



## SKR60 Service Manual

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## Introduction

The SKR60 is a compact manual laser with an attached and adjustable wall mount. It can be used in the horizontal and vertical modes, complete with 90° beam.

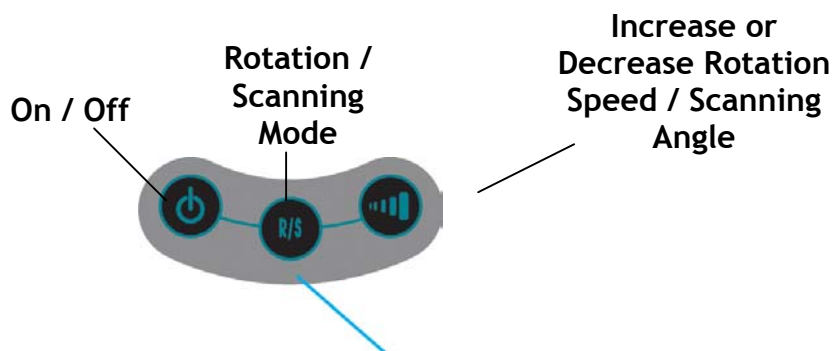
The SKR60 laser has these advanced features:

- Manual-leveling in both horizontal and vertical modes
- Choice of beams: rotation plane, scanning, single point
- All beam modes are grade adjustable

## Specifications

Recommended Operational Range (diameter)	200 ft. (60m)
Leveling Accuracy	3/8" at 100 ft. or 10mm at 30m
Scanning angle	2°, 8°, 25°
Power	3 x AA alkaline batteries
Battery life	40 hours
Rotation speed	0, 80, 150, 600 rpm
Weatherproof	Rain and dustproof (IP65)
Laser beam	635nm Class IIIR
Size	170 x 130 x 130 mm
Weight	2.6lbs (1.2kg)
Tripod mount	Standard 5/8 - II
Remote control	Build-in receiver

## Laser Keypad



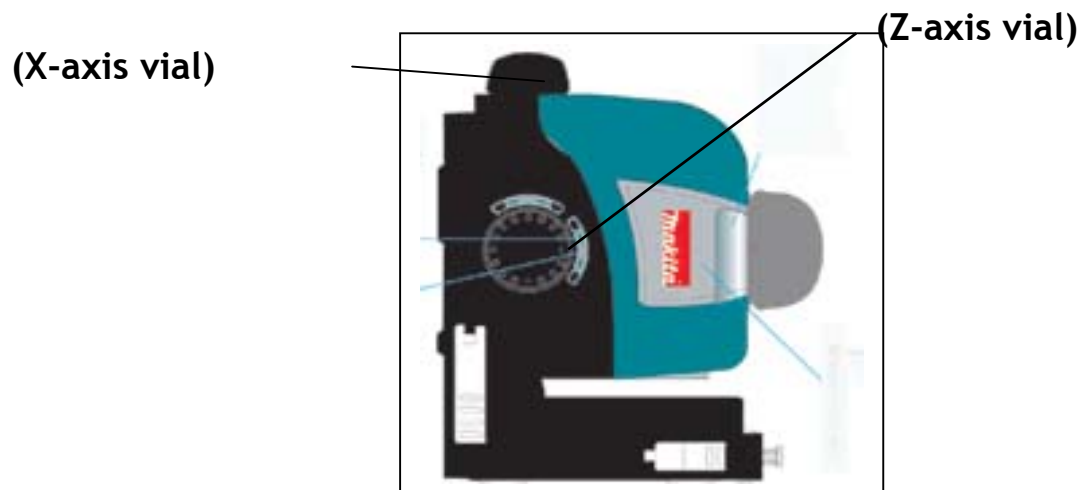
## Horizontal Setup

- 1) Put the SKR60 on a flat surface or a tripod. Turn the levelling knobs X and Y until the bubbles centre in the vials. The bubbles move in the direction you turn the knobs. Level one vial, then the other, then made fine adjustments to both.
- 2) Turn the laser on in pushing the On/Off switch on the laser keypad.
- 3) Adjust the rotation speed in pushing the rotation pad on the keyboard. It may be necessary to adjust the rotation speed according to the ambient light conditions. The laser beam is more visible in slow motion. It is possible to stop the rotation and to point out the beam manually to view the beam over long distance.
- 4) To start with scanning mode, press R/S pad. Adjust the scanning range by pressing the laser keypad.

