



2536 Safety Guidance



# **Using the Automatic Level**

- Wear your protective equipment.
- The automatic level is a sensitive instrument, remove it from the tripod when being carried or when not in use
- Do not change the position of the tripod in the middle of a measuring process. If it is moved accidentally, you must start the process again.
- Make sure your colleague keeps the staff in a vertical plane while measurement is taking place
- It is important that everyone involved understands that the measurement pegs must not be tampered with.
- Always remove the level from the tripod and store all the equipment safely as soon as you have finished using it.
- When all measurement is finished, return this sensitive equipment to the hire company do not leave it where it may become damaged.
- If your equipment is faulty, do not attempt to repair it. Contact the hire company.

Please keep this leaflet safely as it may be required for future reference

## **Cowley Automatic Level**

The rules and procedures in force where people are at work may require the person responsible for this equipment to carry out a specific risk assessment.

### It is important to read this entire leaflet BEFORE using the Cowley Automatic Level

- 1. It is important to read all of this leaflet before you use the Cowley automatic level.
- This automatic level is designed to give a simple and accurate means of measuring levels. It is easy to set up and requires no adjustment.
- This automatic level can be awkward to carry, take care not to cause injury or damage when moving it about.
- If you have not used an automatic level before, familiarise yourself with the equipment before you start work. Some prior knowledge of this kind of work is beneficial.
- Plan your work and think ahead to make sure you will always be working safely.
- must have at least the following items of personal protective equipment: safety helmet to EN397 or BS5240 if you are on a construction site; safety boots to EN345 or BS1870/4972 or at least strong shoes; gloves.
- The automatic level is designed for operation by an able bodied adult. Anyone with













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conjunction with the target. metal telescopic staff may be used in 10. If the user has some prior knowledge, a measurement as your datum.

you may want to consider your zero than what it was.

now becomes zero and every other measurement becomes 1.6m lower your readings, the lowest measurement lowest measurement (say 1.6m). Subtract this measurement from all you can now do the following. Find the In order to simplify your calculations,

Continue taking readings until you have between these two positions. difference in the ground

second measurement indicates The difference between the first and

on the staff indicated by position of the Note this second measurement reading

appears level through the sight. and moves the target up or down until it your colleague holds the staff upright level round to the next position where Do not move the tripod but rotate the

not mix measurements. You must work in metric or imperial, do staff indicated by position of the target. Note the measurement reading on the Follow steps 2 to 4 in levelling above.

Set up the tripod as in setting up above.

IN HEIGHT **MEASURING DIFFERENCES** 

nave enough levels marked. 15. Continue with this process until you

the differences in ground level. lower on each peg to correspond with sporter, and the marks appear higher or 11. Your pegs may need to be longer or

with the mark on the first peg. 10. This mark on the second peg is level

mark off the height. Set another peg in the ground and

appears level through the sight. and moves the target up or down until it level round to the next position where your colleague holds the staff upright

8. Do not move the tripod but rotate the the second selected point and repeat

Move the staff complete with target to height of the target on the peg. ground next to the staff and mark the

Set a peg of appropriate length in the coincident position.

Clamp the target to the staff in this

colucide when looked at through the the staff until the two halves appear to The target must be raised or lowered on

nigner or lower than the right side. with the left half of the target appearing The target will appear as a split image the level and take a 'sight' of the target. Look through the aperture on the top of









- This automatic level must not be used by minors, or by anyone under the influence of drugs or alcohol.
- either temporary or permanent disability must seek expert advice before using them.













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staff. The red front of the target must be

held approximately horizontal to the

must be vertical and the target must be

target, on the datum point. The staff

A colleague will place the staff, with the

become the first point to be measured,

Select the most suitable point to

the level is seated firmly on the top of

mounting pin ensuring that the base of

Place the automatic level on the

the centre of the area; check that the

position, usually but not necessarily, in

Set the tripod up in the desired

the lock allowing the internal mechanism

sessels it level ent of in betreasing it boding

tripod. Once the mounting pin on the

level is locked and safe while it is off the

even for short distances. This is because

the tripod when carrying the equipment.

You should always remove the level from

equipment will help you achieve that.

over a large area and how this

of measuring the differences in height

You should have some prior knowledge

mounting pin is pointing vertically.

This will be the Datum point.

neid towards the level.

**LEVELLING** 

to 'float'.

SELLING UP

rue ruboa.

**BAY 788 Iludilos** The Crescent Birmingham Business Park noo sinegen uch



a target. meric and impenal measurement; and

mount the level; a staff, which will have automatic level; a tripod on which to Your equipment should consist of an

confact the hire company. Check your equipment and its tripod. Do not use anything found damaged-

## **AUTOMATIC LEVEL**

personal protective equipment. will also need to wear appropriate Anybody who is working near to you

Strong gloves will help protect your ·unuiuiuiui

or BS1870 /4972) or strong shoes as a You should wear safety boots (EN 345 construction site.

EN397 or BS5240 if you are on a You must wear a safety helmet to

require a higher level of protection. Particular jobs or environments may whenever you use the automatic level. winimum that should be worn brotective equipment (ppe) are the The following items of personal

### **OPERATORS**

ehicular traffic, warn other people to your work area is clear of people and Your task will be done more efficiently if be moved.

other similar large obstructions should you are working in. Parked vehicles or through 360 degrees in the area that Depending on what task you are doing you will need a clear field of vision

**WORK AREA** 

