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Elinchrom ONE / THREE

Service Manual



Elinchrom ONE (20930.1)

Elinchrom THREE (20940.1)



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1. SAFETY NOTICE



The interior of the Elinchrom devices contain components carrying dangerous levels of electric charge, even though the unit has been disconnected from the mains or without supply battery. **Before all servicing operations or repairs, you must execute the following Discharge Process**

2. DISCHARGE PROCESS

Elinchrom ONE / THREE – Discharge Process before servicing

1. Remove USB-C cable
2. Power Off the unit



Carefully remove the Product Label by the corner. (Img. 3) Try to keep the product label for the reassembling. If the label is damaged during this operation, replace it by a new label 301.376 (ONE) or 301.343 (THREE)



Img. 3

3. Carefully remove the Rubber Pad. (Img. 4) Try to keep the rubber pad for the reassembling, if the pad is damaged or loose the adhesive layer during this operation, replace it by a new rubber pad 291.009



Img. 4

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Use insulated gloves from now until the end of this Discharge Process

4. Opening the housing left side

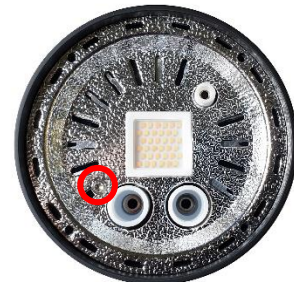
- a) Remove the 4 screws on the Housing Left (*Img. 5a*)
- b) Remove the 4 screws of the Glass Dome (*Img. 5b*) and remove the Flashtube with the Trigger Fork
- c) Remove the screw on the Inner Dish (*Img. 5c*)
- d) Remove the 6 screws of the Front Ring (*Img. 5d*)
- e) Remove the Front Ring and the LED Silicon Ring (*Img. 5e*)



Img. 5a



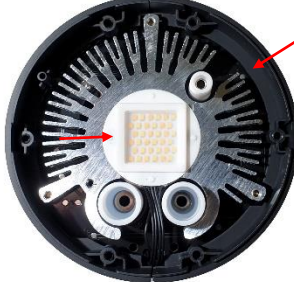
Img. 5b



Img. 5c



Img. 5d



Img. 5e

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- f) Spread the housing left side slightly and insert a flat screwdriver (size 4) between the right shell and the metal base of the housing (*Img. 5f*)
Rotate the screwdriver to unlock the housing left side (*Img. 5g*)



Img. 5f



Img. 5g

- g) Open the housing by pulling the left housing side. (*Img. 5h*)



Img. 5h

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5. Disconnect the internal battery connector (Img. 6)



