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Ranger Quadra Service manual



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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:**

DISCHARGE PROCESS OF THE UNIT BEFORE SERVICING

Note: The discharge process is best achieved with a suitable Elinchrom Security Box (discharging box)

Code numbers:

110.305 Security Box 230V

110.310 Security Box 110V

110.200 Adaptor EL

110.205 Adaptor Ranger RX

110.210 Adaptor Ranger Quadra

110.215 Adaptor Style RX

110.220 Set of hook type test probe clip

110.225 Multimeter cables



1. Set the device at minimum power

Note: One head must be connected to the device to activate the auto-discharge.



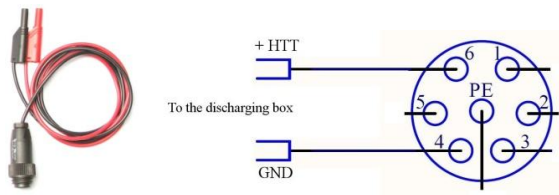
2. Switch off the unit, remove the head cables and the battery.



3. Discharge the UBAT voltage on the X100 and X101 connectors of the unit.



4. Discharge HHT A and HHT B of the outlet A and B by using the RQ discharge cable



Note: Always use the RQ discharge cable alone on the discharging box.



5. Remove the rubber and the housing of the unit.

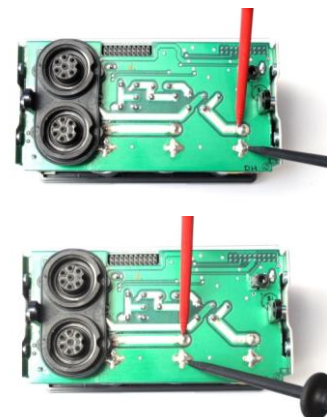
Note: do not touch the circuit boards until the end of this process



6. Remove the keyboard.



7. Discharge the HTD and HTD A on the following points: Across C404 and C405



8. Now you can disassembling, repairing and servicing safely.



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2. OPERATION INSTRUCTION

1. Connect the flash cable with the flash head and plug it to one of the outlets^{1,20}.
2. Push the main button¹⁷ to turn on the generator.
Note: If the display indicates nothing then control the fuse sideways on the battery or charge the battery.
3. Adjust the power by pressing the power setting buttons^{14,15}.
4. Trigger the flash with the manual flash release button¹³.
Note: This works only if the ready indication¹² is on.



Figure 1: Control panel

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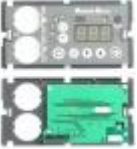
1. Outlet B
2. Ready Charge Beep
3. EL-Skyport Remote Control
4. Photocell functions
5. Setup Menu
6. Setup Sub Menu
7. Battery Charge Status
8. Display
9. Photocell
10. Synchronisation plug for 3.5 mm jack
11. Display in "Ws"
12. Ready Indication
13. Manual flash release
14. Power settings +
15. Power settings -
16. LED Pilotlight
17. ON /OFF
18. Auto-OFF
19. Slow Charge
20. Outlet A

Note: Please use the **Ranger Quadra User Manual** for more information about how to operate the device and its special functions.

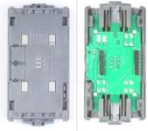
3. SPARE PARTS

The following spare parts list is only an overview.

This list is not updated and only the spare parts present in the Elinchrom Agent Web Shop are orderable and available.

	Item number	Description	Min. Qty	Package
	230.056.ADJ	POWER CONTROL BOARD RQ HYBRID (Adjusted)	1 PCE	1 PCE
	230.086	PCB ISOLATION POWER BOARD+SLICE ADHESIVE	1 PCE	1 PCE
	105.190	Diode UF5408 DO-201AP 3A/1000V	30 PCE	30 PCE
	107.026	BUZZER (F/UCW06) Buzzer on 230.056.ADJ	10 PCE	10 PCE
	225.070	Transformer Booster HE-MX/3028 TR301	5 PCE	5 PCE
	660.064.SAV	FLASH BOARD RANGER Q	1 PCE	1 PCE
	230.300	PCB SYNCHRO SOCKET JACK 3.5MM J403 on 660.064.SAV	5 PCE	5 PCE
	660.060.SAV	KEYBOARD FRONTAL PANEL RANGER Q Always set the correct unit type after replacing this	1 PCE	1 PCE
	660.161	BASE FRAME RQ HYBRID	1 PCE	1 PCE

