

Source Four<sup>®</sup> **PAR**



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## CE User Manual

Production Dates: September 2004 - Present

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## Declaration of conformity



We, Electronic Theatre Controls, Europe Ltd., declare under sole responsibility that the product:

Product name: Source Four PAR luminaries  
 Product type/model: Source Four PAR-EA, PARNeI  
 Lot: n/a  
 Batch/Serial number: n/a  
 Item numbers: one of each model

to which this declaration relates in conformity with the following standards:

EN60598-1:2000 Luminaires, General requirements and tests  
 EN60598-2-17:1990 Specification for luminaires for stage lighting, television, film, and photographic studios (outside and indoor) - equiv. BS 4533-102.17:1990

following the provisions of EU LV Directive(s) 73/23/EEC

London, United Kingdom

(Place of issue)

22<sup>nd</sup> Jan 1997

(Date of issue)

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## Source Four PAR CE guidelines

The Source Four PAR CE is intended for professional use only. **Read the entire User Guide before using equipment.**

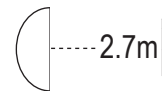
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**WARNING:** *Please note the following safety precautions.*

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- Do not mount the Source Four PAR CE on or near a flammable surface.
- Use the Source Four PAR CE in dry locations only, where humidity does not exceed 90 percent.
- The luminaire is for indoor use only and is not intended for outdoor use.
- For temporary installations, mount and support the Source Four PAR CE only by the primary suspension yoke holes. Suspend the luminaire from a hook clamp or a stand mount, using a securely tightened steel bolt (up to Ø 12 mm), flat washer and locking washer.
- In addition to primary suspension, attach a safety cable (ETC part #7060A1022) or chain to the secondary suspension point on the Source Four PAR CE.
- If the external cable is damaged, it shall be replaced by ETC or our service agents.
- Always hang the Source Four PAR CE with the colour frame held securely behind the retaining clip.
- Always replace the lamp if it becomes damaged or thermally deformed.
- Disconnect the unit from power before all cleaning and maintenance.
- The Source Four PAR CE is suitable for indoor use with a maximum ambient temperature:  $T_a=45^{\circ}\text{C}$
- Maximum exterior surface temperature:  $T_{\text{max}}=242^{\circ}\text{C}$
- A multilingual label sheet is included with this manual. Affix the label of the appropriate language over the existing warning label on the extension yoke. Do not cover ETC trademark or CE mark.
- The Source Four PAR CE contains a CE safety screen that covers the lens to prevent injury from broken glass due to lamp failure. Do not remove the safety screen.
- Keep the luminaire at least 2.7 meters away from any lit surface. Lighted objects at this distance or greater will not exceed 90°C temperature from projected light.