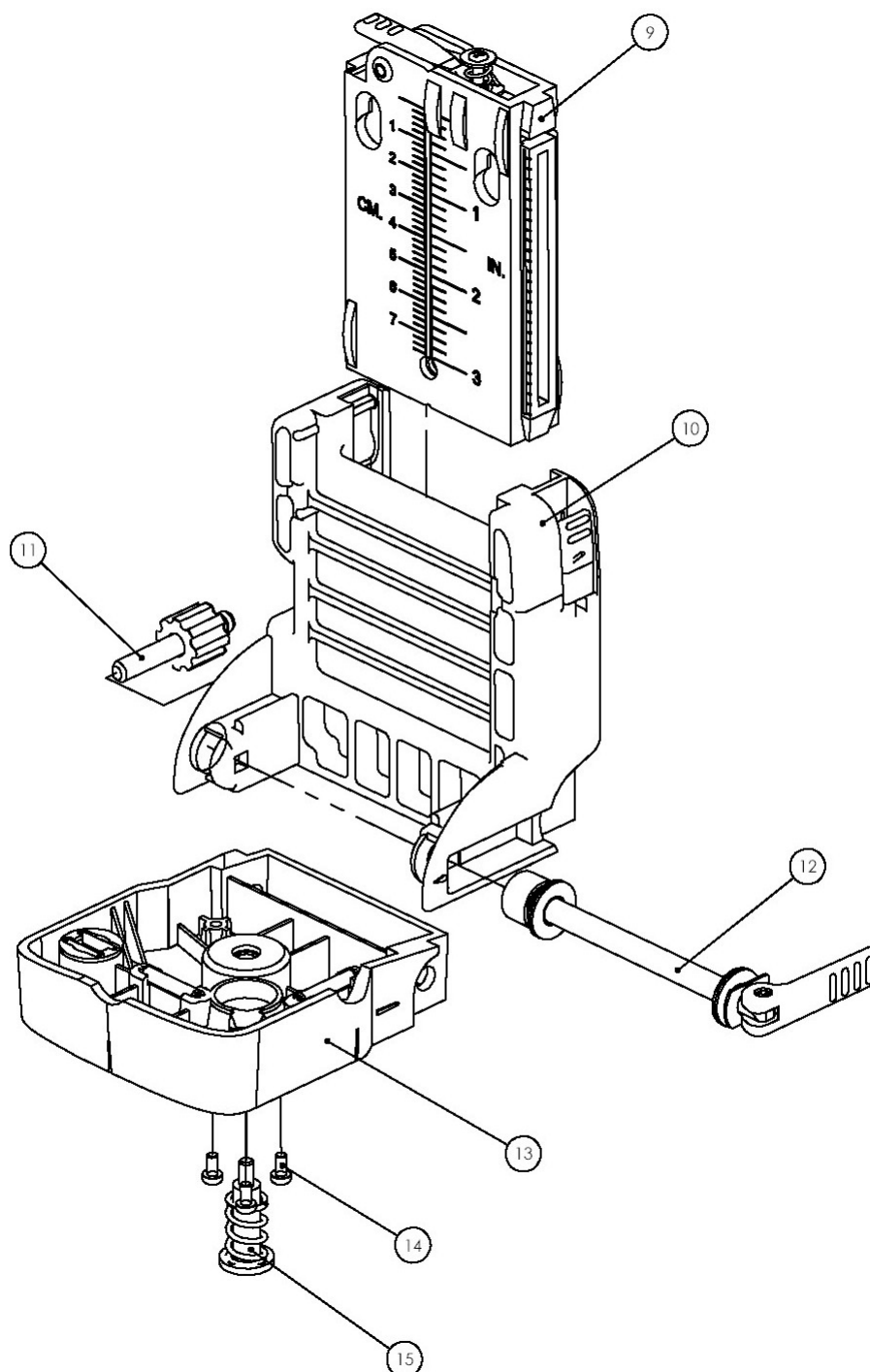


## Vertical Setup

- 1) Put the SKR60 in vertical position on a flat surface or on a tripod. Turn the levelling knob Y in order until the bubble to be centre in the vial.
- 2) Turn the laser on in pushing the On/Off switch on the laser keypad.
- 3) Adjust the rotation speed in pushing the rotation pad on the keyboard. It may be necessary to adjust the rotation speed according to the ambient light conditions. The laser beam is more visible in slow motion. It is possible to stop the rotation and to point out the beam manually to view the beam over long distance.
- 4) To start with scanning mode, press R/S pad. Adjust the scanning range by pressing the laser keypad.