	230.006	HOUSING RANGER Q HYBRID RX (Painted with serigraphy)	1 PCE	1 PCE
	230.020	RUBBER HOUSING RANGER Q	5 PCE	1 PCE
	230.075	PROTECTIVE CAP FOR OUTPUTS A & B	10 PCE	2 PCE
	660.065	SIDE FRAME RANGER Q	2 PCE	2 PCE
	660.062	FOAM BASE FRAME RANGER Q	100 PCE	100 PCE
	24000	FLASHTUBE A500 PLUG-IN	1 PCE	1 PCE
	24009	FLASHTUBE S500 PLUG-IN	1 PCE	1 PCE
	660.169.A.SAV	BODY HEAD A RQ HYBRID TESTED	1 PCE	1 PCE
	660.169.S.SAV	BODY HEAD S RQ HYBRID TESTED	1 PCE	1 PCE
	660.167.SAV	REFLEC INTERN A HEAD RQ HYBRID (Tested)	1 PCE	1 PCE
	660.168.SAV	RQ HYBRID S HEAD REFLECT ASS (Tested)	1 PCE	1 PCE

	230.160	CAR FUSES 20A/32V For all Ranger Quadra battery	25 PCE	25 PCE
	19295	BATTERY LI-ION COMPLETE RANGER Q Lithium-Ion battery	1 PCE	1 PCE
	660.166	RQ Li-Ion complete battery cover Lithium-Ion battery	1 PCE	1 PCE
	260.020	RQ Li-Ion Battery top plate Lithium-Ion battery	5 PCE	1 PCE
	19279	CHARGER LI-ION MULTIVOLTAGE Only for lithium-ion battery 19295	1 PCE	1 PCE
	11037	CHARGER LI-ON CAR CIGAR RANGER Q HYBRID Only for lithium-ion battery 19295	1 PCE	1 PCE
	19294	BATTERY BOX COMPLETE RANGER Q Lead battery	1 PCE	1 PCE
	230.151	BATTERY 12V/3.6AH RANGER Q+CLAMPING FOAM Only for lead battery 19294	1 PCE	1 PCE
	230.100	1/2 BATTERY HOUSING RANGER Q Only for lead battery 19294	2 PCE	2 PCE
	230.125	RUBBER BAT BOX RANGER Q Only for lead battery 19294	5 PCE	1 PCE
	660.066	BATTERY COVER RANGER Q Only for lead battery 19294	1 PCE	1 PCE

	230.105	BATTERY BOTTOM HOUSING RANGER Q Only for lead battery 19294	1 PCE	1 PCE
	19284	MULTIVOLTAGE CHARGER RANGER Q Only for lead battery 19294	1 PCE	1 PCE
	19285	ADAPTER CABLE CHARGER RANGER Q FOR 11093, 19293	1 PCE	1 PCE
	11093	CAR CHARGER RANGER/FREE-STYLE (With RQ Adapter 19285) Only for lead battery 19294	1 PCE	1 PCE
	225.040	AUS PLUG PRIMARY ADAPTER For Australia	1 PCE	1 PCE
	211.892	SCREW COUNTERSUNK HEAD 6 LOBE M3x6 ZgBl	100 PCE	100 PCE
	211.893	SCREW TRUSS HEAD 6 LOBE M3x10 BLACK	100 PCE	100 PCE
	211.819	SCREW PAN HEAD Zgbl KA30x8	100 PCE	100 PCE
	226.025	TRIGGER FORK	20 PCE	20 PCE
	230.261	LABEL RANGER HYBRID QUADRA A-HEAD	50 PCE	50 PCE
	230.271	LABEL RANGER HYBRID QUADRA S-HEAD	50 PCE	50 PCE

4. SERVICE MENU

4.1. How to operate in the Service menu

Action	Description	
Enter Service Menu	To enter the Service Menu you must switch on the device and then press the “Select” button for at least 2 seconds.	
Toggle	To toggle from the present sub menu to the next one push the “Menu” button.	
Change value	Use the “Power UP” and “Power DOWN” buttons to adjust the value.	 
Save settings	Push the “Flash” button to save all changed settings.	
Exit Service Menu ¹	Exit the Service Menu by pressing the “ON/OFF” button.	