## Basic Assembly

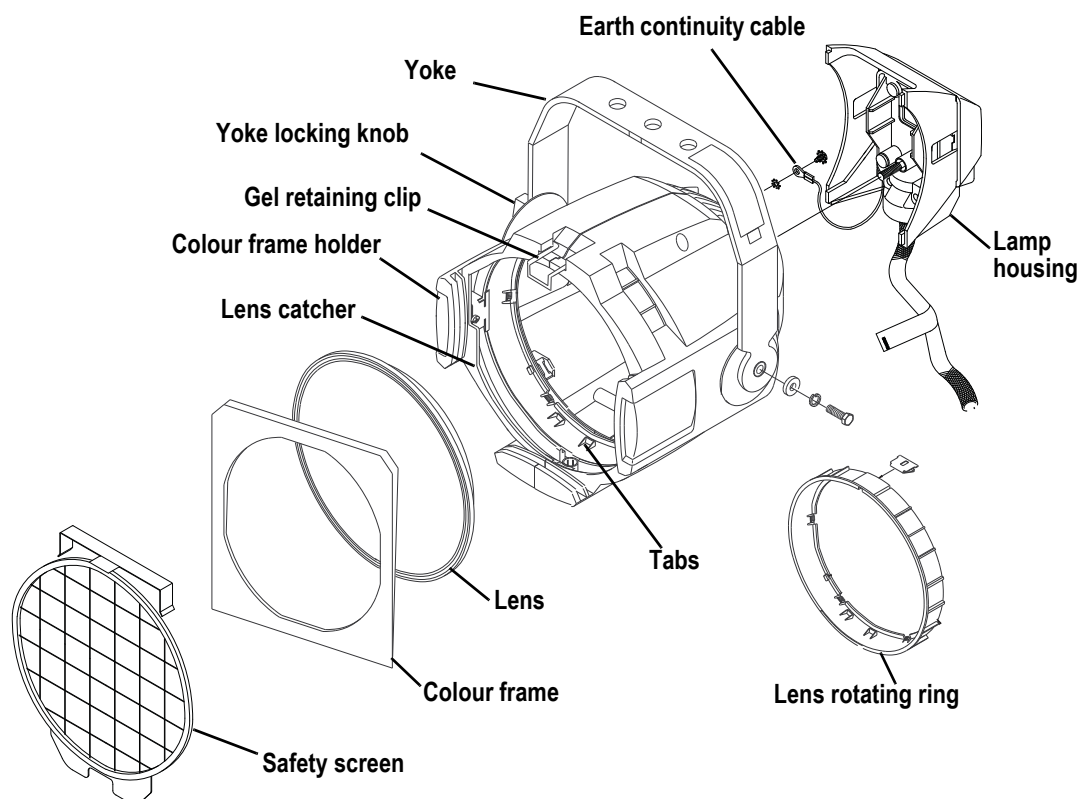


Figure 1



**WARNING:** *Please note the following safety warnings before use:  
Do not mount the luminaire on or near combustible surfaces.  
Do not operate the luminaire without a lens installed.  
Always hang the luminaire with the color frame retaining clip in the locked position.*

## Luminaire information

### Wiring and power information

A plug of at least 2.5 amp (220/240V) rating should be attached to the luminaire's mains lead. The wires in the mains lead are 1.55mm<sup>2</sup> each and coloured in accordance with the following code:

Green and Yellow: Earth

Blue: Neutral

Brown: Live



**WARNING:** *This luminaire must be earthed.*

Current rating: 240V/2.5 amp maximum

Operating frequency: 50/60 Hz

HPL lamp table



**WARNING:** Do not use lamps other than the HPL in Source Four PAR CE luminaries. Use of lamps other than HPL will void your warranty.

Lamp code	Watts	Volts	Initial Lumen	Colour temp.	Average rated life
HPL 750/230	750	230	19,750	3,200°K	300 hours
HPL 750/230X	750	230	15,600	3,050°K	1500 hours
HPL 575/230	575	230	14,900	3,200°K	400 hours
HPL 575/230X	575	230	11,780	3,050°K	1500 hours
HPL 375/230	375	230	7,250	3,000°K	1000 hours
HPL 750/2240	750	240	19,750	3,200°K	300 hours
HPL 750/240X	750	240	15,600	3,050°K	1500 hours
HPL 575/240	575	240	14,900	3,050°K	400 hours
HPL 575/240X	575	240	11,780	3,050°K	1500 hours
HPL 375/240X	375	240	19,750	3,000°K	1000 hours

Colour frame holder

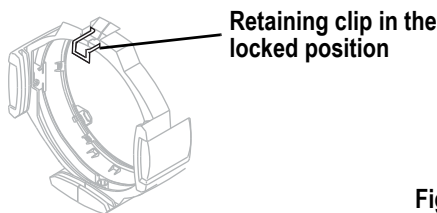


Figure 2

The colour frame holder is equipped with a spring-loaded retaining clip that prevents colour frames and accessories from falling out. See [Figure 2](#).



**WARNING:** Make sure all colour frame accessories are locked in position with the retaining clip before hanging the Source Four PAR CE.

- Step 1: Release the retaining clip by pushing it sideways while gently pulling backwards.
- Step 2: Insert the colour frame.
- Step 3: Lock the retaining clip by pushing sideways while gently pushing forward.



**Note:** The performance of saturated colours may be less than desirable in any theatrical lighting luminaire, especially when equipped with a 750w lamp. For best results, always use high-quality colour media rated for high-temperature use.

ETC's Conical Gel Extender, part # PSF1029, will provide maximum colour media life. The use of any gel extender accessory may limit the coverage of any wide-angle lens or beam setting.

A variety of heat shield products is also available from many colour media manufacturers. Follow the manufacturer's instructions for the use of these products.

