







Technical Support Guide

Introduction

This guide is designed to help support users of the Focus cage lighting system in the event of problems during operation. The initial fault-finding activities below are intended to help users identify and describe problems for more effective remote support from the manufacturer.

WARNINGS

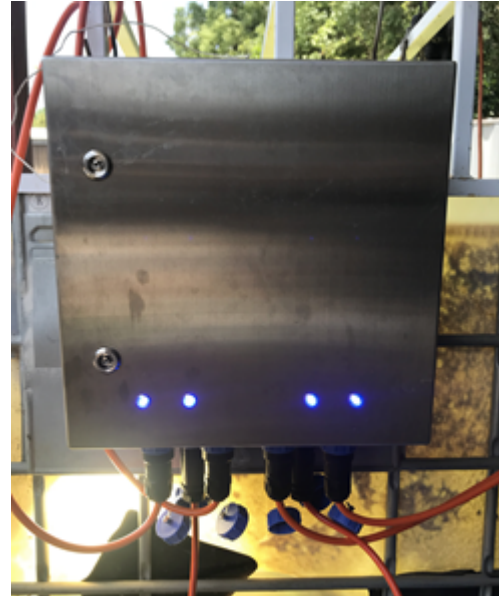
	WARNING	AUTHORISED SERVICE PERSONNEL ONLY. Only Authorised Persons should carry out maintenance on Planet Lighting products. For your safety, always follow your workplace policy or procedure or contact a supervisor if you are unsure.
	WARNING	POWER OFF IMMEDIATELY IF SIGNS OF DAMAGE. If equipment is suspected damaged by machinery or force, users should take steps to ensure the system is completely powered OFF before commencing salvage, fault finding or repair actions.
	DANGER	RISK OF ELECTRIC SHOCK. DO NOT open cabinet. Cabinet access by Authorised Service Personnel such as a qualified and approved electrician or electrical engineer ONLY.
	DANGER	RISK OF FIRE OR ELECTRIC SHOCK. DO NOT 'Hot swap' lights. Ensure the Focus cabinet is completely powered OFF before SWAPPING Focus lights or investigating connection issues. If you are concerned about startling fish, please contact your manufacturer or supplier or fill out the Technical Support Form.
	DANGER	DO NOT RUN LIGHTS OUT-OF-WATER The Focus sea cage light is a high power underwater lighting product which cannot cool properly when operated out-of-water. Operation out-of-water may lead to PERMANENT INJURY or FIRE. DO NOT operate the Focus sea cage light out-of-water under any circumstances. Operation out-of-water can damage the product and void warranty.
	DANGER	RISK OF PERMANENT EYE DAMAGE. Do not look at Light. Lights should be operated under water only.

Normal operation description

When mains power is delivered to the Focus cabinet, the Power Indicator Lights (located on the cabinet door) will turn BLUE to show connected Focus lights. When Focus lights are connected to all 4 outputs and suspended in water, all 4 indicator lights should illuminate and the lights should begin their 30-minute ramp-up from 10% to 100% brightness.

After completing the 30-minute ramp Focus lights will remain ON at 100% until power is turned off.

Note: Power indicator lights may be green on older models and may be located under the cabinet door.



Signs of Abnormal operation

A door indicator light and/or corresponding Focus light:

- (a) Does not turn ON.
- (b) Turns ON but does not remain on (turns OFF again).

Possible Cause:

It is likely there is a problem with a Focus light or connection. (See Table A: FOCUS LIGHT OR CONNECTION INSPECTION)

Action:

Refer to the Isolation Test Procedure on page 3 to try to identify if the issue it is caused by:

- (a) Focus light (including cabling), or
- (b) Focus cabinet



Above: A Focus cabinet power indicator light (right) remains OFF indicating abnormal operation.



DANGER: RISK OF ELECTRIC SHOCK.