4.2. Overview

Sub menu	Description	Display
Unit type	Sets the Unit type ² .	
Temperature ³	Shows the current measured temperature [°C] of the device.	
Charge delay	Sets the delay between the made flash and the start of the next charge. Default value = 0	
Plugmatic	Switches on/off the plugmatic, which lets the device gets ready, only when at least one flash head is connected to it. Default value = 1	
Plugmatic check ⁴	0 = no head connected 2 = only one head connected to B 1 = only one head connected to A 3 = two heads connected	

4.3. Software configurations

Display	Description	Power range
	Ranger Quadra AS	2.0 – 6.0
	Ranger Quadra AS RX	2.0 – 6.0
	Ranger Quadra Hybrid AS RX	2.0 – 6.0
	-	-

Note: Do always set the correct unit type after replacing the KBD board!

¹ The settings are not automatically saved by leaving the Service Menu.

² More details in Chapter [Software configurations](#).

Do not forget to set the correct unit type in the Service Menu after exchanging the KBD board!

³ **This sub menu is just an indication. It is not possible the make any settings.**

⁴ If the Plugmatic is disabled (), the Plugmatic check shows .

5. TROUBLE SHOOTING

Symptom (error description)	Diagnose (cause, additional checks)	Repair (actions to solve the problem)
Error E1 - overvoltage	Voltage control failed	Replace <i>Control board 230.056.ADJ</i>
Error E2 is displayed; device is locked and cannot be switched OFF	Over temperature occurred (only with firmware release r.1)	Remove battery to cancel the error. Replace <i>Front Panel 660.060.SAV</i> by one with a firmware r.2 or higher
Error E3 – Discharge error	Discharge circuit is faulty	Replace <i>Flash board 660.064.SAV</i> or/and <i>Control board 230.056.ADJ</i>
Error E4 – Charge error	Charging circuit is faulty.	Replace <i>Control board 230.056.ADJ</i>
Fuse burns (short circuit) by switching on the generator	Charging circuit is faulty.	Replace the <i>Control board 230.056.ADJ</i> and the fuse.
The generator is not charging, but the LEDs are ON and display is blinking	The charging circuit failed (ON/OFF relay is faulty)	See Technical-Note-001 Replace <i>Control board 230.056.ADJ</i>
Noise during charge or at high power	Flash capacitors failed	Replace <i>Flash board 660.064.SAV</i>
Triggering by sync cable fails sporadically	Intermittent contact on the sync socket	Replace the sync socket (<i>spare part in the kit 660.074</i>)
SkyPort does not work	Wrong communication parameters, check the user manual. Or faulty RF hardware	Replace <i>Front Panel 660.060.SAV</i>
Generator does not flash at low power	Booster voltage failed	Replace: <i>Control board 230.056.ADJ</i> or/and <i>Flash board 660.064.SAV</i>
Modelling LED always ON	Control ON/OFF fails	Replace <i>Flash board 660.064.SAV</i>
Modelling LED does not light	Driver board failed	Replace reflector assembly A-Head: <i>660.167.SAV</i> S-Head: <i>660.168.SAV</i>
Flash power decreasing does not work	discharge hardware failed	Replace <i>Flash board 660.064.SAV</i>

6. KNOWN PROBLEMS AND FAQ

For a complete up-to-date list with all known problems and its solutions please login on your online Elinchrom support account (<http://www.elinchrom.ch>). There you may also find a file for frequently asked questions.