

# Service Manual

## IPL HAIR REMOVAL SYSTEM

Model No. **ES-WH80**

MIDDLE EAST  
ASIA



### **⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

### **IMPORTANT SAFETY NOTICE**

There are special components used in this equipment which are important for safety. These parts are marked by **⚠** in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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# 1 Warning

**Caution:**

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a soldering iron with temperature control and adjust it to 750 ± 20°F (400 ± 10°C). In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F / 600°C).

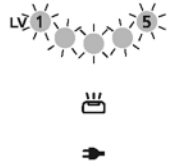
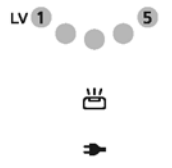
# 2 Specifications

Power source	100-240V AC, 50-60Hz
Power consumption (when charging)	Approx. 7W
Maximum times of flashing in a full single charge	Approx. 600 flashes
Charging time	Approx. 3 hours
Length of power cord	Approx. 1.8 m
Weight	Approx. 340 g (excluding cap)

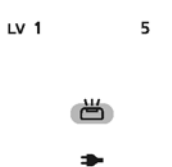
### 3 Troubleshooting Guide

#### 3.1. Lamp Indication


##### 3.1.1. Normal indication

	<p>The level indication lamp (blue) blinks (once/second). The image on the left is when level 5 is selected.</p> <p>Preparation for flash in progress.</p>
	<p>The level indication lamp (blue) glows. The image on the left is when level 5 is selected.</p> <p>Flashing is possible.</p>

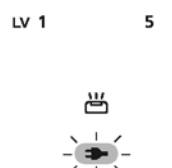
##### 3.1.2. Less than 1000 flashes remaining unit lamp cartridge replacement period.

	<p>Cartridge confirmation lamp (red) glows.</p> <p>There are less than 1 000 flashes remaining until the lamp cartridge replacement period. Prepare a new lamp cartridge.</p>
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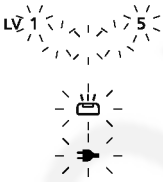
##### 3.1.3. Lamp cartridge replacement period.

	<p>The cartridge confirmation lamp (red) blinks (once/second), and the power turns off 5 seconds later.</p> <p>IPL hair removal is not possible as the lamp cartridge replacement period is up. Replace the lamp cartridge.</p>
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##### 3.1.4. Charging notification

	<p>The charging indication/notification lamp (red) blinks (once/second).</p> <p>The battery level is low. Charging is recommended.</p>
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### 3.1.5. Malfunction display

<p>LV 1                      5</p> 	<p><b>[Abnormal charging]</b> The charging indication/notification lamp (red) blinks quickly (twice/second).  Recommended ambient temperature for charging is 15 – 35 °C. Check the room temperature of the place where the appliance is going to be charged, and charge it again.</p>
<p>LV 1                      5</p> 	<p><b>[Cartridge]</b> The cartridge confirmation lamp (red) blinks quickly (twice/second), the appliance emits a series of beeps, and the power turns off after 5 seconds.  The lamp cartridge is not attached correctly. Turn the power off, and attach the lamp cartridge correctly.</p>
	<p><b>[Other malfunctions]</b> The level indication lamp (blue), cartridge confirmation lamp (red) and charging indication/notification lamp (red) blink simultaneously (once/second), the appliance beeps twice, and the power turns off after 5 seconds.  Recommended ambient temperature for operation is 5 – 35 °C. Check the room temperature of the place that the appliance is going to be used, and turn it on again. (The appliance may not adapt to the room temperature immediately after changing the location.)(See the page 6)</p>

### 3.2. Main unit and charging adaptor

<TROUBLE>

<CHECK>

<REMEDY>

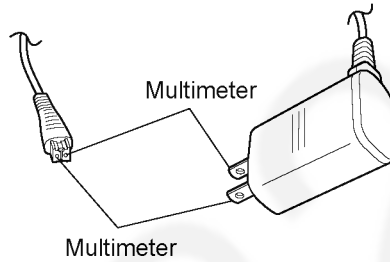
Main unit does not work, even if it is fully charged.

Note : The product does not operated even if the power switch is ON when it is charged with the charging adaptor connected to the power source.

<Check the AC adaptor.>  
Supply the rated voltage to the adaptor. And confirm the voltage using the multimeter. OK if it is approx. DC6V between power plug and appliance plug.

NO

Replace the charging adaptor.



<Check the rechargeable batteries.>  
Confirm the voltage using the multimeter. OK if the voltage of rechargeable battery is more than approx. DC 3.6V between terminals.

