OLYMPUS

OLYMPUS EMPOWER™ Ho:YAG LASERS

QUICK REFERENCE GUIDE
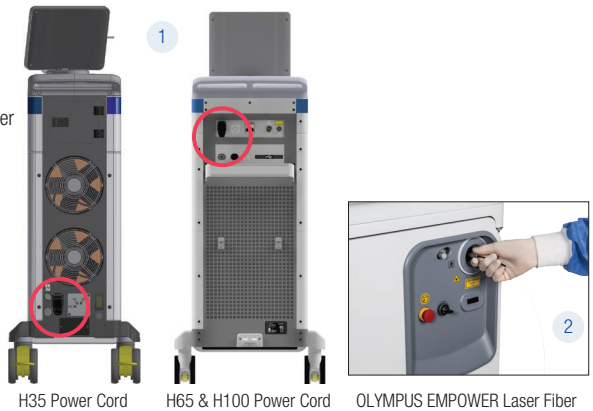
EMP-H35S/EMP-H65S/EMP-H100S

This guide is designed as a quick reference guide only. It is not a substitute for reading the entire Operators Manual and/or Instructions For Use (IFU) provided with the EMP-H35S, EMP-H65S or EMP-H100S OLYMPUS EMPOWER laser system Olympus cannot encourage or recommend any actions that deviate or are not covered by the IFU.

Required parts

1. Power Cord
2. OLYMPUS EMPOWER Laser Fiber
3. Unlock Key
4. Foot Switch
5. Interlock Connector

H35 Power Cord

H65 & H100 Power Cord

OLYMPUS EMPOWER Laser Fiber

Unlock Key

H35 Foot Switch

H65 & H100 Dual
Foot Switch

Interlock Connector

Connect power cord

- Visually inspect the power cable for any tears or cracks, do not use if it appears to be damaged in any way. Connect the female end of the plug into the power port on the rear side of the system.
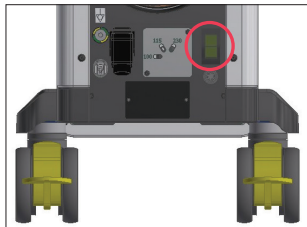
Connect the foot switch

- To connect the foot switch, plug its connector into the socket on the front panel of the laser. Once inserted, twist the silver ring clockwise until tight to secure the connection.

Check rear power switch

- Check the rear power switch ensuring it is flipped to the active ("I") position.
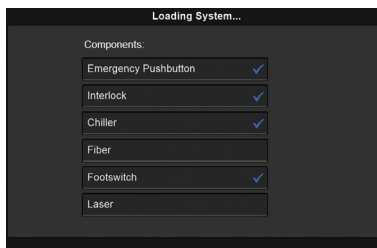

H35 Rear Panel

H65 & H100 Rear Panel

Turn the unlock key to start the device

- Make sure the red emergency stop button is not pressed. To reset the emergency stop button, turn the knob clockwise.

- The unlock key turns the device on and off. To switch the device ON, insert the key and turn it clockwise, 90 degrees, to the vertical position. The ring around the fiber connection will light up (white on the H35 and blue on the H65 and H100) to indicate the system is powering on.

Turn clockwise, 90°

- The Laser will run a self-check of all system components. If an error occurs during start up, the laser will display an error code. If this occurs, restart the device. If the error still remains, contact Olympus Service. Once the system check is complete, the home screen will load.

Only the H65 and H100 show a System Check Screen

Connect the laser fiber

- The fiber is connected to the device through the fiber port on the front panel.

- The fiber connector has an additional ring which facilitates the clamping of the fiber to the connector on the device. Furthermore, this ring enables the automatic detection of fiber status (present/absent), its diameter and its type (single use/reusable). If the fiber is not connected to the device, an error message is displayed when the device is switched on.

- On the H65 and H100, a dedicated sensor recognizes the presence of the user hand, opening the external protection shutter of the fiber connector.
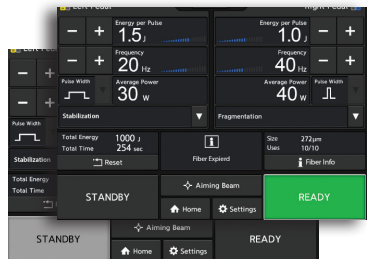

Standby/Ready

- When the user presses the Ready/Standby buttons, the system will be set in the Ready or Standby mode, respectively. The button on the footswitch, or the Ready/Standby display area can be used interchangeably.

- In Standby mode, the laser is not firing and the system cannot emit energy.

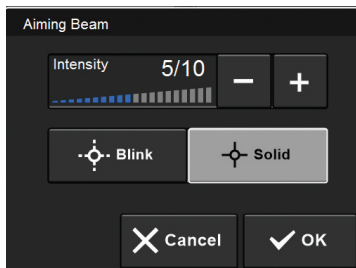- In the Ready mode, the laser is firing and ready to emit energy.

