



Laser Shower Manual

Centurion Laser Shower

Thank you for selecting the Centurion Laser Shower for your veterinary treatment needs. The selection of this unit ensures that you have purchased equipment, which has been designed to be very user friendly and incorporates the most up to date laser therapy technology available.

The Centurion Laser Shower operates by emitting a continuous shower of laser light at multiple frequencies from the treatment heads so that a wide range of problems from surface injuries to deep seated soft tissue injury's may be treated without resorting to specific frequency selection for a particular problem as is required by older style laser units. Research has shown that the most effective penetration of laser light is achieved by using laser diodes which operate at 785 NM so these diodes have been incorporated in the design to further increase it's effectiveness.

The effect of the multiple frequency targeting and the use of 785 NM diodes in an injured area will be to increase the effective average power directed towards the injured area and allow better penetration of the laser light in through all of the treatment area to allow maximum healing conditions for your veterinary problems with a minimum of effort.

Laser Warning Label Reproduction



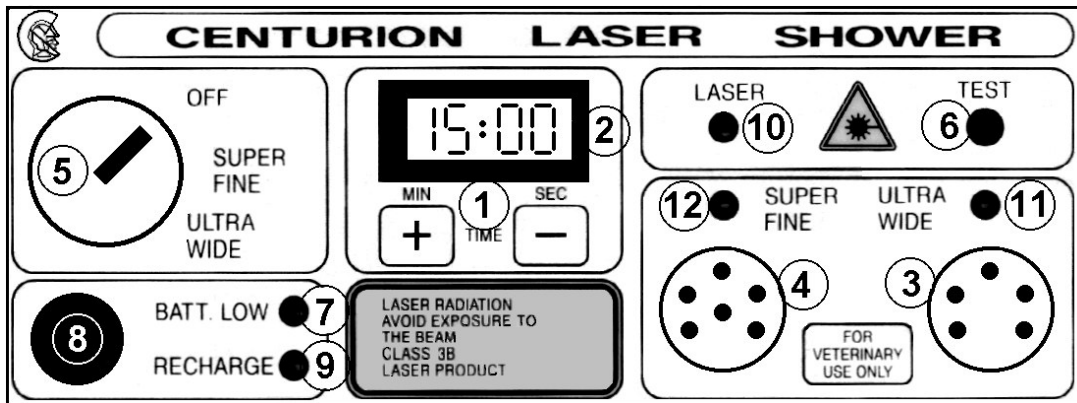
Visit our Website: www.centurion-systems.co.uk

Email to: info@centurion-systems.co.uk

Your Centurion Laser Shower unit contains the following items;

- 1) Carrying bag
 - 2) One logic generator unit
 - 3) Two treatment heads:
 - (a) The Ultra Wide shower head emits Laser light at 785 nanometers from seven Laser diodes and is utilized over large treatment areas.
 - (b) The Superfine head emits Laser light at 785 nanometers from a single Laser diode and is used for small treatment areas and to stimulate acupuncture points.
 - 4) One Recharging unit
 - 5) One pair safety glass
 - 6) Users manual
- NOTE - As an option, an acupuncture point Finder combined with a Superfine head is available.

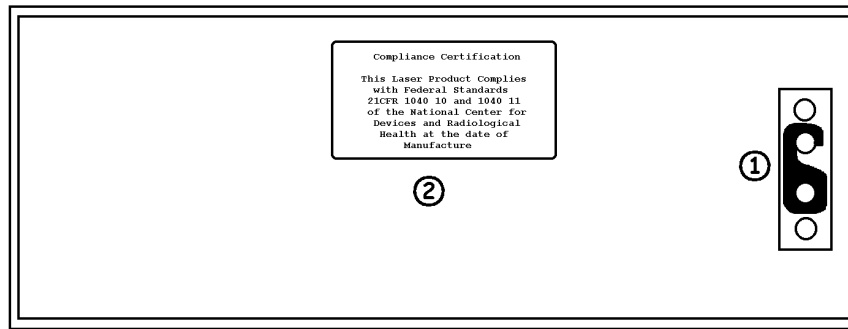
Figure 1 **Logic Generator Diagram - Front**



