

Aculas-HB-150D



User's Guide

English

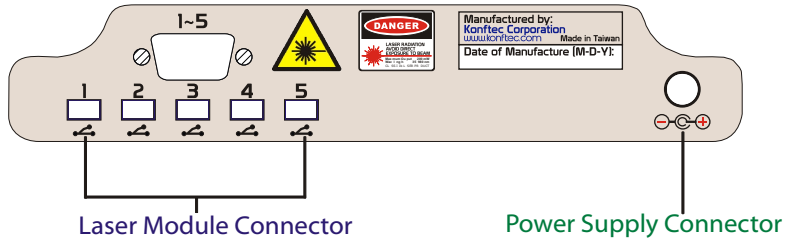
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Getting started

Read on to find out how to get started low level laser therapy (LLLT) with Aculas-HB.

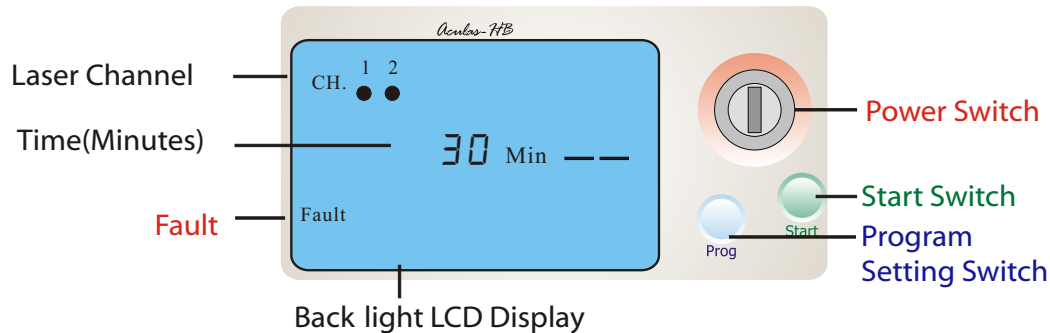
1 Connect Aculas-HB

Connect your Aculas-HB using the included power supply cable and laser module cable.




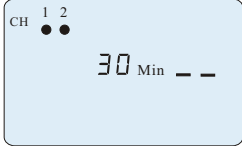

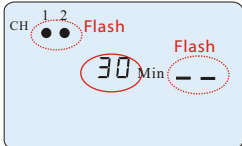
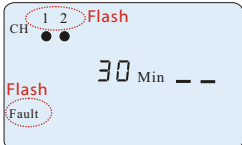


2 Operation

Use Aculas-HB's power switch and "**Prog**" (program) button to set the therapy protocol. Wait 3 seconds until the circles of CH. (channel) appear. Then press the "**Start**" button to begin laser therapy.



3 Operation steps and LCD display

Operation			LCD Display
STEP	ACTION	TURN/PUSH	
1	Power ON		
2	Program Setting	 Prog	
3	Start	 Start	
Fault Alarm: (1) Fault Sign Flash (2) Faulty Channel(s) Flash Check Connection Wire of Flashing Channel(s)			

Using Aculas-HB-150D

Aculas-HB-150D can be used for treatment of dental conditions, follow the recommended dosage and treatment time to get the best efficacy. You can also find new information about using Aculas-HB-150D on the web www.konftec.com.

Specifications					
Operation Environment	0 ~ 50 °C (32 ~ 122 °F); 10 ~ 95%RH (Non-condensing)				
Power Input Voltage	90V AC ~ 264V AC				
Power Input Frequency	47Hz ~ 63Hz				
Power Input Current	Max. 1.0A (115V AC), 0.5A (230V AC)				
Model No. Selection					
Model No.	Laser Module				Total Output Power with Fiber Rod
	660 nm		808 nm		
	w/o Fiber Rod	with Fiber Rod	w/o Fiber Rod	with Fiber Rod	
	100 ± 10 mW	80 ± 8 mW	200 ± 20 mW	160 ± 16 mW	
HB-150D680	1				80 mW
HB-150D8A0			1		160 mW
HB-150D8B0	1		1		240 mW

Tips and troubleshooting

Read on for advice about using and troubleshooting Aculas-HB.

My Aculas-HB won't turn on

- ☑ Make sure Aculas-HB's power switch is on.
- ☑ If that doesn't work, check the connection from Aculas-HB to the Aculas-HB power adapter and connect the adapter to a working electrical outlet.
- ☑ If that doesn't work, contact your local sales office.

My Aculas-HB is flashing fault sign and is continuously playing music

- ☑ **Turn off the power switch** then reconnect the laser module.
- ☑ Repeat the operation steps:
 1. Turn on Aculas-HB's power switch.
 2. Press "Prog" (program) button to set the therapy protocol.
Wait 3 seconds until the circles of CH. (channel) appear.
 3. Press "Start" button to begin the therapy.
- ☑ If that doesn't work, contact your local sales office.

Learning more, service, and support

There is a wealth of information about using Aculas-HB on the web.

For the latest information on Aculas-HB service and support information go to www.konftec.com.

