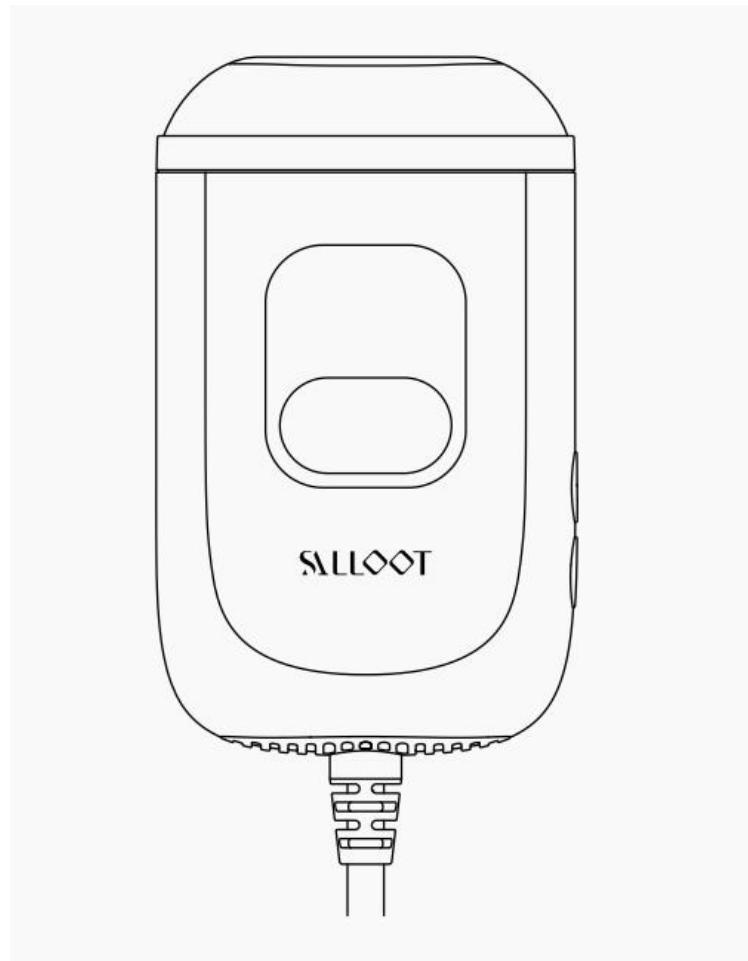


Hair Removal Device

Model: CTU05, CTU07, CTU09, CTU012, CTU015, CTU X



User Manual

Please read through this User Manual carefully before using the product and pay special attention to all safety precautions as well as follow them strictly.

Version: V1.0

Effective date: 2025.06.25

Table of contents

1. Safety precautions	3
2. Product information	7
3. How to Use	9
4. Maintenance	14
5. Disposal	15
6. Troubleshooting	15
7. Technical Specifications	18
8. EMC Statement	18
9. Symbol	19
10. Warranty	19
11. Contact information	20

1. Safety precautions

1.1 Contraindications

Not everyone is suitable to use the Hair Removal Device, please refer to the following information in detail before using the device.

DO NOT use the device if:

- You have a skin perception disorder.
- You have allergic dermatitis, eczema, or other skin diseases.
- You are trying to conceive, are pregnant, lactating, or menstruating.
- Your skin has pigmentation (e.g., burns, tattoos, scars), as it may absorb excessive light energy and cause injury.
- Your skin has been artificially or naturally tanned within the last 3–4 weeks, or if you have sunburn. Sun-exposed skin is more sensitive and prone to IPL side effects (e.g., burns, blisters, discoloration, or scarring).
- You are taking aspirin, immunosuppressants, or isotretinoin.
- You are sensitive to sunlight (photosensitive) or taking photosensitizing medications (e.g., tetracycline, sulfonamides).
- You have a history of skin cancer or precancerous lesions (e.g., nevi or numerous moles).
- You have severe heart disease, moderate-to-severe hypertension, malignant tumors, folliculitis, infectious skin diseases, burned skin, or anticoagulant disorders.
- You have open wounds or abrasions.
- You have used chemical hair removal within 30 days, skin-whitening products in the past week, or cosmetics containing vitamin A.
- You have abnormal collagen metabolism (e.g., history of poor wound healing or scarring).
- You have venous varicose syndrome or vasodilation at the treatment site.
- You have sepsis or are using isotretinoic acid, hydroxy acid (AHA), salicylic acid (BHA), or azelaic acid.
- You have viral, fungal, or bacterial skin infections.
- You have immune system disorders (e.g., AIDS, lupus erythematosus, porphyria).
- You are under 18 years old (safety and efficacy are unestablished for this age group).