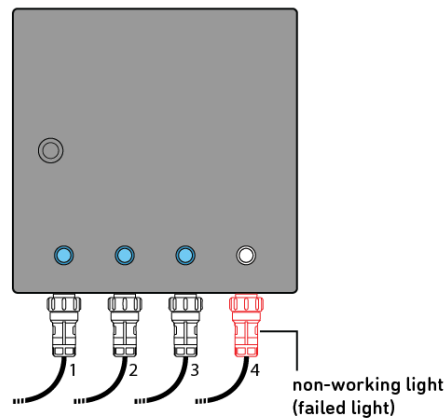
WARNING: DO NOT OPEN CABINET. AUTHORISED SERVICE PERSONEL ONLY.

Isolation Test Procedure

Performing an Isolation Test

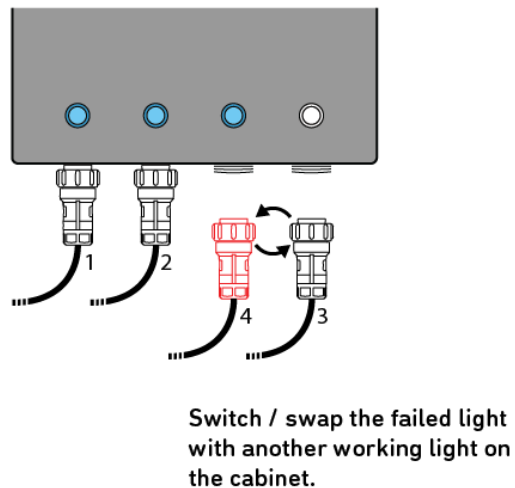
The following isolation test will help determine if your issue is caused by a Focus light (including cabling) or a Focus Cabinet.

The isolation test can be done on site and helps with an accurate diagnosis of the problem. Your test results will help your supplier to resolve your issue more efficiently and effectively.



Test Method

With the Power OFF, SWAP the failed light with a known working light from another socket on the same cabinet.



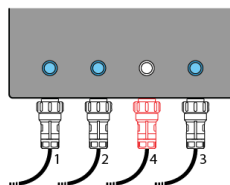
Test Result

Does the **original failed** light now work properly in the new socket?

If no, this Focus light (or its cabling) is faulty (RESULT 1).

If yes, there may be an issue with the cabinet or cabinet socket connection (RESULT 2).

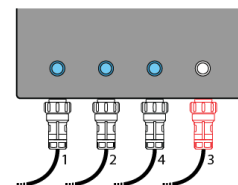
AFTER (RESULT 1)



FAULTY FOCUS LIGHT



AFTER (RESULT 2)

