Quick Guide Operating Instructions
for the Topcon RL-H3CS Laser Level

1. The Laser Levelling Controls

- Mount the laser on a roughly levelled tripod.

Picture A

- Push the green power button (see picture A).
- The instrument will start self levelling. When it has levelled it will start rotating.
- If the instrument is disturbed or jarred, the height alert warning will switch off the laser, and the lights will flash on the control panel (see picture B). This feature warns you that the height of the laser beam may have changed. If this happens, switch the power off and then on to restart the instrument.

Picture B

- If you do not require the height alert feature, push the ‘height alert off’ button twice, and the red light will illuminate (see picture C).

Picture C

- If you require to over-ride the instrument self-levelling, push the ‘manual on’ button twice (see picture D) and the red light will illuminate.
- To return the instrument to its original settings, press the power button off and then on (see picture A).

Picture D

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2. Using RL-H3CS as a Grade Laser
Aligning the Laser in the Direction of the Grade

- Establish a base-line parallel to the job in the direction of the required gradient.
- Put a plumbed ranging pole at the far-end of the base-line to sight on to.
- Set the laser over the near-end of the base-line, using a plumb bob hung from the tripod instrument mounting screw (see picture E).
- Turn the instrument body on the tripod to roughly align the instrument to the direction of the instrument (see picture F).
- Whilst viewing through the gun-sight, align the sight precisely on to the ranging pole, and tighten the tripod instrument mounting screw (see picture G).

Picture E

Picture F

Picture G

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3. Setting Slope into Laser

- Push the green ‘on’ button (see picture A). The instrument will start self levelling. When it has levelled it will start rotating.

Picture A

- Have someone hold a staff with a sensor, plumb and still at a known distance (e.g. 30m/100ft) from the laser along the base line, and set the sensor on grade.

- Move the sensor up or down on the staff to the slope required (30cm/1ft to give 1% of grade for 30m/100ft), and hold the staff plumb and still.

Picture H

- On the laser push one of the red slope buttons once, and the green slope light will flash whilst the laser beam goes up or down for the desired slope (see picture H).

- Once you hear the sensor start to beep, push one of the red slope buttons; the laser will stop sloping and the green slope light with remain on (see picture J).

Picture J

- Now press the required slope button, inching the beam until you hear a continuous beep from the sensor, indicating that the beam has reached the desired grade (see picture H).

- The sensor can now be moved on to the staff to the depth of the dig or fill and the job can commence.

Picture K

- If you wish to retain the grade setting when you switch the instrument off, hold down one of the slop buttons whilst pressing the power button when restarting the instrument (see picture K).

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4. Setting Laser to Match Ground Slope

- Push the green ‘on’ button (see picture A). The instrument will start self levelling. When it has levelled it will start rotating.

Picture L

- Have someone hold a staff and sensor 1m/3ft in front of the laser on the base-line and set the sensor on to grade (see picture L)

- Move the staff down the base-line (do not move the sensor), hold the staff plumb and still.

Picture H

- On the laser push one of the red slope buttons once, and the green slope light will flash whilst the laser beam is going up or down to the slope of the ground (see picture H).

- Once you hear the sensor start to beep, push one of the red slope buttons and the laser will stop sloping and the green slope light will remain on.

Picture J

- Push the required slope button, inching the beam until you hear a continuous beep from the sensor, indicating the laser has reached the on grade position (see picture H).

- The sensor can now, if required, be moved up or down on the staff to the depth of dig or fill, and the job can commence.

Picture K

- If you wish to retain the grade setting when you switch the instrument off, hold down one of the slope buttons whilst pressing the power button when restarting the instrument (see picture K).