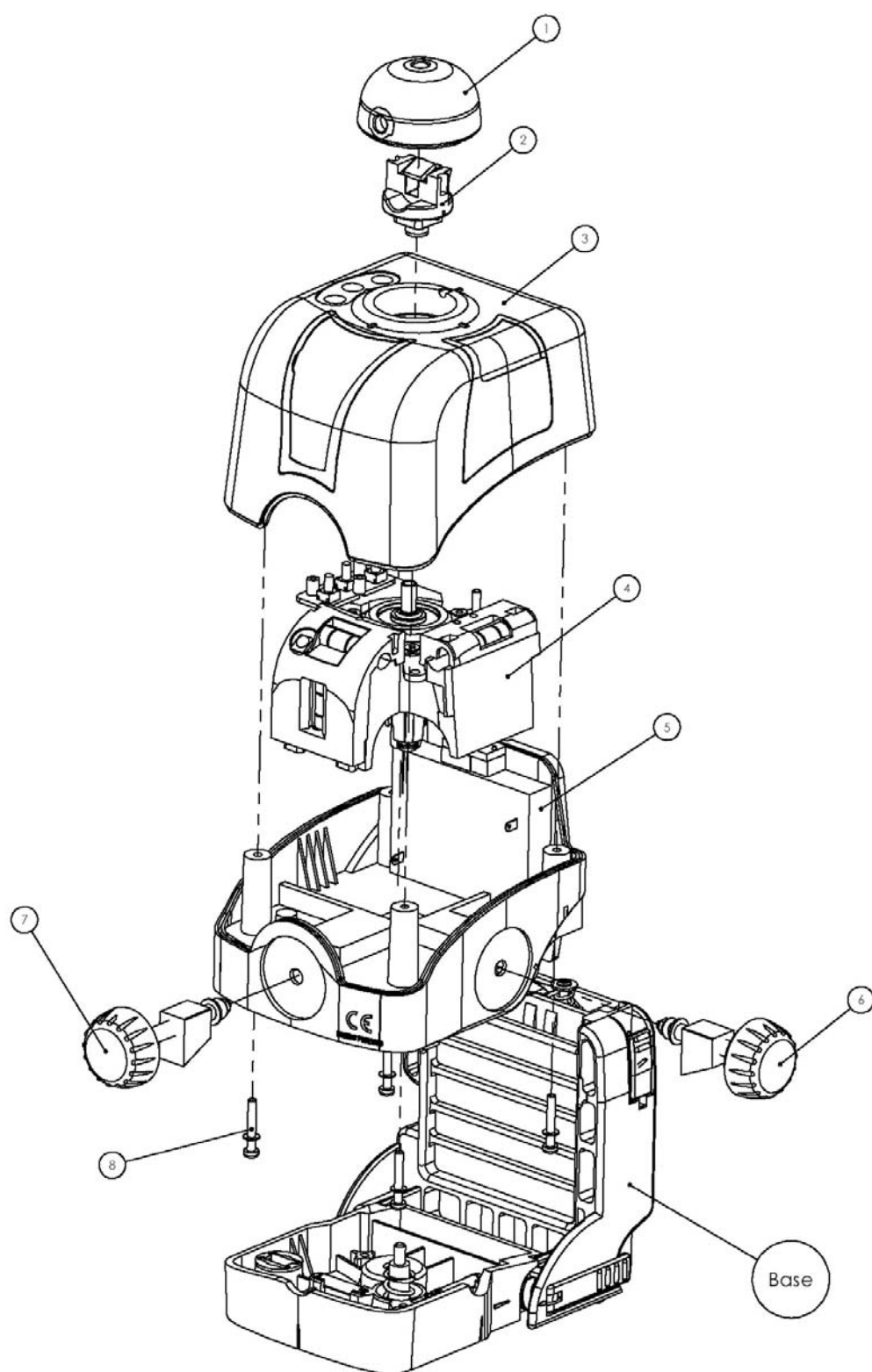


## Disassemble (Base)



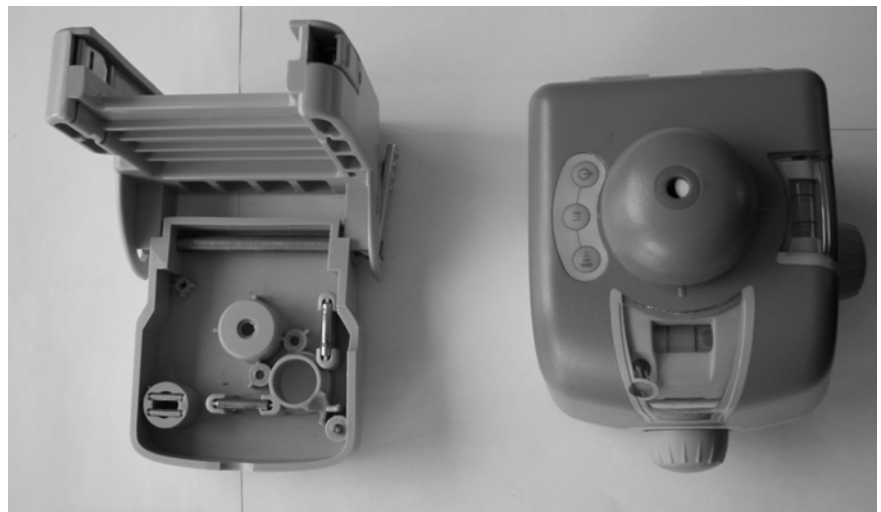
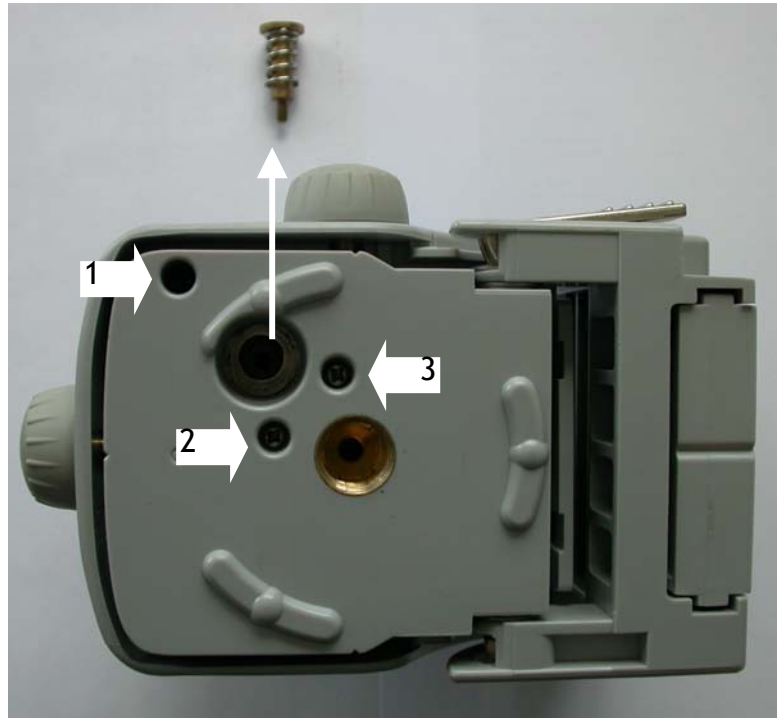


## Disassemble



## Remove Bottom Housing Assembly with Mounting