1.2 Warnings

Avoid using the device on:

- Nipples, genitals, areolas, nostrils, ear canals, or perianal areas.
- Dark brown/black spots (e.g., birthmarks, moles, warts).
- Tattoos or permanent makeup.
- Affected skin areas (e.g., psoriasis, vitiligo, eczema, acne, herpes, active infections, wounds).
- Areas with prior plastic surgery.
- Near the eyes.
- Men: Do not use on the face or penis.

General Warnings:

DO NOT use the device if it is damaged (e.g., cracked housing, exposed cables, or broken flash window). Never touch internal components to avoid electric shock.

DO NOT insert any object into the device.

DO NOT exceed the usage specified in this manual. Damage of the skin may occur after prolonged or repeated surface application on one site.

DO NOT store the device in places with strong magnetic field and heavy humidity and dust or high temperature.

DO NOT use the device irradiate clothes, hair or other articles to avoid blackening, discoloration or damage.

DO NOT use the device near flammable or explosive materials (e.g., aerosol sprays, gas stations) to prevent fire or electric shock hazards.

DO NOT direct the flash window at dark-colored objects to prevent damage to both the objects and the device.

DO NOT use the device in the sun or under ultraviolet lamp for a long time, which will seriously damage the device.

DO NOT apply antiperspirant immediately after exposure to underarms.

DO NOT use the device while applying essential oils to the treatment area. Please ensure that the skin on the illuminated area is clean, dry and free of emulsion, lubricants and other cosmetics.

During the operation of the device, do not smear any gelatinous cosmetics such as gel on the skin to avoid damage to the device.

If the skin occurs any abnormality or discomfort after using the device, stop using it immediately and seek medical treatment.

DO NOT leave the device unattended when it is powered on to avoid the risk of fire or burns.

DO NOT use the device by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the equipment to avoid the risk of fire or burns.

DO NOT use the device by children. Children should be supervised to ensure that they do not play with the equipment to avoid the risk of fire and burns.

Keep the device out of reach of children to prevent accidental ingestion of small parts.

Water and electricity are a dangerous combination! To avoid risk of electrocution,

– do not use the device in wet surroundings (e.g. in the bathroom or near a shower or swimming pool), and keep the device and power adapter dry;

– do not let water run into the appliance.

Check if the voltage indicated on the device corresponds to the local mains voltage before you connect the device to avoid risk of electrocution or permanent damage to the device.

If the wall socket used to power the device has poor connections, the plug of the device becomes hot. Make sure you plug the equipment into a properly installed wall socket to avoid the risk of fire and burns.

DO NOT subject the device to heavy shocks to avoid risk of damage to the light.

CAUTION: Always unplug the appliance after use and in case of a power failure to avoid risk of damage to the device.

During single-fault conditions, the applicator may reach high temperatures and cause burns.

If you choose to reuse the razor, clean it with 70% alcohol immediately after use and store dry.

However, we strongly recommend using a new razor each time to minimize infection risk.

EYE SAFETY

The device emits intense pulsed light (IPL) flashes, which can be harmful to the eyes upon direct exposure.

DO NOT look directly into the flash window when the device is powered on.

DO NOT direct the device toward the eyes during operation.

DO NOT treat areas around the eyes (e.g., eyebrows or eyelashes).

It is recommended to wear protective goggles and avert your gaze from the device when activating the flash button.

ELECTRICAL AND FIRE SAFETY

The risk group classification: Exempt group.

➤ Operator Specification

The patient is designated as the intended operator.

➤ Maintenance Warnings

DO NOT disassemble, repair, or modify the device without professional supervision, as this may cause damage, malfunction, or personal injury.

If the device exhibits functional abnormalities or visible damage, discontinue use immediately and contact authorized agents or after-sales service providers.

All repairs must be performed by authorized service centers. Circuit diagrams, component lists, operational manuals, and calibration instructions may be provided by the manufacturer to facilitate repairs.

Unauthorized modifications are strictly prohibited due to potential safety hazards.

➤ Usage Prohibitions

DO NOT use if the device shows physical damage (e.g., cracked housing, exposed wiring, damaged flash window).

DO NOT operate near water sources (bathtubs, showers, etc.). If the device contacts water, return it to the manufacturer for inspection. If submerged while powered, unplug immediately before handling.

DO NOT use if the device overheats during operation.

DO NOT activate the flash on non-skin surfaces.

DO NOT obstruct ventilation openings to prevent overheating.

DO NOT perform maintenance during operation.

➤ Power Safety

Ensure the device is within reach of the power outlet during use.