## Replacing the HPL lamp

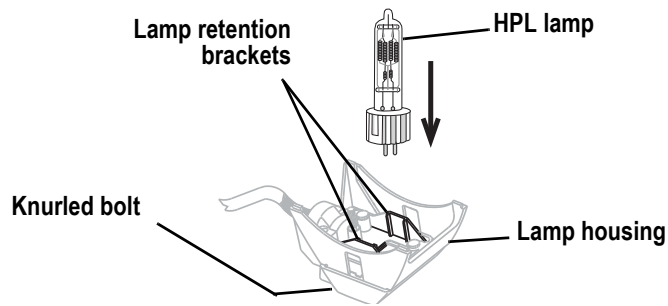


Figure 3

A lamp must be installed before you use the luminaire.



**Note:** Verify that the HPL lamp you intend to install is suitable for your facility's voltage; 115-, 120-, 230-, and 240-volt HPL lamps are available. See [HPL lamp table, page 4](#). Operating HPL lamps above their rated voltage reduces lamp life and can cause premature lamp failure.



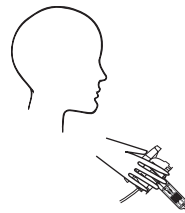
**WARNING:** Let the lamp cool before replacing.

- Step 1: Disconnect power to the Source Four PAR CE before installing the lamp.
- Step 2: Loosen the knurled bolt on the back of the lamp housing, disconnect the Earth continuity cable and pull the housing out.
- Step 3: Holding by the base, remove the HPL lamp from its box.



**CAUTION:** Use caution when installing or replacing any lamp. When installing/replacing lamp, be sure to point the lamp away from your face and away from others before inserting it firmly into the assembly. This may prevent injuries if the lamp should break.

INCORRECT



CORRECT



**Note:** To avoid premature lamp failure, do not touch the lamp glass. If you do, clean it carefully with isopropyl alcohol and a clean lint-free cloth. Allow to dry before operation.

- Step 4: Align the flat sides of the lamp base with the retention brackets on either side of the socket as shown in [Figure 3](#).
- Step 5: Push down on the lamp base until the lamp seats firmly. When properly installed, the top of the lamp's base will be even with the top edges of the retention brackets.



**CAUTION:** Improperly installed lamps cause premature lamp failure and socket problems.

- Step 6: Press lamp retaining clip across lamp base to secure.

Step 7: Reinstall the Earth continuity cable, then install the lamp housing by aligning the bolt hole and tightening the knurled bolt.

## Lens identification

Lenses for the Source Four PAR come in four versions. The type, or beam spread, can be identified by the lens texture.

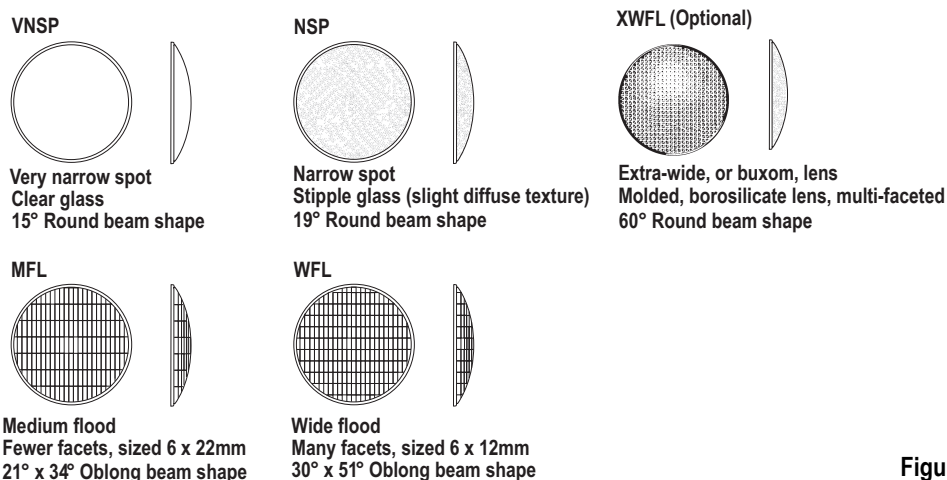


Figure 6

## Changing a lens

Change lenses if they become cracked or badly scratched.



**CAUTION:** *Never operate the luminaire without a lens in place.*



**WARNING:** *Unplug the luminaire and allow it to cool down before attempting to change a lens.*

### Removing a lens

- Step 1: Place the luminaire on a flat, stable work surface. **Do Not** remove or install lenses with luminaire hanging.
- Step 2: Position the lens rotation ring with the spring clip at the top of the unit, directly below the gel retaining clip. See [Figure 1](#).
- Step 3: Tilt the front of the luminaire down at least 45°. See [Figure 7](#).
- Step 4: Press the spring clip with your finger to release the lens.
- Step 5: Allow the lens to drop forward from under the clip.
- Step 6: When the lens drops, remove your finger, allowing the lens to slide forward until it rests on the lens catchers. See [Figure 8](#).
- Step 7: Carefully remove the lens.