Holder Assembly

- a) Remove bass lock screw
- b) Remove screw 1, 2, 3
- c) Remove Bottom Housing Assembly with Mounting Holder Assembly

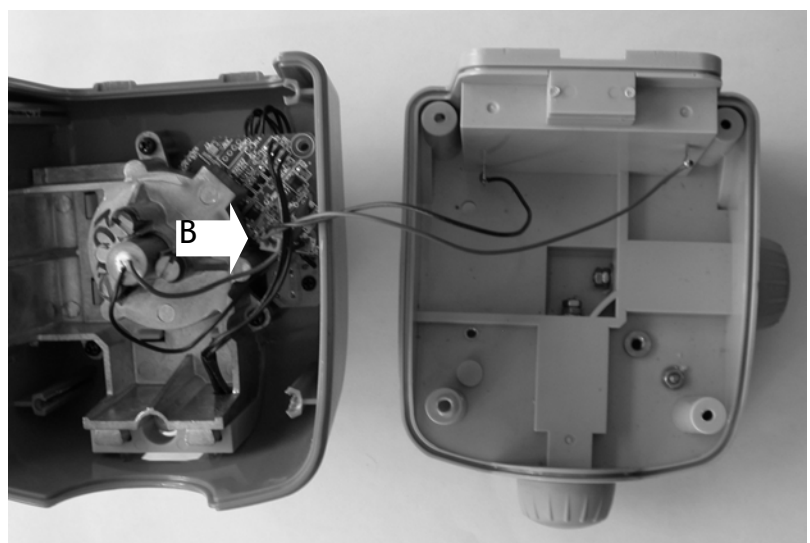
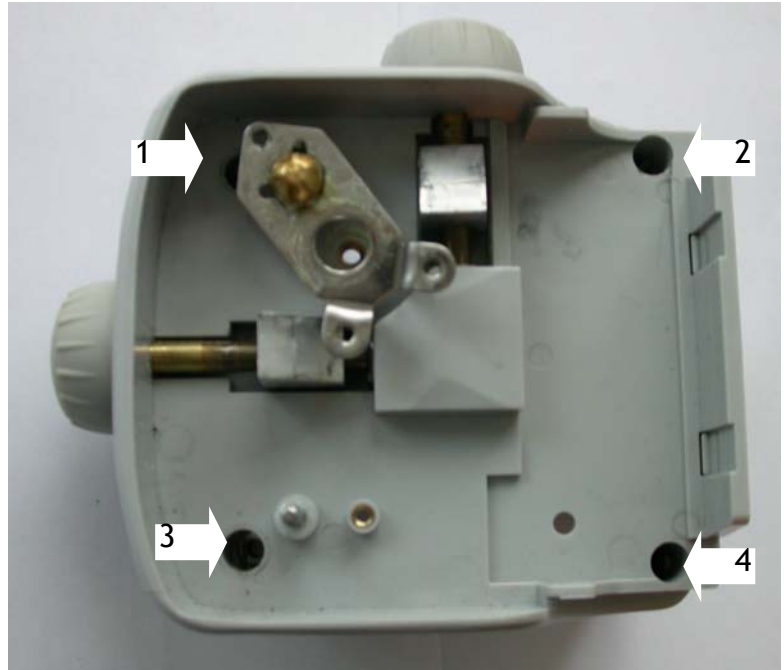