H35 Standby and Ready screens

H65 & H100 Standby and Ready screens

Adjust the aiming beam

- Select the aiming beam button on the main screen.

- The pop up displays the aiming beam intensity with an option to adjust, as well as the option to select a solid or blinking aiming beam.
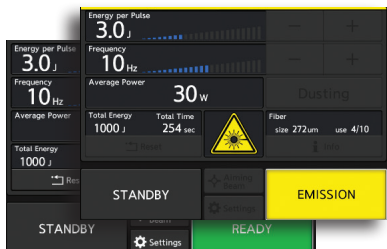

Laser parameter adjustment

- Press the touch screen to adjust the parameters on the selected emission mode.

- Use the +/- buttons to adjust the energy and frequency.

- Press the Emission Mode area to change the Emission mode.

- On the H65 and the H100 the pulse width can be further adjusted after the selection of a certain mode. Select the drop down arrow to change the pulse duration to short, medium or long pulse.

Activating the laser

- To activate the laser, first put the laser in READY mode by pressing the READY button on the screen or the circular button on the foot switch. If using the foot switch button, note that the button must be held down for a few seconds to activate (until beep is heard). This is a safety feature to prevent accidental button pressing.
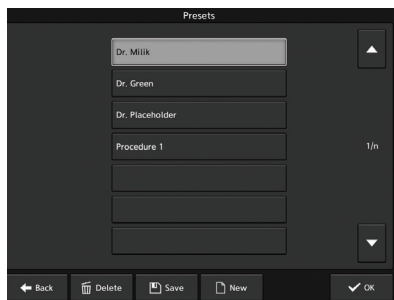
- Step on the foot pedal to activate the laser.

H35 Emission and Ready screens
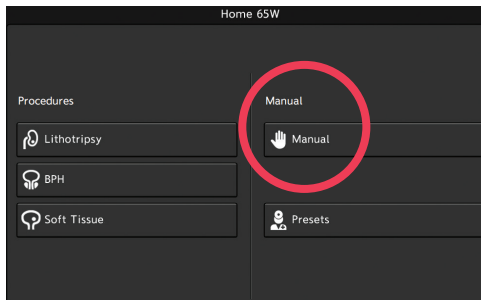

H65 & H100 Emission and Ready screens

Saving settings on the H65 and H100

- On the H65 and H100, settings can be saved under presets to use again.

- From the main screen, select the settings button and then choose presets.

- In the Presets screen, select new to save current settings as a new preset. Enter a name for the preset and click OK. This setting can be referenced again by selecting Presets on the home screen.
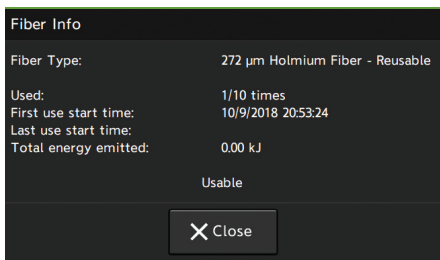
Manual mode on the H65 and H100

- On the H65 and H100, Manual mode may be selected on the home screen instead of a treatment type. Selecting this mode will load the main screen without a pedal selection.

- In Manual mode, the energy, frequency, and pulse width modes are entered manually and can be saved as a preset.

Viewing Fiber information

The Laser RFID system recognizes information on the OLYMPUS EMPOWER Laser Fiber and its use history.

- To display the data, touch the Fiber Info button on the Main screen.

- The pop up will display fiber size and type, number of uses, and date of last use.

- For a given procedure, the Main screen displays total energy (joules) and total time (seconds) emitted through the fiber.

Laser Fiber Selection Guide

Part Number	Fiber Size		
	μm (Core)	μm (OD)	French (OD)
EMP-FBX200HS EMP-FBX200HR	200	380	1.14
EMP-FBX200BHS EMP-FBX200BHS-C	200 Series	420	1.26
EMP-FBX272HS EMP-FBX272HR EMP-FBX272HS-C EMP-FBX272HR-C	272	420 (jacket)*	1.26
EMP-FBX365HS EMP-FBX365HR	365	570	1.71
EMP-FBX550HS EMP-FBX550HR	550	750	2.25
EMP-FBX1000HS EMP-FBX1000HR	1000	1450	4.35

*The Max outer diameter for the Ball-Tip fiber is given by the distal ball diameter with is 0.7±0.1mm

DEFINITIONS

Hertz (Hz): Frequency or Number of pulses for each second.

Joules (J)/millijoules (mJ): A Unit of energy, the force with which each laser pulse hits the stone.

Watts (W): Unit of power equal to the total energy expenditure in 1 second (Hz x Joules = Watts).

OLYMPUS®

Distributed by
OLYMPUS AMERICA INC.
136 Turnpike Road, Southborough, MA 01772

For more information, contact your Olympus
sales representative, or call 800-848-9024.
www.medical.olympusamerica.com