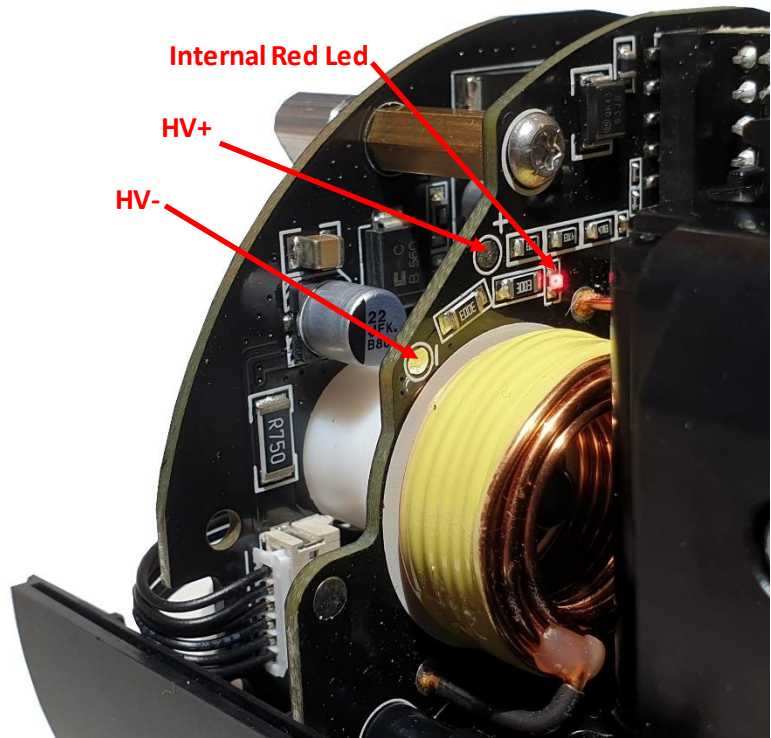
Img. 6



6. Discharging

On the Flash board, check that the voltage between HV+ and HV- (Img. 7) is lower than 50VDC, if higher then use a Security box (110.305 or 110.310) to discharge the HV voltage below 50 VDC.

Note that the internal red led on the Flash Board will shut down when the HV voltage is safe for servicing.



Img. 7

7. Unit discharged

Now you can repairing and servicing safely.

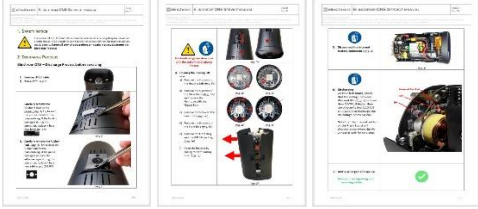


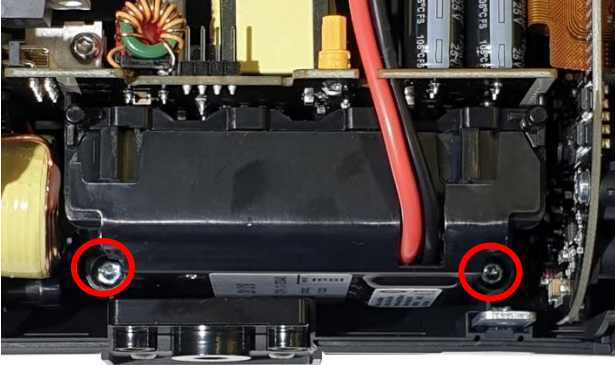




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3. BATTERY REPLACEMENT

Elinchrom ONE – Battery Replacement Process

<p>1. Apply the complete Elinchrom ONE/THREE Discharge Process (<i>Service Manual, chapter 2</i>)</p>	
<p>2. Remove the Elinchrom ONE/THREE Logo Board 291.013 (<i>Img. 8</i>)</p> 	 <p style="text-align: center;"><i>Img. 8</i></p>
<p>3. Remove the 2 screws on the Battery housing (<i>Img. 9</i>)</p>	 <p style="text-align: center;"><i>Img. 9</i></p>
<p>4. Battery replacement Now you can replace the internal battery 291.019</p>	
<p> ot powered-on the Elinchrom ONE/THREE before closing the housing and reassembling the complete unit.</p>	

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4. SPARE PARTS

All available spare parts are visible in our web shop in the Elinchrom Distributors Center.

www.elinchrom.com/agent

Select **Webshop > Order > Spare Parts > Off Camera Flash > 20930 – Elinchrom ONE or 20940 – Elinchrom THREE**

The screenshot displays the Elinchrom Distributors Center web interface. On the left is a navigation menu with categories like 'Units & Sets', 'Spare Parts', and 'Promotions'. The main area shows a list of spare parts for the 'Elinchrom ONE' camera flash. Each item includes a small image, a reference number, a description, the price in EUR, and the quantity available. The items listed include the main unit, diffuser dome, glass dome, retaining ring, flash tube, tripod fork, inner dial, screws, housing left and right, hook, product label, logo guide, housing base, rubber pad, metal bracket, front ring, and power board.