Verify that the rated voltage matches local mains voltage to prevent electrocution or device damage.

If the power plug becomes hot, disconnect immediately and use a properly installed outlet. Always unplug after use and during power outages.

➤ **User Restrictions**

Not intended for users with impaired physical, sensory, or cognitive abilities without supervision.

Not for use by children. Keep out of reach of children and pets.

Environmental Precautions

Avoid mechanical shocks or impacts.

Store in a dry environment; prolonged humidity may degrade performance.

Protect from lint, dust, and direct light.

➤ **Post-Treatment Care**

Avoid sun exposure after IPL treatment. Treated skin is highly sensitive to UV radiation.

Use sunscreen and minimize computer/UV exposure post-treatment.

➤ **Auto Mode Warning**

CAUTION: In Auto Mode, maintain continuous movement at recommended speed. Pausing or slow movement may cause burns.

1.3 Precautions

- No professional skills or training are required for operation. Please read the user manual thoroughly before use.
- This device is not recommended for use on male beards or any areas where hair regrowth is desired, as the results may be permanent.
- The light tube inside the flash window may exhibit varying degrees of blackening on its inner wall during the later stages of its specified lifespan. This is a normal part of the tube's aging process. Within the device's service life, the energy attenuation rate will remain within the specified range, and the device can continue to be used normally.
- Mild skin redness after use is normal. You may apply an ice compress or allow the skin to cool naturally.
- If your hair exceeds 1mm in length, it is recommended to shave the treatment area prior to use. Excessive hair length can absorb heat from the skin surface, potentially causing redness and swelling. Additionally, burning hair may splash into the light outlet, producing unpleasant odors and negatively affecting your user experience.
- Always select the energy level according to your skin type. First-time users must begin with level 1.
- When treating back hair, we recommend seeking assistance from another person, as self-treatment may pose risks.
- Ensure the skin is clean, completely dry, and free of hair residue or oily substances before treatment.

- Verify ambient temperature before use. The device's operating temperature range is 5-40°C.

If the temperature differential exceeds 20°C (from minimum storage temperature to room temperature), allow the device to acclimate for 30 minutes before use.

Similarly, if the temperature differential exceeds 20°C (from maximum storage temperature to room temperature), allow 30 minutes for acclimation.

- For 48 hours post-treatment:

Avoid direct UV exposure

Apply sunscreen when going outdoors

Refrain from consuming photosensitive foods (e.g., spinach, rapeseed, mustard)

- During use, hair or debris adhering to the flash window's plastic edges may cause discoloration or black spots. This does not affect the device's performance or normal operation.
- Some users may experience allergic reactions to certain materials in the device.

2. Product information

Product name: Hair Removal Device

Model: CTU05, CTU07, CTU09, CTU012, CTU015, CTU X.

Note: The differences in models are only in the way the model names are named.

2.1 Indication for Use

Hair Removal Device is indicated for the removal of unwanted hair. The device is also indicated for the permanent reduction in hair regrowth, defined as the long-term, stable reduction in the number of hairs regrowing when measured at 6, 9 and 12 months after the completion of a treatment regime.

2.2 Packing list

Upon opening the package, you can see the following contents:

