

Service Manual

Manuel de service

STYLE 300 RX

600 RX

1200 RX



REMOTE RX



Schematic diagrams and part list

Schémas et liste des pièces

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Safety notice

IMPORTANT !

The interior of the generator or compact contain components carrying dangerous levels of electric charge, even though the unit has been disconnected from the mains.

ALWAYS TAKE THE FOLLOWING PRECAUTIONS:

1. Always disconnect it from the mains supply, and discharge the unit before (for generator) and after (for compact) removing the outer cover or housing. This is best achieved with a suitable discharge resistor (code 11931 for 230 V and (11930 for 120 V) fitted to a lamp head plug which may be inserted into a lamp head outlet for generator only. For compact connect the discharge resistor in the flash tube terminals.
2. Take care when opening a generator. Always start by connecting a voltmeter across the storage capacitors, as capacitor drainage may not have occurred due to a fault in the unit.

ACHTUNG GEFAHR !

Auch wenn der Generator vom Netz getrennt ist, können im Innern des Gerätes noch gefährliche elektrische Spannungen vorhanden sein.

ACHTUNG GEFAEHRliche HOCHSPANNUNG:

1. Bevor Sie ein Blitzgerät öffnen, entladen Sie zuerst die Kondensatoren mittels Entladewiderstand (Best, Nr. 11931 für 230 V)
2. Vorsicht beim Öffnen eines Blitzgerätes. Verbinden Sie sofort ein Voltmeter mit den Kondensatoren, denn diese könnten wegen eines anderen Fehlers nicht entladen sein.

ATTENTION DANGER !

Des tensions électriques dangereuses restent présentes, ceci même lorsque l'appareil est déconnecté du secteur.

PRUDENCE LORS DE L'OUVERTURE D'UN GENERATEUR OU COMPACT.

1. Déconnecter l'appareil du réseau et avant de procéder à son ouverture décharger le générateur au moyen du dispositif de décharge (code 11931 pour 230 V) et (11930 pour 120 V). Pour les compacts retirer la poignée et la chemise métallique ou les coques et procéder à la décharge en connectant le dispositif aux bornes du tube flash.
2. Commencer par vérifier la tension aux bornes des condensateurs. Leur drainage peut ne pas avoir eu lieu, la rupture d' un élément ou d' un conducteur peut en être la cause.

Operating instructions

1. Check that the unit voltage is correct
2. Check that the mains switch "3" is on "O" position.
3. Insert mains cable to the MAINS INLET "1" and connect to a FULLY EARTHED OUTLET
4. Connect the sync cord on the socket "6".
5. Using the main ON/OFF SWITCH "3" switch the unit "O" position.
6. Eventually fit the remote plug on socket "13"
7. Select the power with the push buttons "11" and "12"



Mise en service

1. S'assurer que l'alimentation secteur soit munie d'une mise à la terre et que la tension corresponde à celle indiquée sur l'étiquette signalétique qui est située sous l'appareil.
2. Vérifier que l'interrupteur "3" soit sur "O".
3. Brancher le cordon secteur livré sur la prise "1" et ensuite au réseau.
4. Raccorder un câble de synchronisation sur une des deux prises de synchronisation "6".
5. Enclencher l'appareil en basculant l'interrupteur "3" le mettre sur la position "I".
6. Raccorder éventuellement la télécommande sur la prise "13".
7. Choisir la puissance du flash en agissant sur les touches "11" et "12".

Inbetriebnahme

1. Überprüfen Sie, dass die Netzanschluss- Steckdose geerdet ist und die Netzspannung mit der des Blitzgerätes "1" übereinstimmt.
2. Der Schalter "3" muss auf AUS stehen.
3. Netzkabel am Gerät einstecken "1" und dann erst
4. SYNCHRO- Kabel anschließen an eine der zwei dafür vorgesehenen Buchsen "5"
5. Das Gerät mit dem Kippschalter "3" einschalten (EIN).
6. Eventuell zu verbinden Steckdose "13"
7. Die Blitzleistung kann mit den Tastern "11" und "12" eingestellt werden.