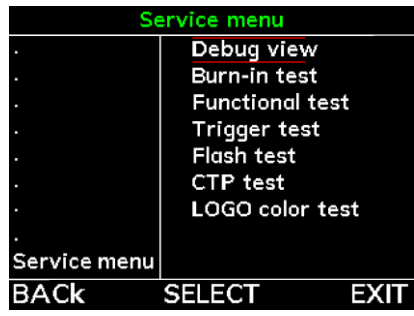
Ref. #	Description	EUR	Min. Qty	Order
20930	Elinchrom ONE Unit with Glass Dome 25111, Diffuser Dome 25110 and Trip Bracket 291.020. Without Charger and USB cable (100x x 110x)	1PCE	1	1
25110	Elinchrom OCF Diffuser Dome	1PCE	1	1
25111	Elinchrom ONE Glass Dome	1PCE	1	1
291.002	Glass Dome Retaining Ring ONE	10PCE	10	10
24091	Elinchrom Flashtube 125 J (see replacement instructions in the Elinchrom ONE User Manual)	1PCE	1	1
270.042	Tripod Fork	10PCE	10	10
291.003	Elinchrom ONE Inner Dial	5PCE	5	5
211.819	Screw pan head Zulf KA30x6 Screws for Glass Dome Retaining Ring and Front Ring	100PCE	100	100
211.130	Screw cross head 6.3x6x M3x5 Screws for Inner Dial	100PCE	100	100
291.004	Elinchrom ONE Housing Left	1PCE	1	1
291.005	Elinchrom ONE Housing Right	1PCE	1	1
291.006	Elinchrom ONE Hook	1PCE	1	1
301.376	Elinchrom ONE Product Label	50PCE	50	50
291.007	Elinchrom ONE Logo Light Guide	10PCE	10	10
291.008	Elinchrom ONE Housing Base	1PCE	1	1
291.009	Elinchrom ONE Rubber Pad	10PCE	10	10
291.010	Elinchrom ONE Housing Metal Bracket	10PCE	10	10
291.011	Elinchrom ONE Front ring	5PCE	5	5
291.012	Elinchrom ONE Power Board	1PCE	1	1

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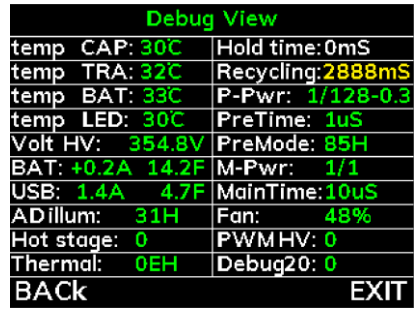
5. SERVICE MENU

5.1. Enter Service Menu

<p>When the unit is ON, press and hold at least 5 seconds the center knob and the Menu buttons</p>	
	

5.2. Menus overview

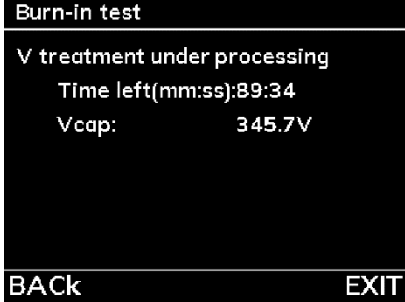
5.2.1. Debug view

<p>Select "Debug View" in the service menu</p>	
<p>Debug View monitors many states, temperatures and values of the unit</p>	

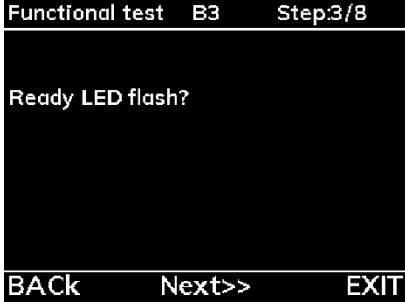
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5.2.2. Burn-in test

<p>Select "Burn-in test" in the service menu</p>	
<p>Burn-in test</p> <p>355V to 300V loops during 240 minutes <i>(since firmware version 1.1)</i></p>	

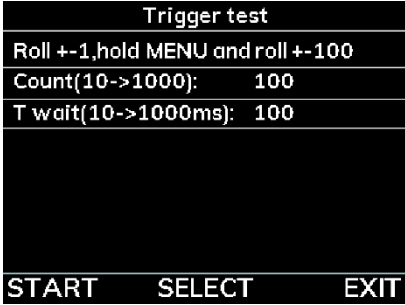
5.2.3. Functional tests

<p>Select "Functional test" in the service menu</p>	
<p>Functional tests</p> <p>Step 1/8 Dark Display [check pixels of the display] Step 2/8 Bright Display [check pixels of the display] Step 3/8 Ready LED flash [check ready led is flashing] Step 4/8 Power Button [Press Power button] Step 5/8 Menu Button [Press Menu button] Step 6/8 Photocell Triggering [Flash with another unit to trigger the photocell] Step 7/8 EF Triggering [Trigger with Skyport transmitter in Group ALL, F1, Speed mode] Step 8/8 Test Complete [Press any key to return]</p>	