Hand-held Hair Removal Device *1

AC Power cord*1

User Manual*1

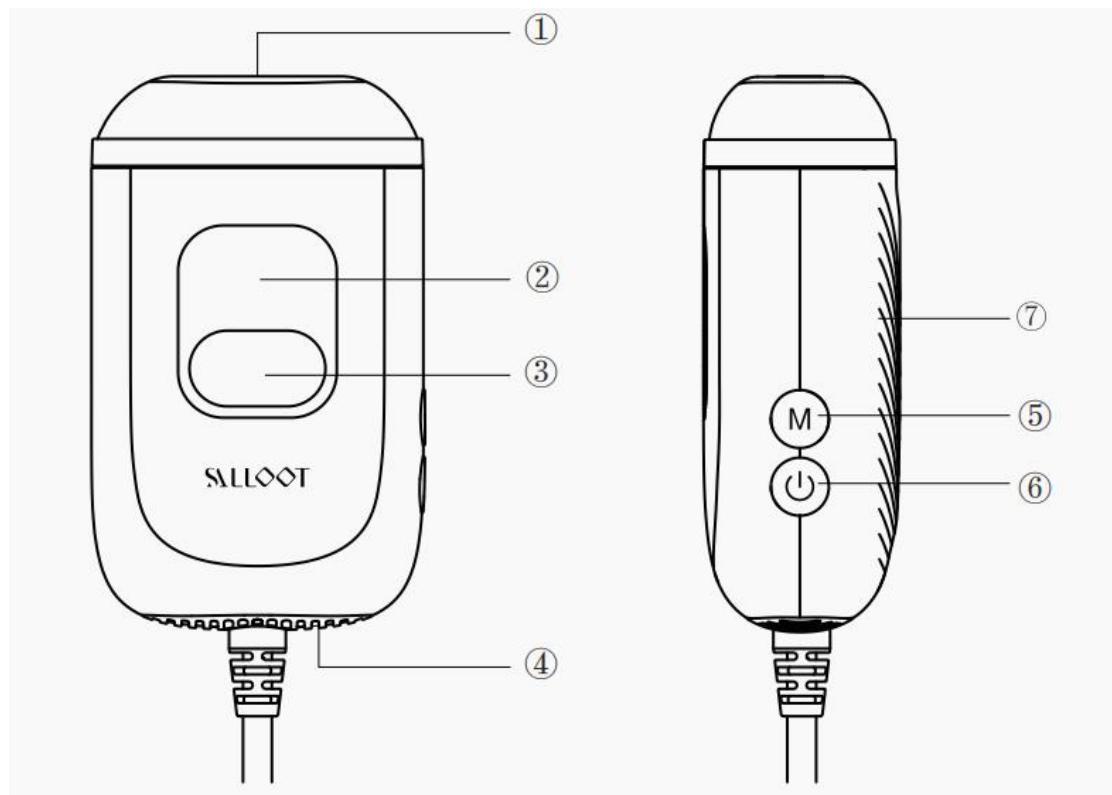
Razor*1

Goggles*1

Cleaning cloth*1

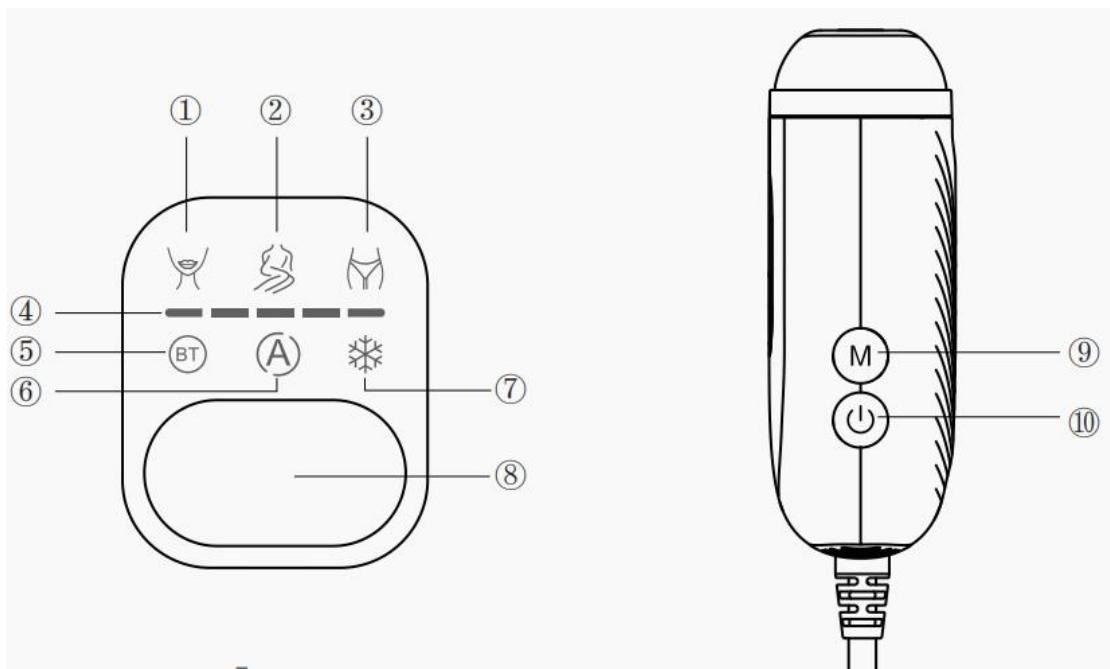
Storage pouch*1

2.3 Product structure



- ① Treatment window
- ② Display screen
- ③ Flashing button
- ④ Air outlet
- ⑤ Hair level switch button
- ⑥ Power button/Energy level button
- ⑦ Air inlet

2.3.1 Display interface



- ① Face-area indicator: Face hair removal mode
- ② Body-area indicator: Body hair removal mode
- ③ Bikini-area indicator: Bikini hair removal mode
- ④ Energy level display
- ⑤ Automatic mode display:
"A" display light on: The device is in automatic Flash mode.
"A" display light off: The device is in manual mode.
- ⑥ Ice-cooling display: Cooling function display stays on once the device is turned on.
- ⑧ Flash button
- ⑨ Body area mode switch button
- ⑩ Power button/Energy level button

2.4 Operation Principle

Hand-held Hair Removal Device is a light-based device for long-term hair removal, designed for home environment used. It is intended for the removal of unwanted hair and permanent reduction in hair regrowth. Ideal body areas include the **upper lip, chin, underarms, legs, arms, bikini area, chest, back, abdomen**. The device used the IPL technology with lower energy level, including 5 Levels of output energy. Intense Pulsed light technology is able to achieve long-term hair removal results at a fraction of the energy level used in other light-based hair removal device.