INDEX

1. Mains inlet socket
2. Mains fuse (slow blow)
3. Mains Illuminated on/off switch
4. Modelling fuse (fast blow)
5. Open-flash
6. Synchro-sockets, Amphenol + jack 3,5mm
7. Digital power display and charge/discharge indicator
8. Acoustic recharging signal (Beep)
9. Slave cell switch on/off
10. Photocell receptor
11. - Power adjustment in 1/10 f-stops, with ADF
12. + Power adjustment in 1/10 f-stops
13. Socket for remote or PC-Multi Link
14. Modelling lamp switch (on/off free or prop)
15. +Modelling power control
16. - Modelling power control
17. Level tilthead
18. Knurled clamp screw
19. Handle
20. Stand 5/8-inch socket
21. Umbrella tube (only for EL umbrellas, diameter 7mm)
22. Supplementary locking for others umbrellas

According to the safety regulation: We draw your attention to the fact that this equipment should be used only in a dry environment; it must be protected from dripping water and from extremely dusty conditions. The unit must ALWAYS be plugged into an EARTHED electrical socket.

Printed boards

Overview

Style 300 RX / 115V

Board	Code No.	Name	Description	Used on (compatible for)
PB1	14377	TBF	Trigger- booster board	300S / 600S (115V) 300RX / 600RX (115V)
PB2	14396RX 14373RX (Canada)	DMT	Modelling lamp dump board	300RX / 600RX (115V/BA15d) 300RX / 600RX (115V/E27)
PB3	14389RX	CAPA	Capacitor board	300RX (115V)
PB4	14433	CTRL	Control board	300RX / 600RX /1200RX
PB5	14432	KBD	Key board	300RX / 600RX /1200RX