- | | |
|---------------------------|-------------------------------|
| 1. Timer + and - Controls | 7. Low Battery Indicator |
| 2. Timer Display, | 8. Insulated Charger jack |
| 3. Ultra Wide Head Socket | 9. Recharge Indicator Lamp |
| 4. Superfine Head Socket | 10. Laser test Indicator Lamp |
| 5. Selector Key, Switch | 11. Ultra Wide Indicator Lamp |
| 6. Laser Test Window | 12. Super Fine Indicator Lamp |

Figure 2

Generator Diagram - Rear



1. Remote Interlock Connector - only used for servicing purposes to disconnect output visible laser radiation.
2. CDRH Compliance Certification Label

Figure 3

CDRH Compliance Certification Label Reproduction

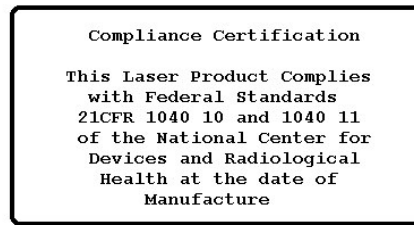
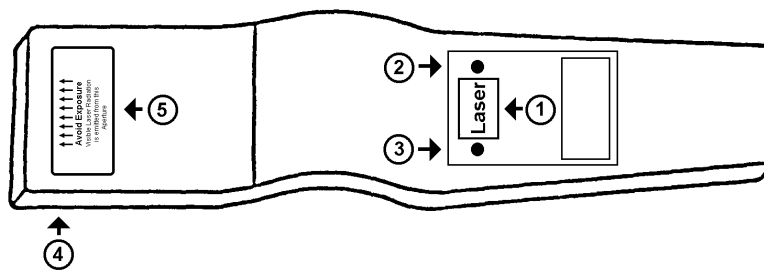


Figure 4

Ultrawide Applicator Diagram



1. On/Off switch
2. Emission Indicator
3. Service Indicator
4. Visible Laser Radiation Aperture on opposite side
5. Aperture Warning Label Location

Figure 5

Ultra Wide Applicator Aperture Warning Label Reproduction

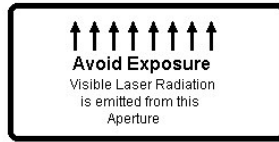
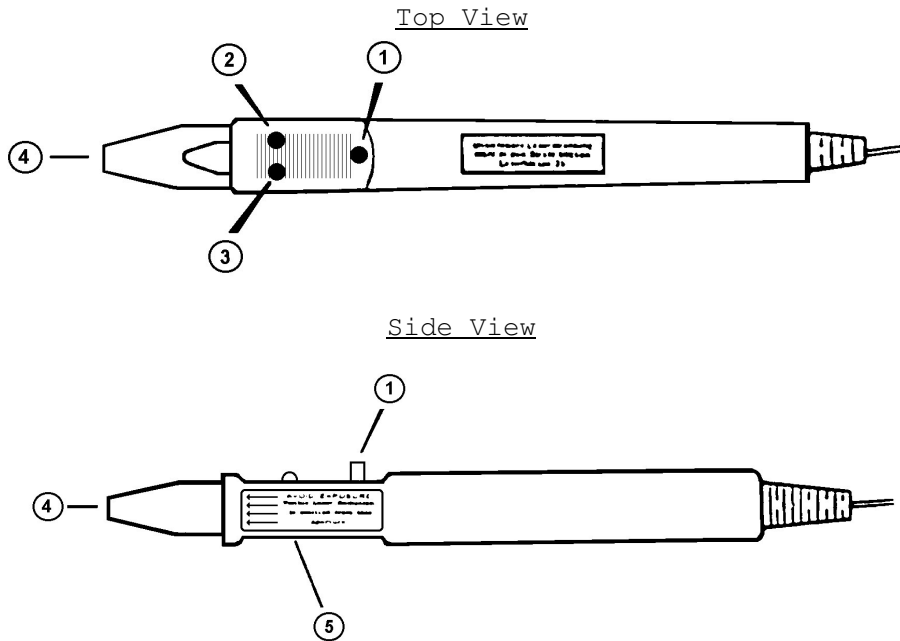