## Remove Middle Housing Assembly

a) Remove screw  
1, 2, 3, 4

b) Disconnect  
the battery  
connector (B)

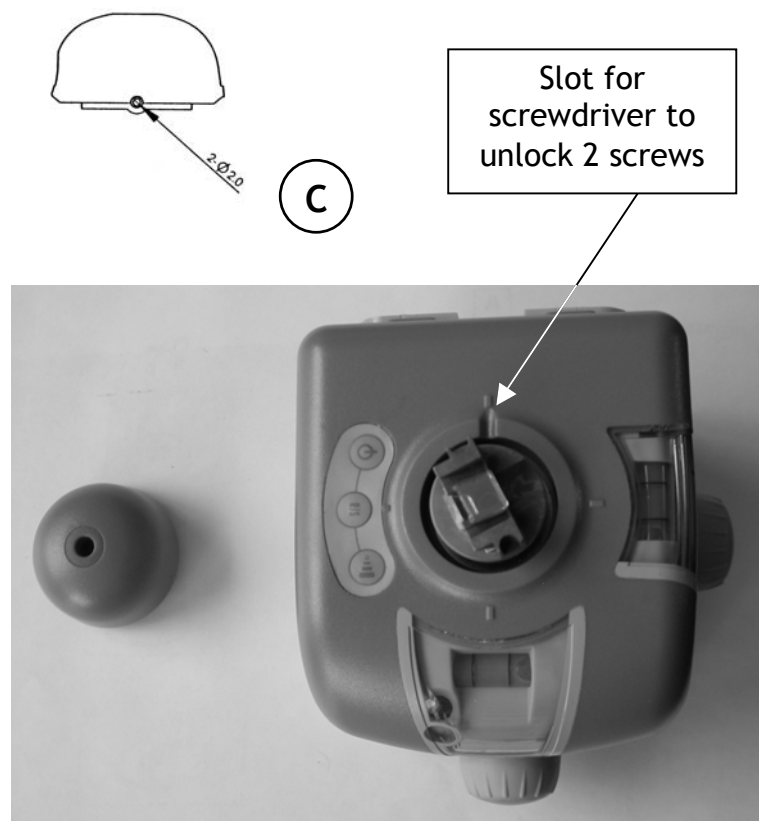
c) Remove  
Middle Housing  
Assembly



## Remove Cover Head Assembly

Remove Cover Head Assembly by unlock 2 screws (item C) located on the bottom of the Head Cover.

- 1) Find the slot located near the back of top housing assembly.
- 2) Then turn the cover head assembly clockwise to locate one of the two screws at the slot; unlock the screw.
- 3) Find the second screw and unlock.
- 4) Remove cover head assembly.