The Principle of Operation is selective photothermolysis and the Mechanism of Operation is to disable hair growth using light to preferentially heat the hair bulb.

3. How to Use

3.1 Application ranges

The Hair Removal Device is for hair removal of upper lip, chin, underarms, legs, arms, bikini area, chest, back, abdomen. Please check the

Skin Tone Table below to determine whether IPL is suitable for you.

USE ON ACCEPTABLE SKIN TYPES

USE ON ACCEPTABLE SKIN TYPES and this device is to only be used on Fitzpatrick Skin Types I-V.

BEFORE USING THE DEVICE, choose your skin tone on the basis of Fitzpatrick Phototyping Scale, which was developed by Harvard Medical School dermatologist, Thomas Fitzpatrick, M.D., PhD, to classify a person's complexion and their tolerance of sunlight.

There are six levels of skin tone in the scale.

Please IDENTIFY your skin tone and check the following diagram to see whether the product is applicable:

Safety grade	Applicable	Applicable	Applicable	Applicable	Applicable but caution	Not applicable
Skin type/color	Type I Pale white skin	Type II White skin	Type III Cream white skin	Type IV Moderate brown skin	Type V Dark brown skin	Type VI Deeply pigmented dark brown to darkest brown, black skin
Example						

NOTE:

- Choose the comfortable level according to your skin tolerance and increase level from one to five levels gradually. If there is not unsuitable or reaction, you could increase level gradually.
- The colour of your skin may change, for example because your skin has been tanned: it may then be darker than the skin tone during the previous treatment. Therefore, it is important that you check the settings to be used before each treatment and set the settings according to different treatment areas. Some areas may be darker than others.
- Use on acceptable hair tone

Illustration	Color	Applicable or not
	White/Gray	No
	Blonde	No
	Red	No
	Light Brown/Brown	Yes

	Dark Brown	Yes
	Black	Yes

3.2 Check before use

- a. Unpacking inspection: Take out the host and its accessories from the box, count the accessories according to the packing list, and save the relevant packaging materials for subsequent transportation, storage and reference.
- b. Check whether the host and accessories are in good condition, and check whether there is any mechanical damage. If there is any sign of damage to the function of the device, do not use it, and contact the agent or after-sales service unit in time.

3.3 Preparation before use

- a. Use the razor provided along with the device to remove all visible hair on the skin before using the device. Make sure there is no hair remaining above the surface of the skin as this can cause treatment discomfort. Remove any cosmetics, lotions and cream from the area you wish to treat.
- b. Confirm that there is no hair slag, dirt in the flash window. If necessary, the flash window should be cleaned according to the cleaning method provided before use.

3.4 Skin Test

Before your first treatment, we RECOMMEND you test your skin for reactions.

Select part of body you intend to treat. Connect power adapter and Power on the device. Press flash window firmly on the selected skin until skin contact sensor indicator lights up. Move the device to another test position and raise energy level, press the Flash Button to do another test treatment. If it feels comfortable, increase the setting by one level and try it on another test position. Do not apply more than one flash on the same spot. Wait 24 hours after test, to ensure your skin is suitable for treatment and there is no adverse reaction to the light energy. If there is no skin abnormality after 24 hours, but you feel intense hotness during the treatment, then the last energy level is the most proper energy level for your skin.

3.5 Body Hair Removal Tips

Armpit hair removal

For areas with loose skin, use your fingers to stretch the skin to remove hair. It is normal to feel a slight burning sensation when using.

Bikini hair removal

For highly pigmented and darker areas, use low intensities; always level 1 until accustomed.

Hair removal on hands and feet

Bones and bumpy areas are more susceptible to pain than other areas.

3.6 Instructions for Use

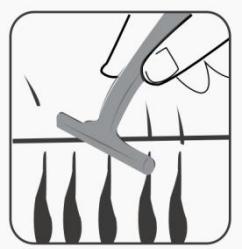
- Before use, use a cotton swab or a cloth dipped in 75% concentration alcohol to clean the

flash window and Filter of the device (if it is not dirty, do not clean it), pay attention to keep the flash window dry before use, otherwise it will affect the light output.

