

Quick Start FRE-205

INSTRUCTIONS



from P.R.Engineering Ltd www.laser-level.co.uk Tel: 01246 269 777

Thank you for purchasing the **FRE-205** Auto Rotary 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. We are here to help.

Power source:

Unscrew the battery cover screw & remove panel.

Fit 4 x AA rechargeable batteries. The mains charger (supplied) will charge most batteries in around 8 hours. It takes 4 to 5 charge/discharge cycles for batteries to reach their maximum capacity.

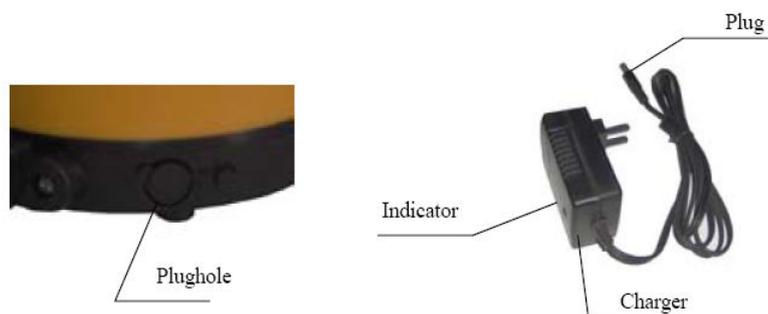
Mains charger:

The general procedure to adopt is use the laser during the day & charge up overnight. You cannot damage the system by "over-charging".

When plugged into the 230V mains supply, red LED flashes every 1 sec.

Connect to laser socket & LED should be ON continuously ie.
Red LED = charging; Green LED = Sufficient charge to operate.
Even though the Green light is ON, we recommend a full 8 hour charge.
The FRE-205 can be operated with the charger connected to the mains supply,
if required. On receipt of your *new* laser, charge batteries fully overnight.

Four x type AA Alkaline batteries can be used instead or in emergency, but do NOT attempt to recharge them, otherwise serious damage will occur.



Positioning the Laser:

Mount the FRE-205 on a generally level, firm surface or 5/8" threaded Tripod.
To operate correctly this surface must be within +/-5 deg of true horizontal.
The laser can be used Indoors or Outside, where it is waterproof to IP64.

Controls:

Power ON/OFF via the green button. Red LED illuminates, laser takes 15 to 30 seconds to auto level & then the head rotates & projects visible red laser beam.

The central speed control button, stops the red dot then increases the head's rotational speed in 4 steps up to a maximum speed of 600rpm.

For Interior work use slower speeds, where it is easier to see; but for Exterior Groundworks – run the laser @ its max speed, which gives the best range when used with the supplied Laser Detector.

Grading:

This is a DUAL grade facility laser level. This means that the instrument can be switched to Manual (to over-ride the level sensors) and then the User can set a

grade (incline/slope) in the X axis only, Y axis only or both together.
For X & Y alignment, please see the markings on the black rubber TOP of the laser, where an arrow points in the direction of the axis being set.

Setting a single axis slope.

This sets the grade in the X axis.

Procedure – switch ON, FRE-205 then auto levels. Press central top button (bubble level symbol) on the Remote Control & the green LED X illuminates on the Laser. The FRE-205 is now set to MANUAL.

Again on the Remote Control, press either the + or - buttons to set appropriate grade/slope required. This is done by holding finger on the buttons, not just clicking on & off.

To return to Auto level, press central top button again (on your Remote Control) & green LED goes off. The Laser will stop rotating, wait to find true level again, then automatically restart, self levelled.

Setting Y axis slope.

The procedure is similar to setting the X axis (as described above).

Procedure – switch ON, FRE-205 then auto levels. Press central top button (bubble level symbol) on the Remote Control & the green LED X illuminates on the Laser. The FRE-205 is now set to MANUAL.

Then press the bottom right-hand button (marked either X/Y or Adjust) on the Remote control..

The Green Y axis LED illuminates and the X axis LED goes off.

Again by pressing either the + or - buttons, the Y axis can now be set.

To return to auto (self) level, press the "bubble level, MANUAL" button again.

Automatic Drift System (ADS):

Operated via yellow button, showing a "picture of a tilted instrument"

Once the FRE-205 is ON and rotating in the auto (self) levelled mode, the automatic drift system can be activated. Press the button, the red LED will flash on/off for 20 secs after which the LED will be red continuously. **ADS is now ON.**

If the Laser is knocked or caught by a gust of wind for example, the laser head will stop rotating and the red ADS light flash to warn the User of the problem.

Check all is OK, press the button again & the laser will reset back to AUTO level.

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Remote Control:



Fit 2 x AAA batteries, taking care with correct polarity.

The Remote's keypad can set the following:

1. Rotating speed in increments, slow for Indoors, fast (max) for Outdoors
2. Auto / Manual (grade) setting.
3. ADS (see above)
4. Red +/- buttons to set required grade.

In fact, it is better to use the Remote Control rather than the instrument's keypad, because then you do not disturb the laser's sensitive mechanism.

5. Button marked either X/Y or Adjust to change from X to Y axis grading.

Detector:



Fit the supplied 9V battery, polarity marked. Power up - via red ON/OFF button.

The middle button sets coarse (+/-2mm) or fine (+/-1mm) resolution.

Top button switches the sounder ON or OFF, if required.

A rear LCD repeats the main front display.

Use with or without its staff mounting bracket.

Detector Procedure – face towards rotating laser & find rotating laser beam via the red pick-up window.

If the sun is low in the sky & into the red window, shield it with a cupped hand to prevent false readings. Positioning the FRE-205 itself in full sun is no problem, but the detector window can in some instances be affected by direct bright sunlight or reflections. So please take extra care!

SAFETY PRECAUTIONS:

Comply with class II laser operating safety procedures.

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

General Advice:

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

Prevent the FRE-205 from receiving severe knocks, bangs or vibration.

Store the laser & its accessories in the supplied carry case.

If wet, dry before storing & keep in storage temperatures between 5-30 deg C.

Remove all batteries before long term storage, to prevent internal damage.

There are NO User serviceable parts.



We offer a full Back-up service including repairs, calibration & usage advice.

Accessories for the various Trades are also available - on request.

Eg. Tripods, staffs, wall brackets & screeding poles etc.

Please contact us:

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