**CAUTION:** Handle carefully to avoid damage to Rotary Head Assembly

## Remove Internal Assembly from Top Housing Assembly

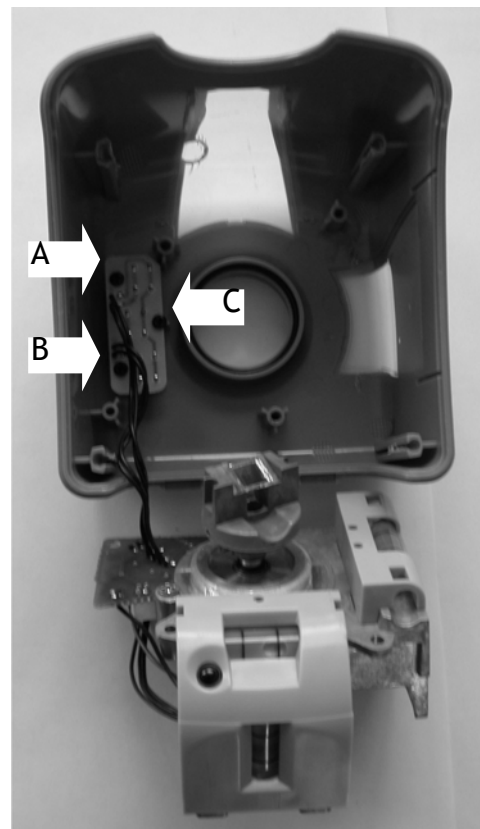
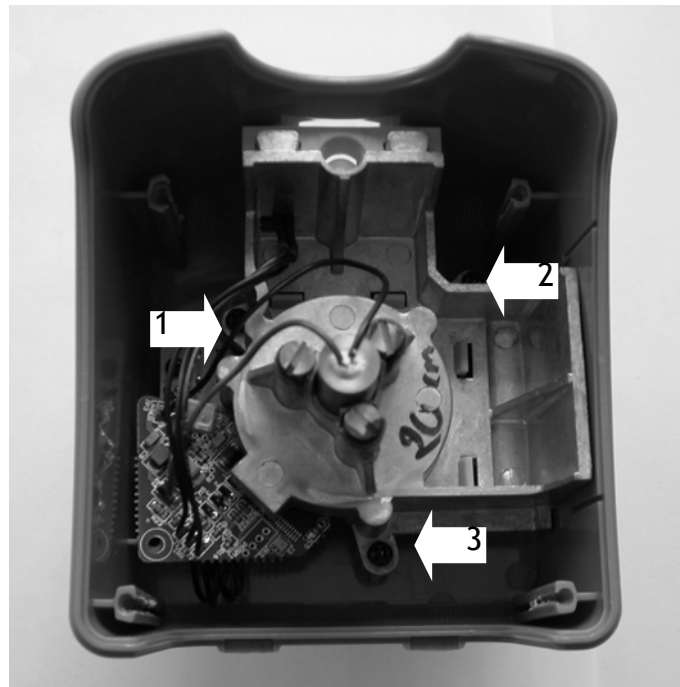
**CAUTION:** Handle carefully to avoid damage to Rotary Head Assembly