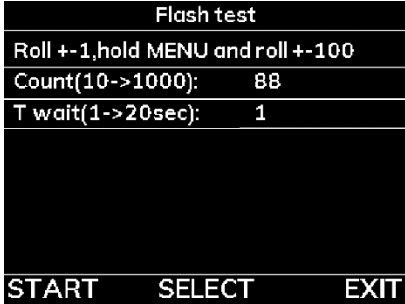
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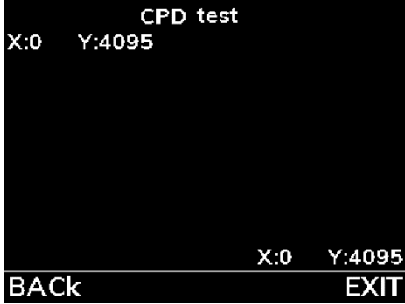
5.2.4. Trigger test

Select "Trigger test" in the service menu	
<p>Trigger test</p> <p>Count [Choose the number of flashes and press SELECT] Twait [Choose the time between flashes and press SELECT]</p> <p>To start the Trigger Test, push the Power button</p> <p><i>Note: During the Trigger test, the flash power is automatically set to minimum power.</i></p>	

5.2.5. Flash test

Select "Flash test" in the service menu	
<p>Flash test</p> <p>Count [Choose the number of flashes and press SELECT] Twait [Choose the time between flashes and press SELECT]</p> <p>To start the Flash Test, push the Power button</p> <p><i>Note: During the Flash test, the flash power is set on the last value before entering the Service menu.</i></p>	

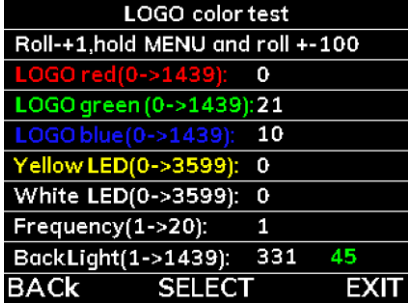
5.2.6. CTP Test

Select "CTP Test" in the service menu	
Touch screen test [Touch the display]	

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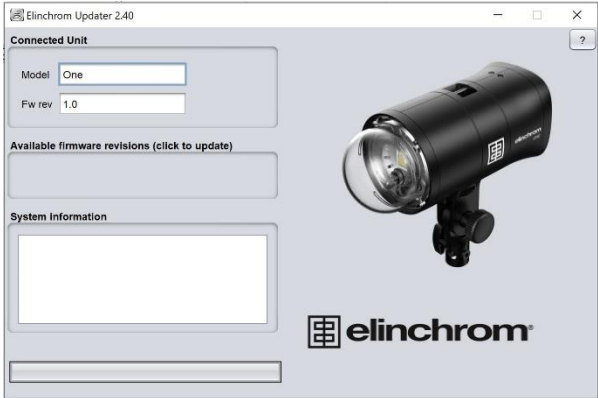
5.2.7. LOGO color test

Select "LOGO color Test" in the service menu	
LOGO color test [You may vary the value of the logo color LED]	

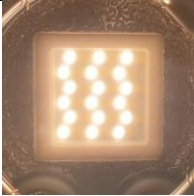
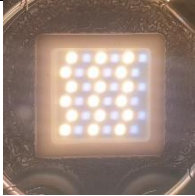
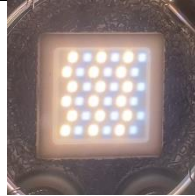



6. FIRMWARE

6.1. Firmware Update

Elinchrom ONE/THREE firmware update could be done with a USB-C cable and the EL-Skyport Updater software version 2.40 or newer version.