Figure 6

Super Fine Applicator diagram



- 1. On Off switch
- 2. Emission Indicator
- 3. Service Indicator
- 4. Visible Laser Radiation Aperture
- 5. Aperture Warning Label Location (Left and Right sides)

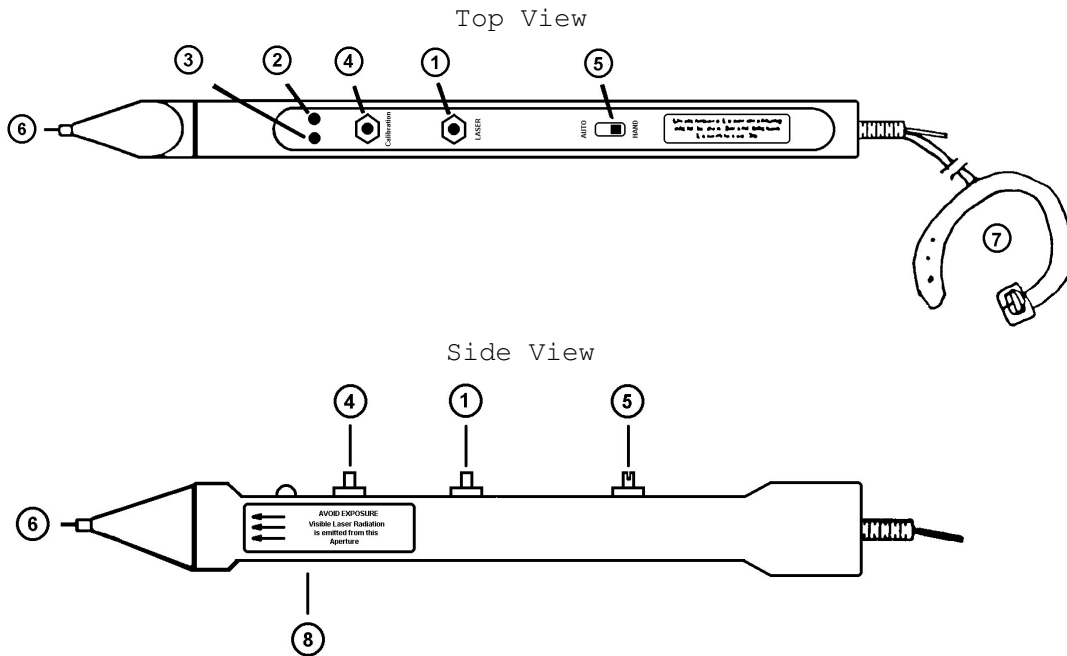
Figure 7

Super Fine Applicator Aperture Warning Label Reproduction



Figure 8

Superfine with Acupuncture Point Finder Diagram



- | | |
|-------------------------------|--|
| 1. On/Off switch | 5. Auto/Manual switch |
| 2. Emission Indicator | 6. Visible Laser Radiation Aperture |
| 3. Service Indicator | 7. Dispersive Strap |
| 4. Conductance setting switch | 8. Aperture Warning Label (both sides) |

Figure 9

**Super Fine with Acupuncture Point Finder
Applicator Aperture Warning label Reproduction**



Caution: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Equipment is for Veterinary use only

Safety Instructions

While operating the laser applicators care should be taken not to directly, expose your eyes or the eyes of the animal under treatment to the Visible Laser Radiation. The sole Source, of Visible Laser Radiation comes from the aperture at the treatment point of the applicators and should always be pointed away from the eyes at all times. To avoid stray exposure ensure that the laser is off when a treatment ends by, visually checking that the emission indicator lamps located by the applicators on/off switch are off before you lift the applicator away from the treatment area.