a) Remove screw  
1, 2, 3

b) Carefully take  
the Inner  
Assembly with  
Rotary Head  
Assembly out

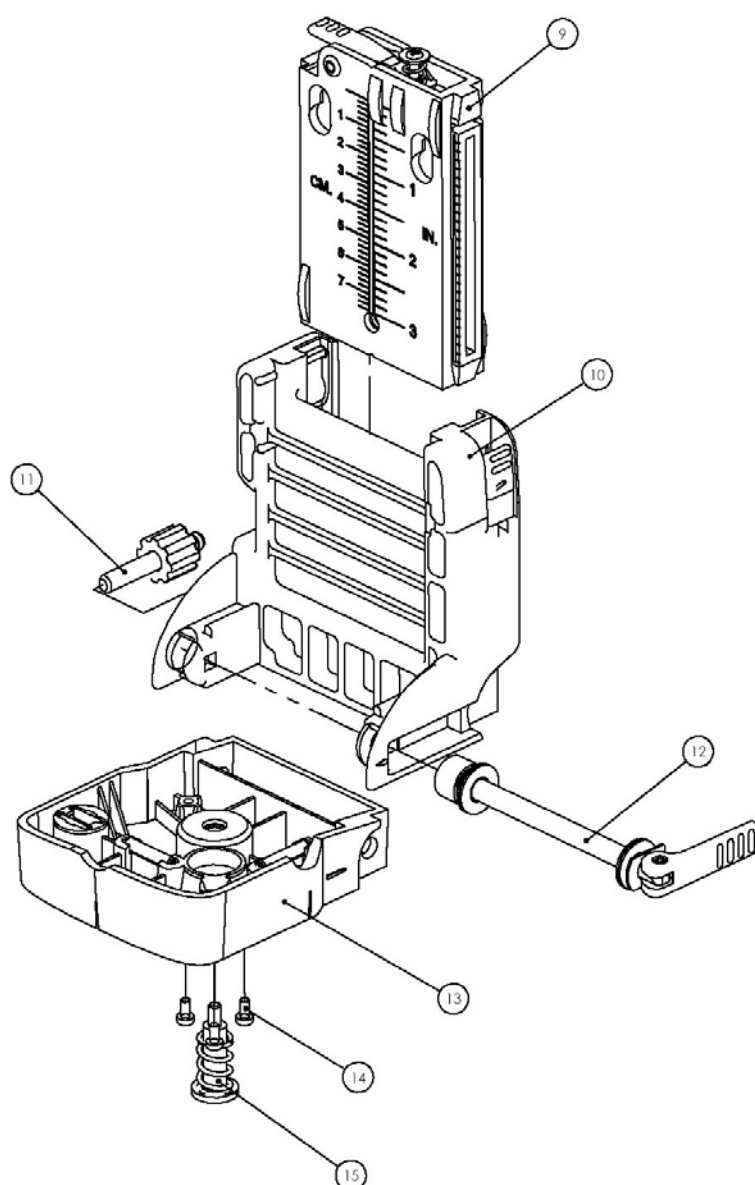
c) Remove Screw  
A, B, C

d) Remove Inner  
Assembly with  
Rotary Head  
Assembly



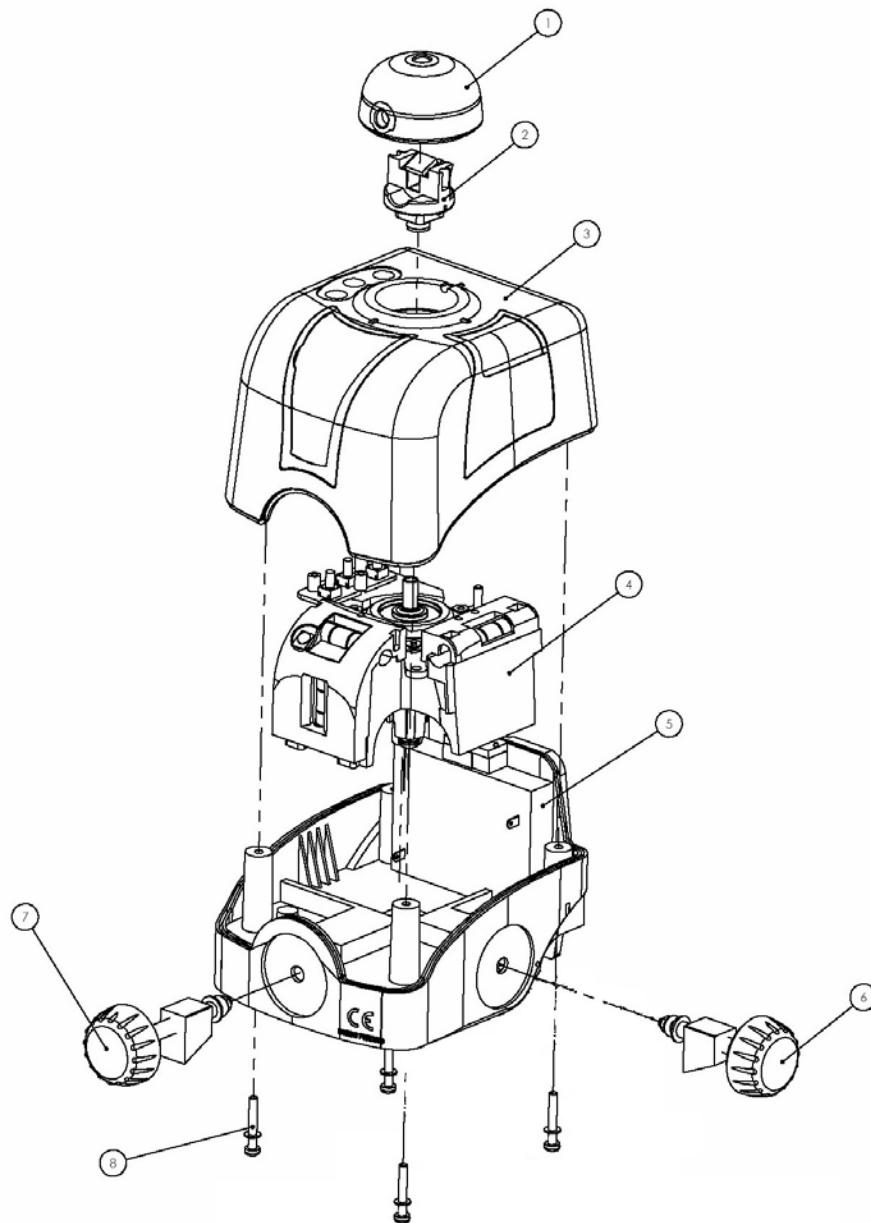
## Replace Bottom Housing Assembly / Mounting Holder Assembly

- 1) Remove Bottom Housing Assembly with Mounting Holder Assembly
- 2) Remove Angle Lever with Shaft



## Replace Level Turning Knob

- 1) Remove Bottom Housing Assembly with Mounting Holder Assembly
- 2) Remove Middle Housing Assembly
- 3) Remove Level Turning Knob



## Replace Internal Assembly

**CAUTION: AVOID staring or looking directly into the laser light.**

SKR60 is a laser diode, class IIIR product. When adjusting, care must be taken to meet class IIIR requirements.