<p>Activate Firmware update mode</p> <ol style="list-style-type: none"> 1. Switch OFF the Elinchrom ONE/THREE 2. Plug the USB-C cable to the computer side 3. Press and Hold "Menu" and "Knob" buttons and plug the USB-C cable to the Elinchrom ONE <p><i>("USB Mode" is now displayed on the unit)</i></p> <ol style="list-style-type: none"> 4. Start the EL-Updater Software on your computer 5. Follow the instructions in the EL-Updater Software 	
--	--

7. MODELLING LED

2700 °K	3000 °K	3200 °K	5000 °K	5500 °K	6500°K
					
2700°K LEDs 100%					2700°K LEDs 0%
6500°K LEDs 0%					6500°K LEDs 100%

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8. REPAIR ASSISTANCE

8.1. Error management

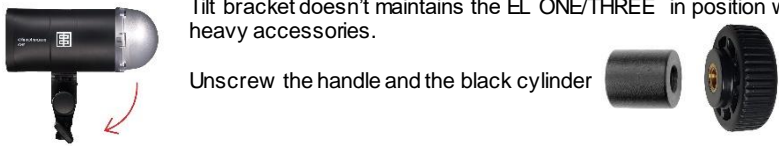


The following table describes the possible errors, which could be shown on the display if the unit micro controller detects them:

Error number	Description	Solution for user (User manual)	Notes	Solution for Service
1	Capacitor overvoltage	Switch the unit off, wait 2 minutes and switch the unit ON again. If the error shows up again, the unit requires a check-up at an authorized Elinchrom Service Centre.	Error 1 is triggered when the flash voltage (HV) is higher than 370 VDC	Elinchrom ONE : Replace Flash board 291.014 Elinchrom THREE : Replace the Flash board 291.033
4	Charge timeout			
6	Charge hold error			
8	Charge circuit error			Elinchrom ONE : Replace Flash board 291.014 Elinchrom THREE : Replace the Flash board 291.033
18	Discharge circuit error			
32	Head type unknown			
33	14VDC error			
-	"Voltage Treatment fail"	-	"Voltage Treatment fail" during Burn-in test (Service Menu)	Update the unit firmware and restart the Burn-in test

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8.2. Failures management

Failure Description	Solution for Service
Unit will not flash anymore. The white LED ring around the knob will blink randomly or keep off.	Read the Technical Note (TECH-NOTE-025) about the problem of the diode D43 on the Power Board 291.012
Overheat	Not a failure, but a protection. Could happen in hot temperature conditions. If it happens at normal temperature (20°C), check the monitored temperatures in the Debug View of the Service Menu. Here are the temperature limits : temp CAP 80°C, sensor on the Flash Board 291.014 (ONE) / 291.033 (THREE) temp TRA 99°C, sensor integrated in the transformer on the Power Board 291.012 temp BAT 68°C, sensor on the Power Board 291.012 temp LED 99°C, sensor integrated in the LED slab on the LED Board 291.016
Modelling LED colors problem	Replace LED Board 291.016
Battery don't keep the 100% charge	After a 100% charge, if the battery level falls down when you unplug the USB-C cable. The battery is too old, defective or unbalanced. Replace the internal Battery 291.019
Battery don't charge	Check or replace the Elinchrom 65W USB-C Wall charger 11052 or replace the Keyboard 291.015 (ONE) / 291.041 (THREE)
Tilt bracket doesn't maintain the Elinchrom ONE/THREE in position with heavy accessories	<p>Tilt bracket doesn't maintain the EL ONE/THREE in position with heavy accessories.</p> <p>Unscrew the handle and the black cylinder</p>  <p>Check the nut position in the tilt bracket. The distance between the top of the nut and the bracket has to be max 9 mm.</p>  <p>If this solution doesn't solve this clamping issue, try to replace also the handle by the 14495 handle :</p> 

9. KNOWN PROBLEMS

 All known problems have a corresponding Technical Note available in the online **Technical Centre**.