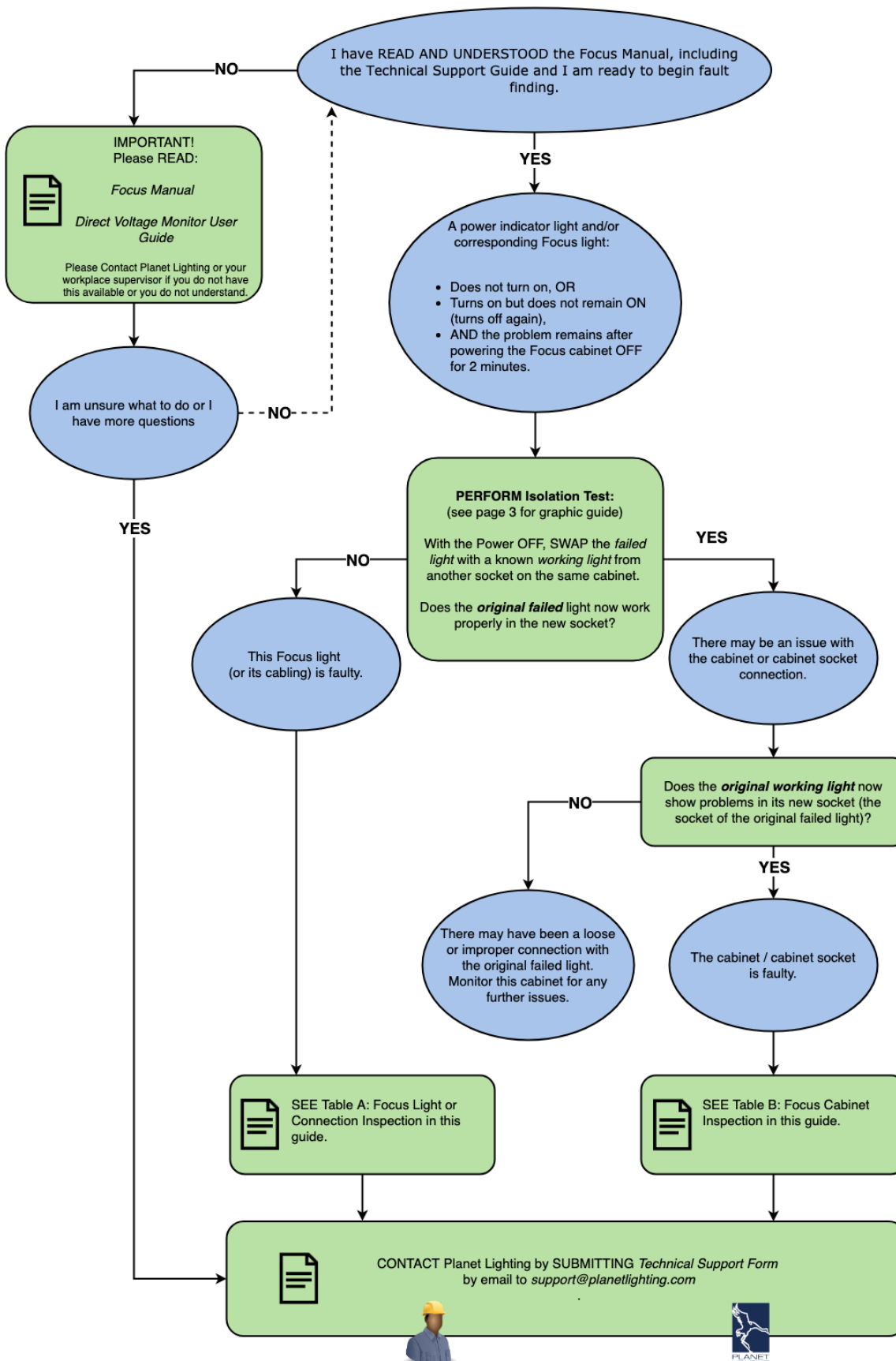


FAULTY FOCUS CABINET



Fault Finding Process

START HERE





WARNING: MAKE SURE THE LIGHT IS OFF AND DISCONNECTED FROM POWER BEFORE YOU INSPECT IT FOR FAULTS.



DANGER: RISK OF FIRE OR ELECTRIC SHOCK. DO NOT 'Hot swap' lights. Ensure the Focus cabinet is completely powered OFF before SWAPPING Focus lights or investigating connection issues. If you are concerned about startling fish, please contact your manufacturer or supplier or fill out the Technical Support Form.



WARNING: DO NOT OPEN FOCUS CABINET. AUTHORISED SERVICE PERSONEL ONLY. This guide describes basic external inspection actions which may assist remote product support. Make sure the cabinet is OFF and disconnected from power during your inspection. Fault finding or repair actions for cabinets and cabinet connections require authorised service personnel specifically a licensed electrical installer. In the event a cabinet is faulty, the manufacturer can provide remote support to your installer. Please advise your installer of the fault. Please also provide your installer's contact details on the Technical Support Form and advise them that the manufacturer will contact them to provide remote support for authorised service personnel.

TABLE A: FOCUS LIGHT OR CONNECTION INSPECTION







Possible Cause	Inspect	Action
Focus light connector (on the light) is not fitted properly or is damaged or burned.	Check that connector is fitted properly and there are no signs of damage.	If damage found: Fill out <i>Technical Support Form</i> and contact Planet Lighting <i>! Remember to check the box in your Technical Support Form:</i> <input checked="" type="checkbox"/> connector  Authorised electrical installer ONLY: Replace with new connector.
Cable is damaged.	Check for signs of cable damage (cuts, abraded stretched or burned).	If damage found: Fill out <i>Technical Support Form</i> and contact Planet Lighting <i>! Remember to check the box in your Technical Support Form:</i> <input checked="" type="checkbox"/> cable  Authorised electrical installer ONLY: Replace with new cable.