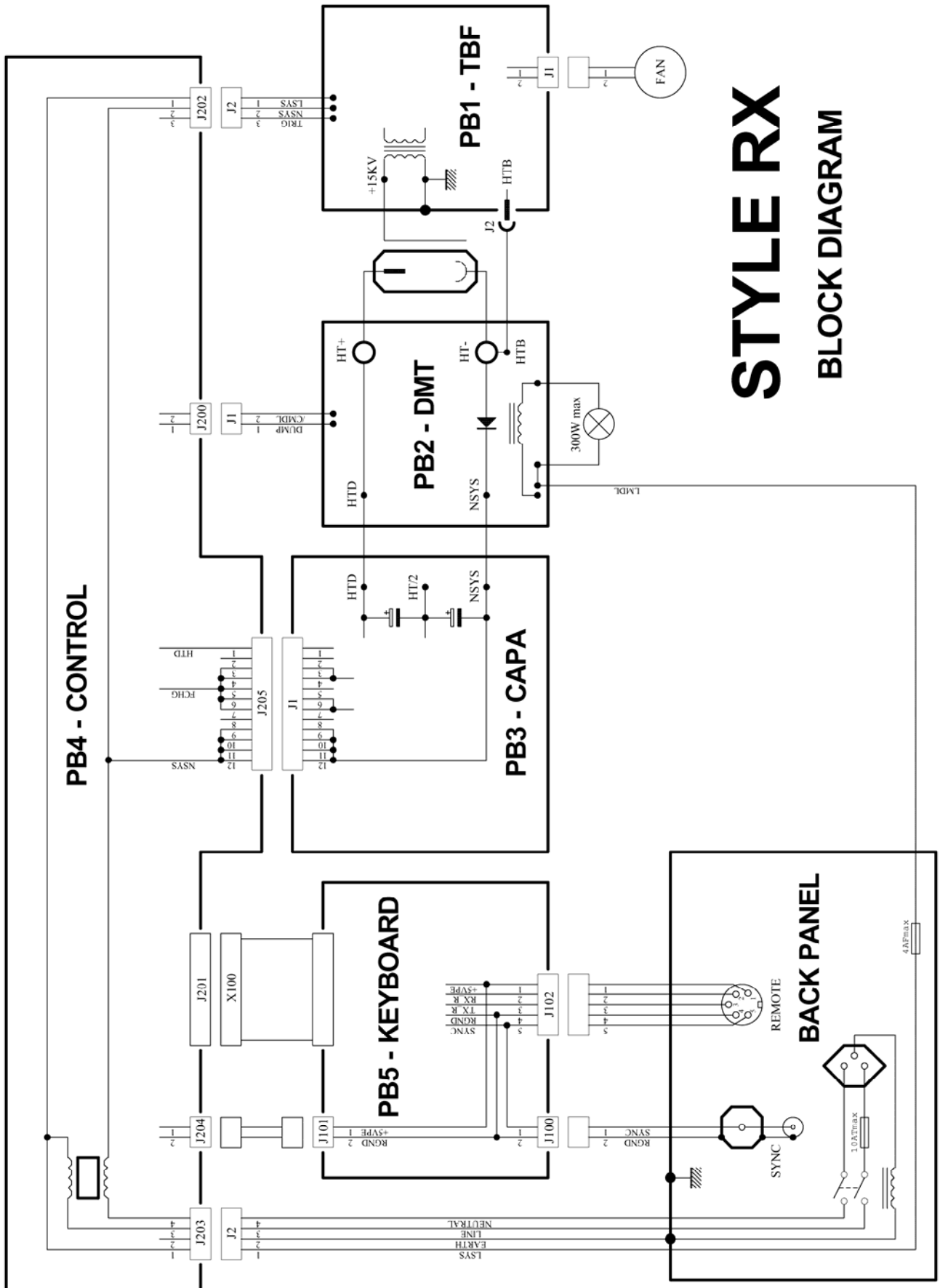
Style 600 RX / 115V

Board	Code No.	Name	Description	Used on (compatible for)
PB1	14377	TBF	Trigger- booster board	300S / 600S (115V) 300RX / 600RX (115V)
PB2	14396RX 14373RX (Canada)	DMT	Modelling lamp dump board	300RX / 600RX (115V/BA15d) 300RX / 600RX (115V/E27)
PB3	14389RX	CAPA	Capacitor board	300RX (115V)
PB4	14433	CTRL	Control board	300RX / 600RX /1200RX
PB5	14432	KBD	Key board	300RX / 600RX /1200RX

Style 1200 RX / 115V

Board	Code No.	Name	Description	Used on (compatible for)
PB1	14393	TBF	Trigger- booster board	1200RX (230V)
PB2	14397RX 14392RX (Canada)	DMT	Modelling lamp dump board	1200RX (115V/BA15d) 1200RX (115V/E27)
PB3	14379RX	CAPA	Capacitor board	600RX / 1200RX (115)
PB3+	14381	CAPA	Capacitor board	1200RX
PB4	14433	CTRL	Control board	300RX / 600RX /1200RX
PB5	14432	KBD	Key board	300RX / 600RX /1200RX

