

# EK-411G

## INSTRUCTIONS



from **Laser Levels Online** [www.laser-level.co.uk](http://www.laser-level.co.uk) Tel: 01246 269 777

Thank you for purchasing the **EK-411G** automatic Cross Line Laser Level kit. These instructions are intended to explain the quick basics to operating this equipment. If you need any more information, or the unit requires calibration or repair, then please contact our Service Dept on tel 01246 269 777 or fax 01246 260 007. Email: [sales@laser-level.co.uk](mailto:sales@laser-level.co.uk) We are here to help.

### **Power source:**

The EK-411G is fitted with a high powered 1750mAh Lithium-ion (Li-ion) battery. Ensure it is located securely and NEVER substitute it for a different rated Li-ion battery.

Only use the supplied Mains Charger (BX-1202000) to charge the battery in ambient temperatures above 5 deg C. The Charger itself has no LED indicator.

Plug the Charger into a 230V socket and connect DC plug into the side mounted Li-ion battery pack. Note the charging LED:

**RED** indicator denotes the battery is CHARGING.

**GREEN** indicator denotes battery is partially CHARGED. Further charging to reach full capacity is recommended, taking approx. 4 hrs.

The laser cannot be operated without a fitted battery but can be operated whilst the instrument is being charged.

### **Important**

However, we would recommend that a spare Li-ion battery is kept in the carry case as a back-up, where Mains operated equipment is prohibited on-site.

### **Positioning the Laser:**

Mount the EK-411G on a generally level, firm surface or a 5/8" threaded laser accessory eg. a Floor to Ceiling Pillar or Tripod. You may need to use the adapter. To operate correctly, this surface must be within +/-2.5 deg of true horizontal. Use the top bubble level as a "guide".

If the laser alarms (ie. the green beams flash on & off every second), then it is outside its levelling range.

Centralise the bubble level via the adjusting feet.

### **Principle of Operation:**

It is important to note that this bubble level does NOT set the accuracy of the level. The instrument has a fully automatic pendulum system to set true level.

**IF THE EK-411G EMITS CONTINUOUS GREEN LASER LINES, THEN THEY WILL ALL BE TRUE LEVEL & PLUMB.**

This laser can be used Indoors or Outdoors, where it is waterproof to IP33.

### **Controls:**

A simple ON/OFF switch combined with a black transit latch is located on the side of the case. Position laser & centralise the bubble level, as described above. Switch ON - the top bubble level & "H" LED will illuminate green & the horizontal green laser line will project onto the wall opposite. To switch OFF, press button "H" again.

A second button marked "V" is used to switch the four vertical laser plumb lines ON or OFF, either together or independently. Note also, the red down dot.

\*Outdoor button - see details below in the "**How to use the Detector**" section.

### **Working Range:**

Up to 25m without the detector, depending on ambient lighting conditions and generally up to 50m with the supplied FD-9G detector.

### **To set Squaring:**

The EK-411G does have a squaring facility to set-out 90 degrees.

Place the instrument on the floor & operate the vertical lines. These will project along the floor (to set floor squaring), up the walls opposite & square on the ceiling above too.

The body of the laser can be slowly rotated by hand, keeping the feet in the same position. This gives a coarse setting on any plumb (vertical) lines.

The User can adjust the fine setting, cross spindle to finalise line positions.

### **To set Plumb:**

Again, switch on all the vertical lines. The Green Cross on the ceiling is true plumb with the red DOT below the instrument. This is an electronic equivalent of a plumb string line - a very convenient & useful feature.

### **To Switch OFF:**

Simply turn the transit latch to **OFF / LOCK**.

**When moving the laser, always select the LOCKED position.**

### **Detector model FD-9G**

(colour may vary)



Fit the supplied 9V battery, polarity marked. Power up via left hand ON/OFF button. The mode button sets the sensitivity of the "pick-up" window.

The User can switch the sounder On or OFF, as required with the right hand press button.

Bright LED's next to the green pick-up window show above/below or SET LEVEL. Both side & rear LED's simply repeat the main front display.

Use with or without its staff mounting bracket. Spare brackets are available.

**How to use the Detector:**

**SWITCH ON the EK-411G's button marked \*OUTDOOR.**

Face the detector towards the laser & find the centreline of the laser beams via the green pick-up window. Obtain a continuous tone for true level. Mark out.

**Outdoor use....**

If the sun is low in the sky & shining into the green window, shield it with a cupped hand to prevent false readings. Positioning the laser level itself in full sun is no problem but the detector window can in some instances, be affected by direct bright sunlight or reflections from glass or water.

So please take extra care!

**Important**

Only switch on the Outdoor button when you need a "pulsed output" to operate the detector. This will save battery power & make the normal green laser lines brighter - for general use.

**SAFETY PRECAUTIONS:**

Comply with class 3 laser operating safety procedures.

Display a **Laser Safety Notice** in the working area.

**General Advice:**

This is an accurate measuring device - so to give good service, look after it!

Prevent the EK-411G from receiving severe knocks, bangs or vibration.

Store the laser & its accessories in the supplied, foam-lined carry case.

If wet, dry before storing & keep in storage temperatures between 5 - 25 deg C.

For long-term storage, remove the Li-on battery - to prevent any internal damage.

**There are NO User serviceable parts.**



We offer a full Back-up service including calibration & usage advice.  
Accessories for the various Trades are also available - on request.  
eg. Floor-to-ceiling Pillar kits, tripods, staffs, wall brackets & adapters etc.

**To contact us:**

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