- 1) Remove Bottom Housing Assembly with Mounting Holder Assembly
- 2) Remove Middle Housing Assembly
- 3) Remove Cover Head Assembly
- 4) Remove Internal Assembly with Rotary Head Assembly from Top Housing Assembly
- 5) Put in replacement Internal Assembly with Rotary Head Assembly
- 6) Reverse step 3 to 1 to put all covers in

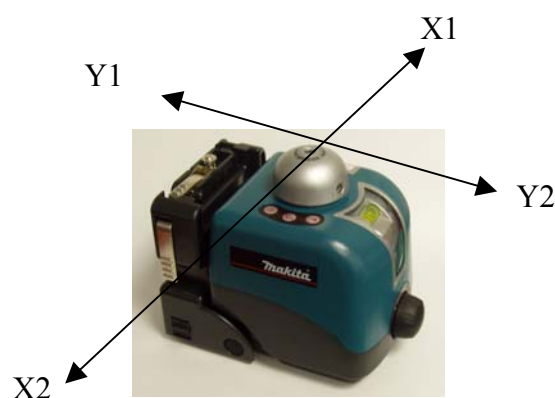


## Checking

**THIS CHAPTER IS VERY IMPORTANT:** Here are a few simple instructions to check your SKR60 for accuracy. Remember that the laser is a precision instrument and that it is important that you keep it in proper condition. The accuracy of your work is completely under your responsibility and you should regularly check your instrument.

- 1 Place the laser on a flat surface 30m (100ft.) from a wall. Position it so that the x1 is facing the wall.
- 2 Turn the laser on. Adjust the level, stop the rotation so that the beam is a point.
- 3 Mark the location x1 of the beam on the wall.
- 4 Rotate the laser 180°. Adjust the level, mark the location x2 of the beam near the first mark x1.
- 5 Both measurements must be at the same place. At 30 meters, no more than 10 mm apart. This is +/- 0.03% leveling accuracy.
- 6 If the marks are close enough, X-axis is within specification. The second axis (Y) must then be checked (see Step 7).
- 7 To check the Y-axis, turn the laser 90° from Step 4 so that Y1 is facing the wall. Repeat the same steps: mark the y beam, rotate 180°, and mark again (Steps 2 to 5).

**\*\*In case either X or Y axis out of specification, the Internal Module need to be replaced.**



## Spare Part List

No.	Part Number	Description	Batch	Prices
	LM.400.02	CARRYING CASE, BLACK	1	
1	LM.401.2M	COVER HEAD ASSEMBLY, MAKITA	1	
2	LM.402.20	ROTARY HEAD ASSEMBLY	1	
3	LM.403.2M	TOP HOUSING ASSEMBLY, MAKITA	1	
4	LM.404.2M	INNER ASSEMBLY, MAKITA	1	
5	LM.405.22	MIDDLE HOUSING ASSEMBLY, MAKITA BLACK	1	
6	LM.406.22	X LEVEL TUNING KNOB, MAKITA BLACK	1	
7	LM.407.22	Y LEVEL TUNING KNOB, MAKITA BLACK	1	
8	LM.408.20	SCREW TO TIGHT THE MIDDLE HOUSING WITH THE TOP HOUSING	10	
9	LM.409.22	SLIDING PLATE ASSEMBLY, MAKITA BLACK	1	
10	LM.410.22	MOUNTING HOLDER ASSEMBLY, MAKITA BLACK	1	
11	LM.411.22	ADJUSTABLE KNOB AND LEG, MAKITA BLACK	10	
12	LM.412.20	ANGLE LEVER WITH SHAFT PARTS	1	
13	LM.413.22	BOTTOM HOUSING ASSEMBLY, MAKITA BLACK	1	
14	LM.414.20	SCREW TO TIGHT THE BALL PIN'S CLAMP PLATE	10	
15	LM.415.20	SCREW AND SPRING PARTS FOR MAX OPENING	10	

## 11. Tools

1. Philips Screwdrivers
2. Big Flat Screwdriver
3. Lens tissue
4. Snap ring pliers (10~50mm)