3.6.1 Model CTU05, CTU07, CTU09, CTU012, CTU015, CTU X

- Preparation

Shave off the visible hair and clean the skin.



- Connect the power supply

Plug the power cord into the adapter. After the device detects the power supply, the Energy level display lights flash in sequence.

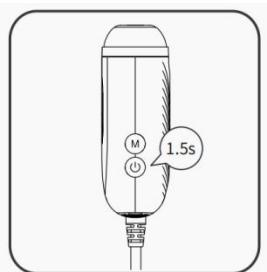
- Wear goggles

Wear the goggles provided in the box to avoid damage to your eyes caused by flash.



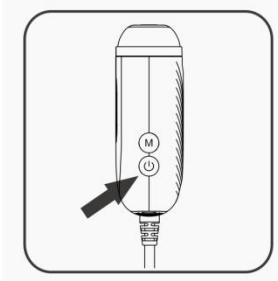
- Turn on the device

Press and hold the power button for more than 1.5 seconds to turn on the device. The display will light up Face-area indicator and Ice-cooling display, the energy level will default to level 1.



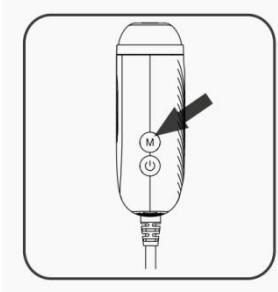
- Energy level switching

Short press the [Energy level button](#) to adjust the energy level in the sequence of 1-2-3-4-5-4-3-2-1.



- **Body area mode switch button**

Short press the "M" Body area mode switch button to choose the suitable areas. Face for face, chin, fingers, toes small areas. Body for hands, legs, back, big areas. Bikini for sensitive areas, such as bikini, armpits.



- **Correct skin contact**

Place the device 90 degrees vertically and closely on the area to be hair removed. The energy level display will be flashing. If the device is not in contact with the skin, the energy level display will not flash and the device will not emit flash.



- **Auto & Manual treatment modes**

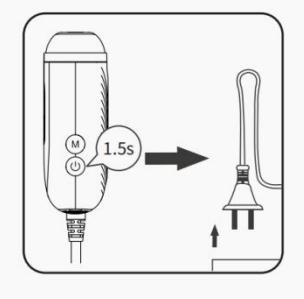
Auto Flash Mode: Press and hold the flash button for 2 seconds to switch to automatic mode. The "A" indicator on the display screen will light on.

Manual Flash Mode: Short press the flash button for 0.5 seconds and the device will flash once.



- Turn off the device

Press and hold the power button for 1.5 seconds to turn off the device, then unplug it. To avoid damage, do not unplug while the device is on.



3.7 Suggested Treatment Regime

Treatment cycle reference table:	
First month	Use 3-4 times a week
Second month	Use 2-3 times a week
Third month	Use 2 times a month

3.8 Skincare after treatment

- After hair removal, The skin may be slightly inflamed or tingly or warm. These reactions are completely harmless and go away quickly.
- After using the device for two hours, you can safely apply lotion, cream deodorant, moisturizing products or cosmetics to the treatment area; if there is tingling or redness on the skin after the treatment, please wait for these conditions to disappear. Do not expose treated areas to the sun. Wait at least 48h after treatment before exposing treated skin to direct sunlight. If there is tingling or redness on the skin after the treatment, please wait for these conditions to disappear before applying any product on the skin. If the skin feels tingling after applying the device, please wash off with water.

4. Maintenance

Cleaning

In order to ensure the best results and service life of the device, please thoroughly clean the device before and after each use to avoid debris accumulation.

- Before cleaning, the device must be powered off and unplugged to allow the device to cool.
- Use a soft, clean and dry cloth to wipe and clean the flash window surface.
- After use, the Filter of the lamp head may have small black spots attached, if the water does not clean well, use a cloth dipped in 75% concentration alcohol to clean the device.
- After cleaning, please check visually if it is completely clean, if not, please repeat the above cleaning steps.
- Never wash the device and accessories under faucets or in dishwashers.
- Do not use steel wool, abrasive cleaners (toothpaste, etc.) or corrosive liquids (gasoline, motor oil, acetone, etc.) to clean the device.

Product maintenance methods

Keep the device unit dry. Do not immerse the device or any of its parts in water to avoid the risk of electric shock.

In order to avoid damage or loss of the device and its accessories, please store the device and accessories in the box after each use, and be sure to clean the device before storing.