Interconnection diagram



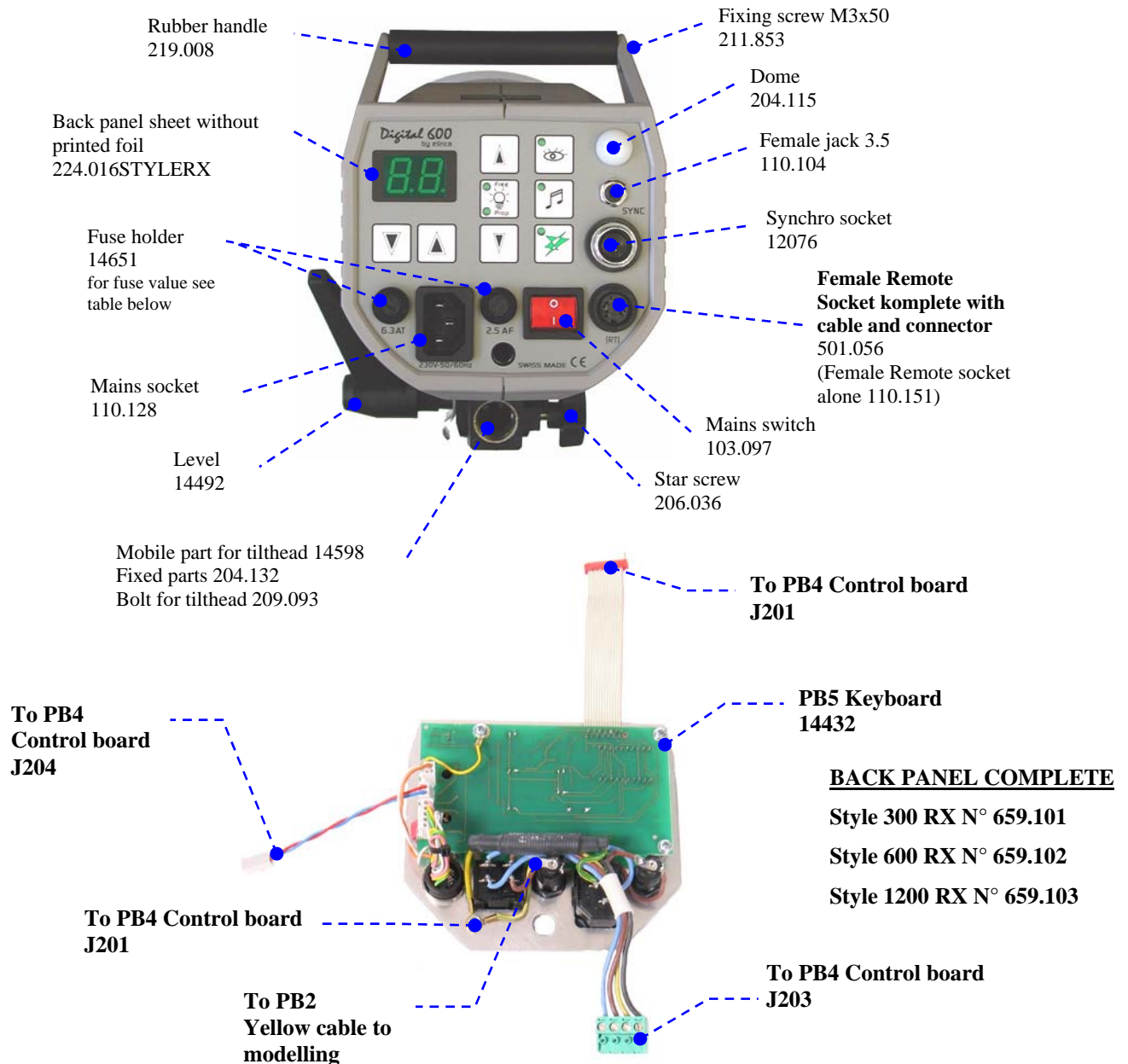
STYLE RX
BLOCK DIAGRAM

Mechanics

Back view Style RX (all)

Fuses and back panel sheet

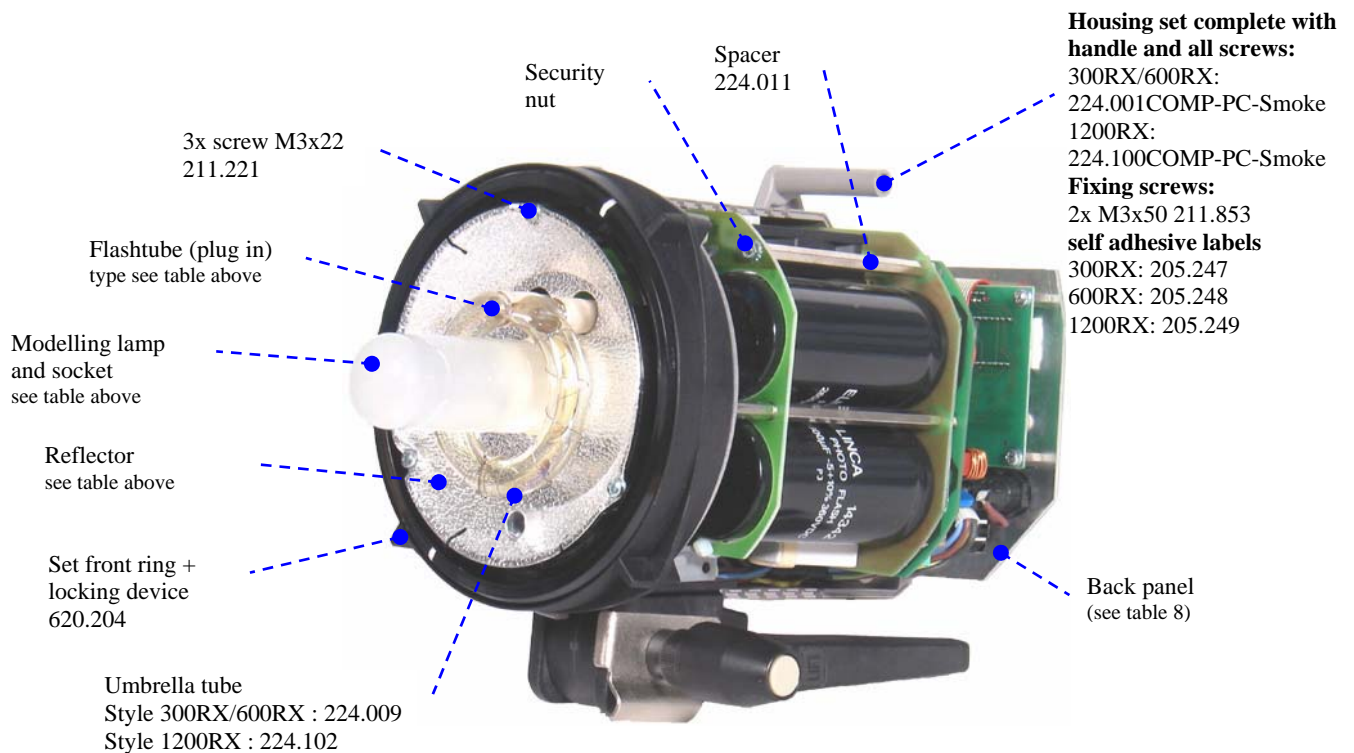
Version	Unit	Printed back panel foil / Code No.	Main fuse / Code No.(10 fuses)		Modelling fuse / code No.(10 fuses)	
			Type	Code No.	Type	Code No.
230VAC	Style 300RX	224.210	6.3AT	19020	2.5AF	19033
	Style 600RX	224.211	6.3AT	19020	2.5AF	19033
	Style 1200 X	224.212	8AT	19022	2.5AF	19033
115VAC	Style 300RX	224.215	6.3AT	19020	4AF	19035
	Style 600RX	224.216	8AT	19022	4AF	19035
	Style 1200 X	224.217	10AT	19056	4AF	19035
115VAC Canada	Style 300RX	224.215	6.3AT	19020	4AF	19035
	Style 600RX	224.216	8AT	19022	4AF	19035
	Style 1200 X	224.217	10AT	19056	4AF	19035