### Installing a lens

- Step 1: Position the luminaire with the front of the unit (lens side) facing you, and tilted slightly upward. See [Figure 9](#).

Step 2: Hold the lens by the edge and position it so the convex side faces the rear of the luminaire.



**Note:** *Installing the lens with the convex side out will not impair the optics, but it will make removing the lens difficult.*

Step 3: From the top of the luminaire, slide the lens behind the lens catchers and position it behind the tabs on the bottom of the lens rotator ring.

Step 4: Gently push the top of the lens inward until it snaps behind the spring clip.

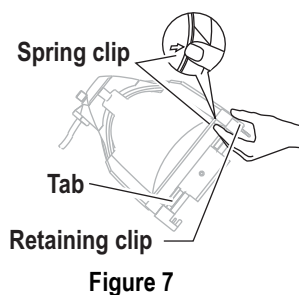


Figure 7

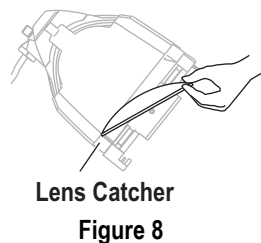


Figure 8

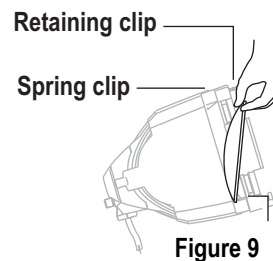


Figure 9

## Cleaning lens and reflector



**WARNING:** *Do not use ammonia-based or other harsh commercial cleaners. Clean lens and reflector only as directed.*

*Commercially available glass cleaning agents should be avoided as they may contain ammonia, other harsh chemical detergents or abrasive agents. These cleaners may damage the glass surface and the Anti-Reflective coatings. Do not immerse or soak the glass in any cleaning solution.*

### Cleaning glass lens

Replace lenses if they contain visible damage (cracks or deep scratches) that may impair their effectiveness.

Remove dust with a blast of oil-free air or wipe with a clean, lint-free cloth. Isopropyl alcohol, distilled water or a 50%-50% mixture of each can be used to clean the glass surface.

### Cleaning the reflector



**WARNING:** *Unplug the luminaire before attempting to clean the reflector.*

To quickly clean the reflector, remove the lens (see [Removing a lens, page 6](#)) and clean the dust from the reflector with a blast of oil-free air. You may also wipe the reflector with a clean lint-free cloth. If either method is not sufficient, follow these steps.

Step 1: To protect the lamp housing during cleaning, remove the lamp housing by loosening the knurled bolt and pulling the housing straight out. See [Figure 3](#).

Step 2: Remove dust with a blast of oil-free air or wipe with a clean, lint-free cloth. Isopropyl alcohol, distilled water or a 50%-50% mixture of each can be used to clean the glass surface.

Step 3: Gently wipe the reflector.

Step 4: Perform the steps in [Installing a lens, page 6](#).

Step 5: Reinstall the lamp housing and tighten the knurled bolt.

## Portable appliance test (PAT)

The Portable Appliance Test is a set of tests that must be administered to electrical equipment in the UK and some locations in Europe to ensure safety. The tests are typically carried out using a small PAT device. The PAT device connects to a power source and then attaches to the product via an electrical outlet and test probes. The PAT provides a simple pass or fail result, allowing rapid testing of large inventories.

Source Four PAR CE luminaires include a specific PAT point where the test clip is attached, as shown in [Figure 10](#). PAT tests should be performed by a qualified technician. Your local regulatory authority has guidelines on the testing frequency.

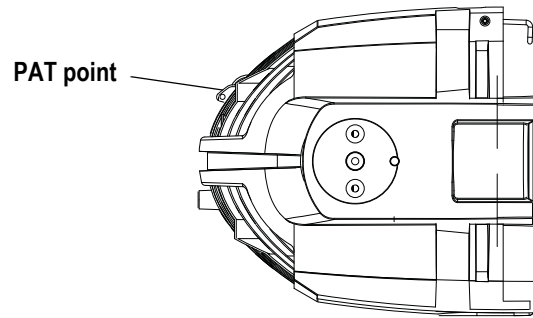


Figure 10





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