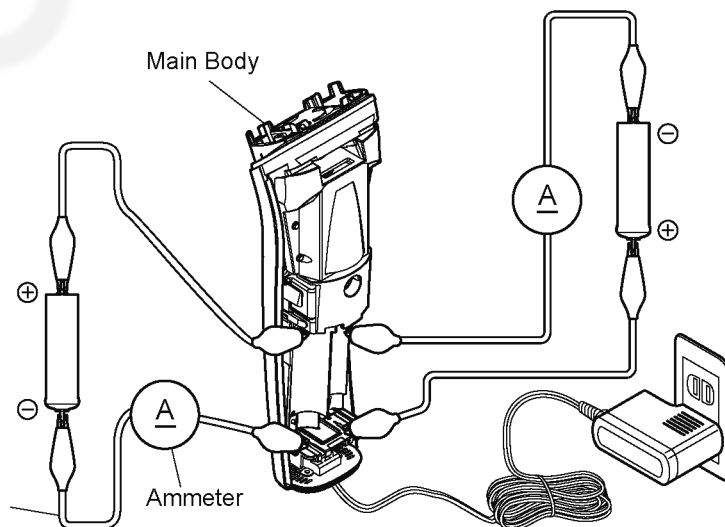
NO

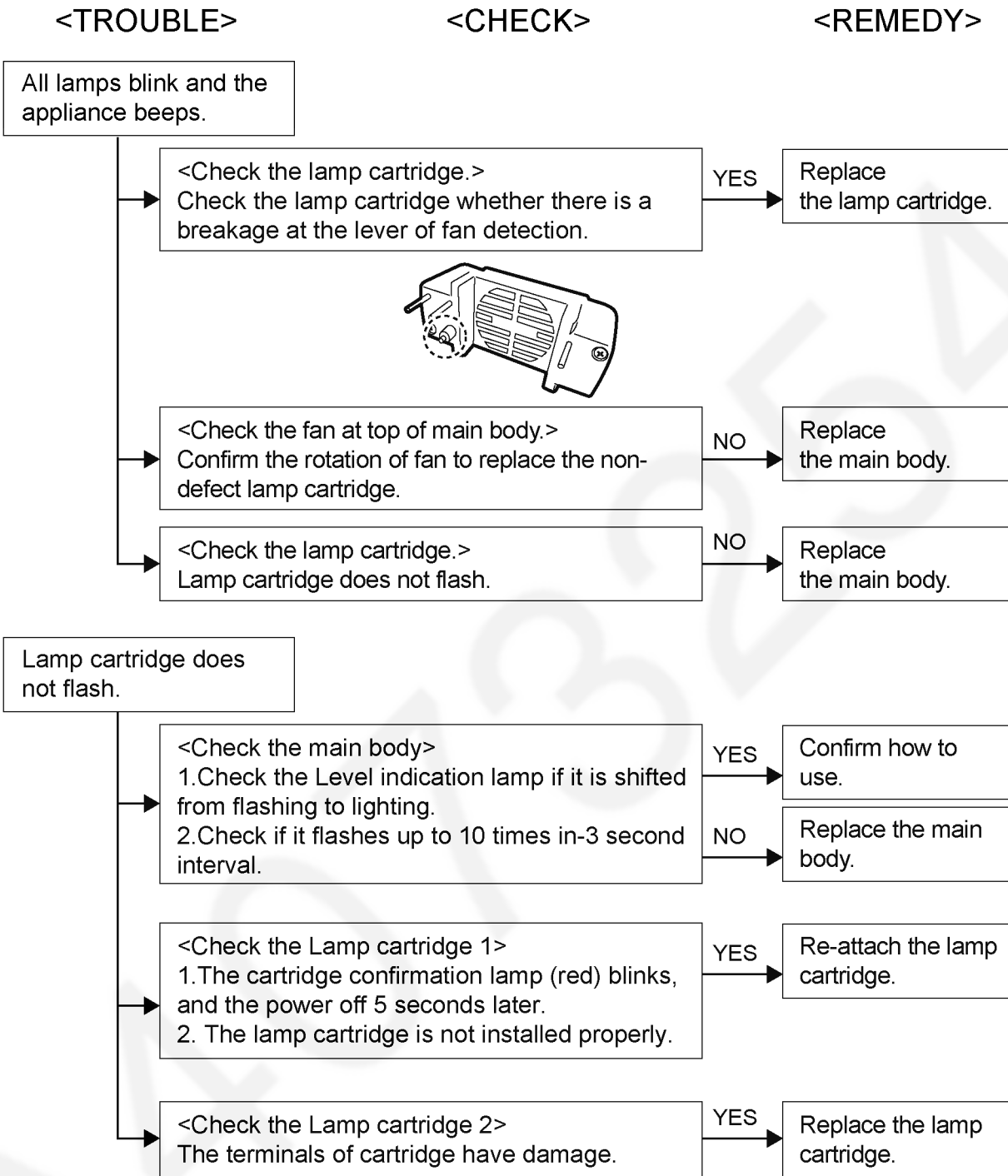
Replace the rechargeable battery.