- 1) Avoid direct exposure of the beam to the eyes.
- 2) Do not use the laser over areas that have recently been treated with any photosensitive, chemicals such as cortisone, furacin or iodine.
- 3) The wearing of safety, glasses are recommended when the laser is in operation.

Operating Instructions

1) Place the long strap of the control unit around your neck so that the unit hangs in front of you or place over your shoulder. The unit is designed to give you complete freedom of movement when the treatments are in progress. Put on the supplied safety glasses for eve protection.

2) Plug in the desired treatment head connector into the appropriate socket on top of the control unit and turn until locked into place. (If using the acupuncture point finder use superfine socket)

3) Turn the key, on the control unit to the ultra-wide or superfine position depending on the head chosen. An LED will light up over the selected output socket. You will note that a 15-minute timing period will automatically be selected for you on the timer display. If you wish to choose more or less time, press the "+" button to increase the time on the display or "-" button on the control unit to decrease the time on the display. Select the timing period required. (From one to sixty minutes)

The starting and stopping of the treatment is controlled from the treatment head as follows:

Ultra-wide head - press on the on/off button marked "Laser" on the back of the applicator head. A yellow light will appear that shows the Laser applicator is operating and the time will count down. For safety reasons there will be a Four second delay before the Visible Laser Radiation is emitted from the aperture of the applicator. Should you need to interrupt the treatment for any reason press the button again and the visible laser radiation output will stop, the yellow light will go out and the timer display will stop counting but will retain the treatment time left, Press the button again to resume the treatment. When the treatment time is completed the applicator will automatically shut off and stop emitting Visible Laser Radiation. The timer will then reset to 15 minutes in preparation for the next treatment.

Superfine head - press on the button marked "Laser" on the treatment head. A yellow light will appear that shows the Laser is operating and the time will count down. For safety reasons there will be a Four second delay after the button is pressed before the Visible Laser Radiation is emitted from the aperture of the applicator. Should you need to interrupt the treatment for any reason press the laser button again and the visible laser output will stop, the yellow light will go out and the timer display will stop counting, but will retain the treatment time left. Press the button again to resume the treatment. When the treatment time is completed the laser output will automatically shut off and the timer will reset to 15 minutes for the next treatment.

Superfine head with acupuncture point Finder - the acupuncture point finder is capable of operating in two modes. The first mode is on manual and is operated the same as the Superfine head. In the automatic mode this unit will find acupuncture points and automatically turn itself on to deliver the treatment to the point.

To operate in this mode it is first necessary to flip the switch on the treatment head to automatic and connect the dispersive strap to an area where it can contact skin such as around the base of the tail on your horse. Calibrate the probe by placing the tip of the probe to an area of the skin away from known acupuncture point and press the conductance button on the probe for 10 seconds to set your reference standard. Place the probe head on the area to be treated. When an acupuncture point is located the yellow light will come on, the probe will emit a buzzing sound and the treatment will start. For safety reasons there will be a Four second delay before the Visible Laser Radiation is emitted from the aperture of the applicator. The timer display will count down as long as you are on a point. When you are finished one point move the probe until another point is found and treat that area. If the probe is removed from one treatment area to another it will be necessary to recalibrate the probe. A veterinary acupuncture book can be consulted to find the specific points you may want to treat.

NOTE -if at any point the red light appears on any of the applicator heads the unit may be too cold and should be warmed up before use. If the light does not go out after warming up the unit should be returned to the factory for service.