TABLE A (continued): FOCUS LIGHT OR CONNECTION INSPECTION

<p>Cable gland failure ONLY.</p> <p>! Does NOT include failure from water ingress into the Focus light.</p>	<p>Check for cracks, damage or loose fit of cable gland where the cable enters the body of the light.</p>	<p>If damage found: Fill out <i>Technical Support Form</i> and contact Planet Lighting</p> <p><i>! Remember to check the box in your Technical Support Form:</i></p> <p><input checked="" type="checkbox"/> cable gland</p> <p> Authorised electrical installer ONLY: Replace with new cable part (gland included). ONLY attempt if there is NO water ingress into the light itself. Replacing cable/gland part of a light with water ingress will void warranty.</p>
<p>Water ingress into the light, broken lens.</p> <p>! Note, a small amount of condensation in the lens is normal.</p>	<p>Check for signs of water ingress into the light or a broken lens.</p>	<p>If water ingress found: Fill out <i>Technical Support Form</i> and contact Planet Lighting</p> <p><i>! Remember to check the box in your Technical Support Form:</i></p> <p><input checked="" type="checkbox"/> water</p> <p> Authorised electrical installer ONLY: Replace with new Focus light.</p>
<p>LEDs burned or damaged (Yellow circular area behind lens discoloured/cracked) Light may have been run out-of-water.</p>	<p>Check for signs of burned or damaged LEDs.</p>	<p>If damage found: Fill out <i>Technical Support Form</i> and contact Planet Lighting</p> <p><i>! Remember to check the box in your Technical Support Form:</i></p> <p><input checked="" type="checkbox"/> LEDs</p> <p> Authorised electrical installer ONLY: Replace with new Focus light.</p>
<p>Acetal suspension rod melted out of the light. Light has been run out-of-water.</p>	<p>Check for signs of melted suspension rod.</p>	<p>If damage found: Fill out <i>Technical Support Form</i> and contact Planet Lighting</p> <p><i>! Remember to check the box in your Technical Support Form:</i></p> <p><input checked="" type="checkbox"/> acetal</p> <p> Authorised electrical installer ONLY: Replace with new Focus light.</p>



WARNING: DO NOT OPEN FOCUS CABINET. AUTHORISED SERVICE PERSONEL ONLY.

This guide describes basic external inspection actions which may assist remote product support. Make sure the cabinet is OFF and disconnected from power during your inspection.

Fault finding or repair actions for cabinets require authorised service personnel specifically a licensed electrical installer. In the event a cabinet is faulty, the manufacturer can provide remote support to your installer. Please advise your installer of the fault. Please also provide your installer's contact details on the *Technical Support Form* and advise them that the manufacturer will contact them to provide remote support for authorised service personnel.

TABLE B: FOCUS CABINET INSPECTION

Possible Cause	Inspect	Action
<ul style="list-style-type: none">Faulty light connector	Inspect socket underneath cabinet for signs of damage or heat.	If damage found: Fill out <i>Technical Support Form</i> and contact Planet Lighting. Contact your authorised electrical installer for cabinet repair / replacement. <i>! Remember to check the box in your Technical Support Form:</i> <input checked="" type="checkbox"/> light connector
<ul style="list-style-type: none">Circuit breaker trip	It is assumed that your Focus lighting installation has operational circuit breaker protection. If the circuit breaker for the lighting circuit tripped, please advise in your support request	If the breakers tripped during operation of the product, power the circuit off and contact your authorised electrical installer. <i>! Remember to check the box in your Technical Support Form:</i> <input checked="" type="checkbox"/> breaker trip
<ul style="list-style-type: none">Improper mounting of the cabinet	Inspect the cabinet and ensure it is secure on the cage on a correctly fitted mounting bracket. Does not apply if the cabinet has been removed from the site.	Install the cabinet as shown on the drawing supplied with the bracket.

END OF GUIDE