Obtaining warranty service

If the product appears to be damaged or does not function properly, please follow the advice in this booklet, and the online resources. If the unit still does not function, go to www.konftec.com for instructions on how to obtain warranty service.

Safety and cleaning

Read on to learn about using Aculas-HB safely and cleaning Aculas-HB.

Important safety instructions

When setting up and using your Aculas-HB, remember the following:

- ☑ Read user's guide carefully before you plug your Aculas-HB Power Adapter into a power outlet.
- ☑ Keep user's guide handy for reference by you and others.
- ☑ Follow all instructions and warnings dealing with your Aculas-HB.
- ☑ **Warning:** Electrical equipment may be hazardous if misused.
- ☑ Operation of this device, must always be supervised by an adult. Do not allow children access to the interior of any electrical product and do not permit them to handle any cables.

Warning: Laser beam

- ☑ Avoid direct eye exposure to the laser beam.
- ☑ Because some Aculas-HB lasers emit invisible infrared light, the usage of handheld unit in the area of the face and around the eyes must proceed with appropriate care and caution. Invisible infrared laser light penetrating the eye may cause serious harm after extended exposure. Therefore, the use of the optional laser safety goggles for the patient and clinician is advised.



Using the power adapter

- ☑ Use only the power adapter that came with your Aculas-HB. Adapters for other electronic devices may look similar, but they may damage your Aculas-HB.
- ☑ The only way to shut off power completely to your power adapter is to disconnect it from the power source.
- ☑ When connecting or disconnecting your power adapter, always hold the power adapter by its sides. Keep fingers away from the metal part of the plug.
- ☑ Before connecting the laser module cable to the power adapter, make sure there are no foreign objects inside the adapter's port.
- ☑ The power adapter for your Aculas-HB is a high-voltage component and should not be opened for any reason, even when the Aculas-HB is off. If the power adapter needs service, see “Learning more, service, and support.”

About operating and storage temperatures

- ⦿ Operate your Aculas-HB in a place where the temperature is always between 0 and 40° C (32 to 105° F).
- ⦿ Store your Aculas-HB in a place where the temperature is always between -20 and 85° C (-4 to 185° F).
- ⦿ When you are using your Aculas-HB, it is normal for the bottom of the power supply case to get warm.

Avoid wet locations

Warning To reduce the chance of shock or injury, do not use your Aculas-HB in or near water or wet locations.

- ☑ Keep your Aculas-HB and power adapter away from sources of liquids, such as drinks, wash basins, bathtubs, shower stalls, and so on.
- ☑ Protect your Aculas-HB and the power adapter from direct sunlight and rain or other moisture.
- ☑ Take care not to spill any food or liquid on Aculas-HB or its power adapter. If you do, unplug Aculas-HB before cleaning up the spill.
- ☑ Depending on what you spilled and how much of it got into your equipment, you may have to send your equipment to Konftec for service. See “Learning more, service, and support.”

Do not make repairs yourself

Warning Do not attempt to open your Aculas-HB or power adapter, disassemble it. You run the risk of electric shock and voiding the limited warranty. No user-serviceable parts are inside.

For service, see “Learning more, service, and support.”

Cleaning

Follow these general rules when cleaning the outside of your Aculas-HB and its components:

- ☑ Make sure your Aculas-HB is unplugged.
- ☑ Use a damp, soft, lint-free cloth. Avoid getting moisture in openings.
- ☑ Don't use aerosol sprays, solvents or abrasives.

About handling

Your Aculas-HB may be damaged by improper storage or handling. Be careful not to drop your Aculas-HB when treating or transporting the device.

Therapy Protocol

Treatment Frequency: 1 ~ 2 Time/Week

Disease / Condition	Therapy Time (seconds)			Dose (Joule)	Application	Effectiveness
	HB-150D680	HB-150D8A0	HB-150D8B0			
	660nm @80mW	808nm @160mW	660nm@80mW + 808nm@160m			
Endodontics	50	25	17	4	at apex of each root	No post-operative pain
Extractions	50 ~ 100	25 ~ 50	17 ~ 34	4 ~ 8	in the alveolus	⊙ Promote healing
						⊙ Less swelling
						⊙ No post-operative pain
Herpes Simplex	38	19	13	3	per lesion; 2 times/day	⊙ Promote healing
						⊙ Less pain
Hyperemic Pulp	50	25	17	4	at the tooth's apex	No pain/hypersensitivity
Hypersensitive Dentine	50	25	17	4	at dentine (+ gel)	No pain/hypersensitivity
	50	25	17	4	at the tooth's apex	
Implants	50	25	17	4	on bone	Faster and better osseo integration
	25	13	9	2	along the flap	
Scaling (Deep)	25	13	9	2	at gingival over the pocket before scaling	⊙ Less bleeding
						⊙ Less pain during scaling
						⊙ Less pain & discomfort afterwards
Surgery	25	13	9	2	per cm of suture	⊙ Promote healing
						⊙ Less swelling
						⊙ No post-operative pain



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