteries and then insert new ones ensuring that you correctly align the polarity of the batteries (+ or -). Close the battery door.

7-4 CR2 Detector



Specifications

Operating distance	600m
Capture window size	5cm
Sound	3 settings (high, low, off)
Power	2 AA batteries
Accuracy Settings	Fine, Medium Wide
Dimensions	11cm x 3cm x 5.5cm

Operation

1. Press the on/off button once to turn on. Press and hold to turn off.
2. Press the sound button briefly to change between sound settings. A speaker symbol will appear at the bottom of the screen to indicate volume setting.
3. Press accuracy button briefly to change between accuracy settings. Arrows will appear at the bottom of the screen to indicate the accuracy mode.
3. Press sound and accuracy buttons simultaneously to turn on/off the screen illumination function for working in low visibility conditions. (front and rear)
4. Turn the capture window towards the laser beam and move the detector up or down according to the information given on the LCD display. An arrow facing down will inform you that you have to move the detector down. An arrow facing up will inform you that you have to move the detector up. When a horizontal line appears on the display, the detector is at the same level as the laser beam.

Batteries

The catch for the battery cover is located on the underside of the instrument. Prise the catch open with a screwdriver or similar object. Pull the plastic tab up to remove batteries. Replace batteries ensuring that the tab is underneath and the polarity is correctly aligned. (+ and -)

7-5 Tripods

The A 510 S laser can be mounted on a 5/8x11 threaded flat head tripod. You can also use a tripod with an elevating (telescopic) column to adjust the height of the laser.

7-6 Other Accessories

- Laser Glasses: Improve the visibility of the laser beam in bright conditions.
- Red Magnetic Targets: Improve the visibility of the laser beam in bright conditions. Will quickly attach to any metal surface providing an easy to see reference point.