<Check the main body.>  
Remove the batteries from main body. And confirm the current using the ammeter. Connect the ammeter refer as the following figure. OK if the current is more than approx. 700mAh, when amount of batteries are empty.

NO

Replace the main body.

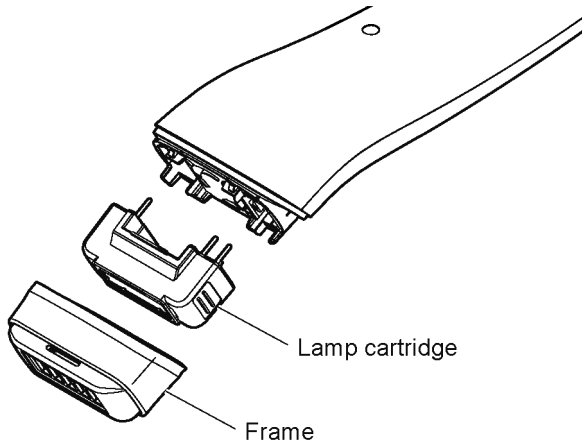




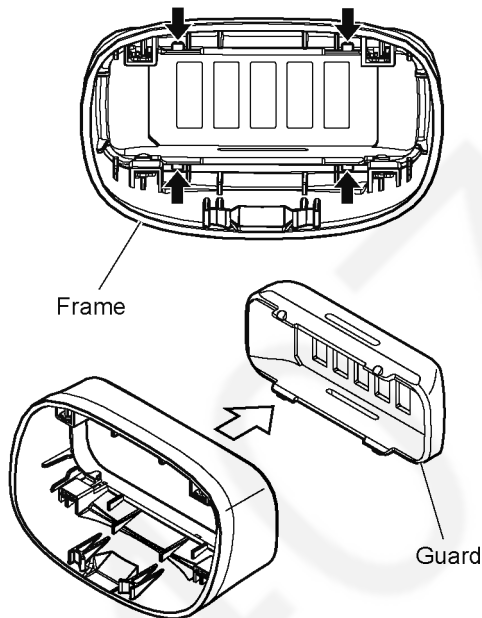
# 4 Disassembly and Assembly Instructions

## 4.1. Disassembly method.

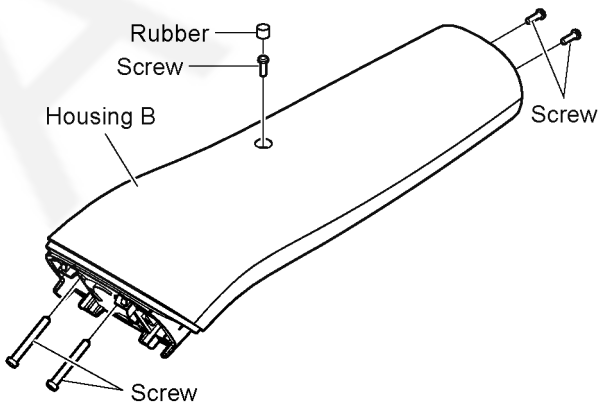
1. Remove the frame and lamp cartridge.



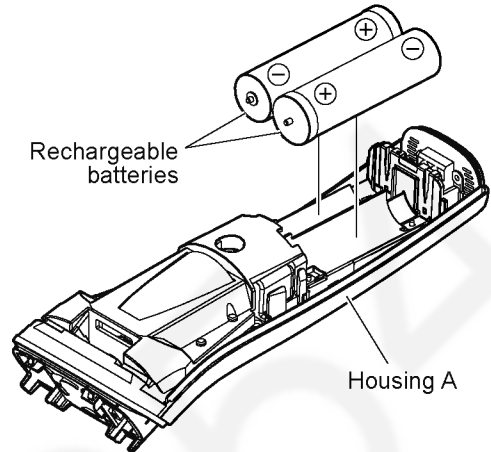
2. Remove the guard from frame by unfastening hooks.