If the device is not used for a long time, please keep it properly, store it in a dry, dark and cool place, and avoid contact with hard objects to avoid damage to the device.

Storage

- Store the device in a dry, dust-free environment at temperature **-5°C-30°C**, humidity **25%-75%RH**, relative pressure: **80-106KPa**
- No corrosive gas, well-ventilated room.

5. Disposal

In order to minimize hazards to health and the environment and ensure that materials can be recycled, this product should be disposed of at a separate collection facility for waste



electrical and electronic device according to local environmental requirements.

6. Troubleshooting

Below summarises the most common problems you could encounter with the device. If you are unable to solve the problem with the information below, please contact your local distributor:

Problem	Possible reason	Solution
The adapter or hair removal device heats up during use.	Normal	No action required.
The device is turned on, but the intensity level cannot be increased or decreased.	The device needs to be reset.	To restart the hair removal device, simply turn off the power and then turn it back on. Please contact the seller if you still can't adjust the light intensity.
After the device is powered on, it can't emit light normally when it is placed on the skin.	The device doesn't place vertically (90°) on the skin.	The energy level display will flash continuously if the device is correctly placed.
After a long time of use, the numbers on the LED screen suddenly don't flicker, but the cooling fan is running normally.	The overheating protection system has been activated, suspending the flash work, while the fan is running normally to dissipate heat.	Don't turn off the device, let it cool down for a minute before continuing to use it. If it still doesn't flash after cooling down, try restarting.
The numbers on the LED screen flicker, but no flash	Equipment system failure.	Reboot the device. If the same problem still exist,

is emitted when the flash button is pressed.		please contact the seller for after-sale service.
Pain feeling intolerable when using this product.	You have not removed the hair before using.	If you didn't shave the visible hair before using the device, it will cause a burning feeling and you won't get the best hair removal result, as the light energy was absorbed by the melanin of the visible hair rather than the follicle.
	The selected energy level is too high.	The first time you use it is recommended to start from 1 gear, gradually increase to a bearable gear.
	The position where the device cannot be used.	Can't use this product on Private parts, such as vagina, nipple or penis.
	This device is unsuitable for your hair color or skin color.	IPL hair removal device is ideal for lighter skin tones and brown-to-dark hair. NOT applicable to black skin. NOT applicable to blonde, red, gray, white hair.
The position change to be red after hair removal.	Tiny red is normal appearance, harmless to human body, and will degrade soon.	No action required.
No result after using	The selected energy level may be too low.	Execute the skin test to confirm whether you can use more higher light strength.
	You will get better results if following the reasonable treatment frequency.	First month use 2-3 times per week; Second month use 1-2 times per week; Third month use 2 times per month.
	No shaving before using	Shave off the hair on the surface of the skin every treatment to get better result.
The product unable to work	This product exist faults	Please contact the seller to handle it. The seller

		promises a 12-months unconditional warranty for any quality problems or no result issues no matter the Amazon return window is closed or not.
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7. Technical Specifications

Product Name	Hair Removal Device
Product model	CTU05, CTU07, CTU09, CTU012, CTU015, CTU X
Product Size	115(W)x69(H)x41(L)mm
Energy level	5 levels
flash window Size	3.0cm ²
Wavelengths	560nm-1200nm
Continuous exposure interval	1-2.3S
Pulse repetition rate	1S-2.3S
Output Energy	7-15 J
Energy density	2.3-5J/cm ²
Pulse width range	10us-15ms
Software version	47DE
Operating conditions	Operating temperature: 5-40°C (41-104°F) Humidity: 25%-75%RH Relative pressure: 80-106 KPa
Storage and transportation conditions	Temperature: 0-40°C Humidity: 10%-80%RH Relative pressure: 80-106 KPa
Lifetime	Lifetime of the device and adaptor is Three years.

8. EMC Statement

- Hand-held Hair Removal Device conforms to the relevant requirements in IEC 60601-1-2.
- Hand-held Hair Removal Device needs special precautions regarding EMC and need to be installed and put into service according to the EMC information provided in the accompanying document.
- Guidance and manufacturer's statement can be seen in the appendix.



Warning:

Warning: Don't use near active HF surgical device and the RF shielded room of an ME system for magnetic resonance imaging, where the intensity of EM disturbances is high.

Warning: Use of this device adjacent to or stacked with other device should be avoided because it could result in improper operation. If such use is necessary, this device and the other device should be observed to verify that they are operating normally.

Warning: Use of accessories, transducers, and cables other than those specified or provided by the manufacturer of this device could result in increased electromagnetic emissions or decreased electromagnetic immunity of this device and result in improper operation.