Testing for Output

When the applicator head is operational the output of the laser head may be directed to the "TEST" area of the of the control unit. Point the aperture towards the Laser Test Window. If the laser applicator is emitting Visible Laser Radiation, the Laser Test Indicator Lamp will light up to indicate proper operation. Caution - For safety reasons do not test laser output by pointing aperture at your eyes and do not point in the direction of bystanders.

Charging

The Centurion Laser shower will be fully charged when you receive it. Under normal operating conditions you should be able to run your unit for 10 hours if only the wide-head unit is used and up to 40 hours if only the fine point is used. A combinational use of both heads will typically give you about 25 to 30 hours of use between charging. The unit should not be charged until the Battery Low light on the faceplate is lit up. More frequent charging when the battery is not discharged may reduce the life of the battery pack or damage it's ability to receive a full charge. The battery pack has been custom designed for this unit and should be capable of being charged up to 1000 times during its life. Treat it well and it will treat you well. The following procedure should be used to charge the battery:

- Charge only when "BATT. LOW" warning appears.
- Charge with key removed from unit. Do not use unit while charging!!! It may cause premature failure of the battery, as the battery will not charge while the unit is in use and this could allow the battery to discharge below a recoverable level.
- Plug charger into the charger jack on front of the control unit and then plug charger into wall socket Recharge light will come on if the charger is hooked up correctly.
- Recharge for up to 8 Hours. The Recharge light will turn off automatically when the battery is fully charged. The charger may be left on all night as built in safety circuits will prevent overcharging. Unplug charger before using.

Care and Cleaning

You can help ensure that you receive a longer life from your unit by taking care of it. Do not store the unit in any place where items may fall on it. When transporting, ensure that it is placed in a secure area away from your animals and in a location where it is not likely to, move around and be damaged. When you are not using the unit make sure that it stored in the carrying bag provided. The carrying bag is divided into two sections, the control unit and charger should be stored in one section and your treatment heads should be stored in the other section to avoid damaging the treatment heads. Do not store with key inserted or applicators plugged in. Do not leave the unit out where it can be exposed to excessive dust or moisture. It should also be stored in an area where the temperature does not exceed 45 Celsius (115 Fahrenheit) or go below 0 Celsius (32 Fahrenheit).

To clean the unit you should use a damp cloth to clean the control unit with a mild detergent if necessary. The applicators can be cleaned with Isopropyl alcohol and cotton swabs. Heads should be cleaned after each treatment. If you are treating open wounds it is a good idea to wrap the applicator with a clear stretch wrap that can be discarded after the treatment is completed.

Warning: There are no user replaceable parts in the applicators or in the generator. If a problem is encountered, return to manufacturer for any required repairs. Any attempt to open any of the parts contained in this unit will void the warranties and possibly result in hazardous radiation exposure.

TECHNICAL DATA

Model: Centurion Laser Shower

Dimensions:

Generator only	- 7" x 6 3/4" x 3"
	- 180mm x 172mm x 76mm
Carrying bag	- 15" x 8 1/2" x 7 1/2"
	- 380mm x 220mm x 190mm
Boxed	- 18" x 15 1/2" x 12 1/2"
	- 460mm x 394mm x 320mm

Weight: Complete unit in bag - 5.5 Lb.
- 2.5 Kg. Boxed - 9.2 Lb.
- 4.15 Kg

Power Supply: Rechargeable battery pack

15V/500 ma AC Adapter

Pulse Duration: Swept frequency from 20 Hz. to 20,000 Hz.

Laser Diode Wavelength: 785 nm

Maximum Peak Radiant Power:

Superfine Applicator - 9.4 mW
Ultra-wide Applicator - 5.8 mW

Treatment Duration:

Default setting is 15 minutes.
Time is also user selectable from 1 to 60 minutes.

Warranty: 90 days on battery pack
1 year parts and labour on rest of electronic systems
Optional service contract available after original warranty expires.

Manufacturer:

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