3. Remove the rubber and five screws, and remove the housing B.

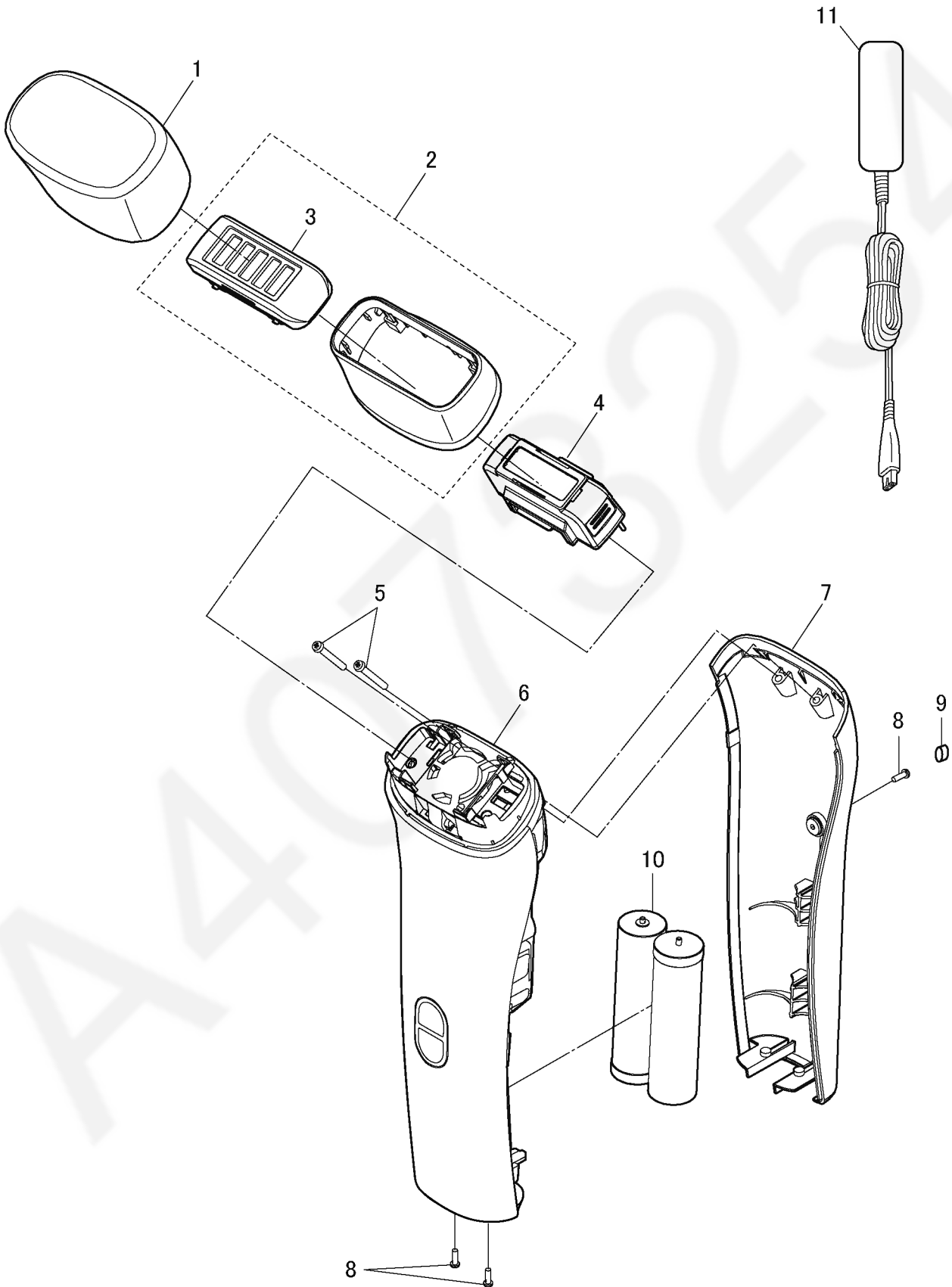


4. Remove the batteries from main body.



# 5 Exploded View and Replacement Parts List

## 5.1. Exploded view





## 5.2. Replacement Parts List

Safety	Ref. No.	Part No.	Part Name & Description	Quantity	Remarks
	1	WESWH81P7157	CAP	1	
	2	WESWH81P3107	FRAME	1	
	3	WESWH81H3747	GUARD	1	
	4	WES2W13H803	LAMP CARTRIDGE	1	
	5	WESWH81L6207	SCREW	2	
	6	WESWH80W4008	HOUSING A	1	
	7	WESWH80W3080	HOUSING B	1	
	8	WESWH20L9007	SCREW	3	K2-6
	9	WESWH80X7158	RUBBER	1	
	10	WESWH81L2507	RECHARGEABLE BATTERY	2	LI-ION TYPE
	11	WESWH80W7675	CHARGING ADAPTOR	1	BF-3 PLUG
	11	WESWH80W7663	CHARGING ADAPTOR	1	C-2 PLUG
	-	WESWH80P8008	INDIVIDUAL BOX	1	MIDDLE EAST
	-	WESWH80P8009	INDIVIDUAL BOX	1	ASIA
	-	WESWH80P8108	OPERATING INSTRUCTIONS	1	
	-	WESWH80P8208	WHITE CARDE	1	