Warning: Portable RF communications device (including peripherals such as antenna cables and external antennas) should be used no closer than 12 in (30 cm) to any part of the device, including cables specified by the manufacturer. Otherwise, degradation of the performance of

this device could result.

9. Symbol

No.	Symbols	Description
1		“WEEE (Waste Electrical and Electronic Equipment)”. The waste products should be handled legally.
2		Keep dry
3		Manufacturer
4		Eye protection
5		CONSULTINSTRUCTIONS FOR USE
6		Type BF Applied Part
7		Class II MIE equipment
8		Warning
9		OPTICAL RADIATION
10		The device complies with the electromagnetic interference (EMI) limits set by the FCC.

10. Warranty

After-sale protection policy fully implements the relevant laws and regulations of sales. From the date of purchase, the product's warranty is 12 months. However, if the following circumstances occur during the warranty period, warranty may be refused.

- Failure to follow the instructions, operation, maintenance.
- Mistake which causes damage to the product.
- Exceeding the allowable use environment (such as high temperature, corrosion, etc.) causing

product damage.

- Non-normal external forces (falling, extrusion, impact, etc.) causing damage to the product.
- Natural force majeure (fire, flood, lightening, impact, etc.) causing damage to the product.
- Use of non-manufacturers accessories and expansion parts causing damage to product.

11. Contact information



Shenzhen Chuangtong Yigou Technology Co., Ltd.

Address: Room 2218, Rongchuang Zhihui Building A, Shangfen Community, Minzhi Street, Longhua District, Shenzhen, China.

E-mail: whenyouneed@foxmail.com

Appendix A: EMC information

Guidance and Manufacturer's Declaration – Electromagnetic Emissions	
Emissions test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Class A
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies

Guidance and Manufacturer's Declaration – Electromagnetic Immunity		
Immunity Test	IEC 60601-1-2	Compliance level
	Test level	
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4kV, ±8 kV, ±15 kV air
Electrical transient/burst 61000-4-4	fast IEC	±2 kV for power supply lines
Surge IEC61000-4-5	± 1 kV line(s) to line(s)	± 1 kV line(s) to line(s)

	$\pm 0.5 \text{ kV line(s) to line(s)}$	$\pm 0.5 \text{ kV line(s) to line(s)}$
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % U_T ; 0.5 cycle at $0^\circ, 45^\circ, 90^\circ, 135^\circ, 180^\circ, 225^\circ, 270^\circ, 315^\circ$ 0 % U_T ; 1 cycle 70 % U_T ; 25/30 cycle 0% U_T ; 250/300 cycle	0 % U_T ; 0.5 cycle at $0^\circ, 45^\circ, 90^\circ, 135^\circ, 180^\circ, 225^\circ, 270^\circ, 315^\circ$ 0 % U_T ; 1 cycle 70 % U_T ; 25/30 cycle 0% U_T ; 250/300 cycle
Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz
Conducted RF IEC 61000-4-6	3 V r.m.s. 150 kHz to 80 MHz 6 V r.m.s. 150 kHz to 80 MHz	3 V r.m.s. 150 kHz to 80 MHz 6 V r.m.s. 150 kHz to 80 MHz
Radiated RF IEC 61000-4-3	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	10 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz
NOTE U_T is the a.c. mains voltage prior to application of the test level.		

Guidance and Manufacturer's Declaration - IMMUNITY to proximity fields from RF wireless communications equipment

Immunity test	IEC60601 test level				Compliance level
	Test frequency	Modulation	Maximum power	Immunity level	
Radiated RF IEC 61000-4-3	385 MHz	**Pulse Modulation: 18Hz	1.8W	27 V/m	27 V/m
	450 MHz	*FM+ 5Hz deviation: 1kHz sine	2 W	28 V/m	28 V/m
	710 MHz 745 MHz 780 MHz	**Pulse Modulation: 217Hz	0.2 W	9 V/m	9 V/m
	810 MHz 870 MHz 930 MHz	**Pulse Modulation: 18Hz	2 W	28 V/m	28 V/m
	1720 MHz 1845 MHz 1970 MHz	**Pulse Modulation: 217Hz	2 W	28 V/m	28 V/m

	2450 MHz	**Pulse Modulation: 217Hz	2 W	28 V/m	28 V/m
	5240 MHz 5500 MHz 5785 MHz	**Pulse Modulation: 217Hz	0.2 W	9 V/m	9 V/m
Note* - As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.					
Note** - The carrier shall be modulated using a 50 % duty cycle square wave signal.					

FCC Warning

15.19 Labeling requirements.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
3. This equipment should be installed and operated with minimum distance 5mm between the radiator and your body.