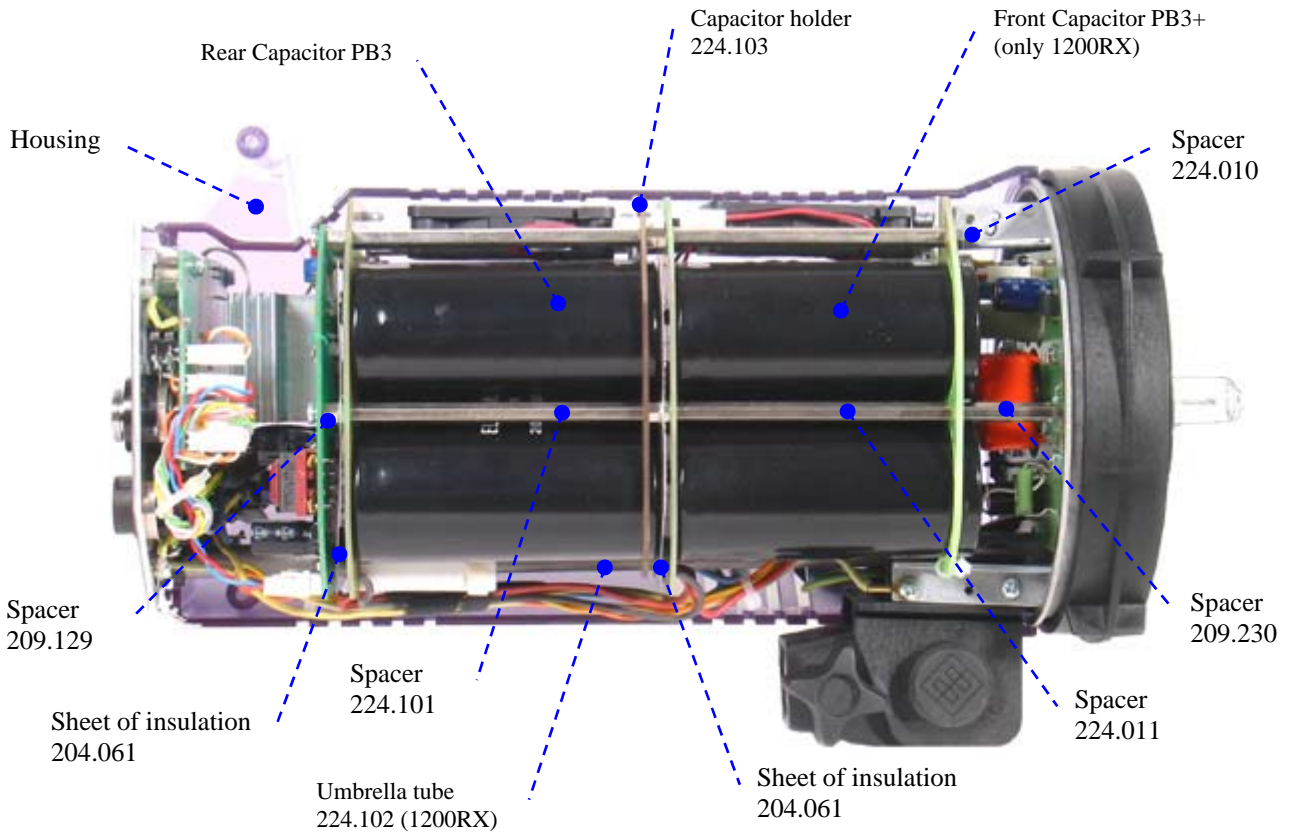
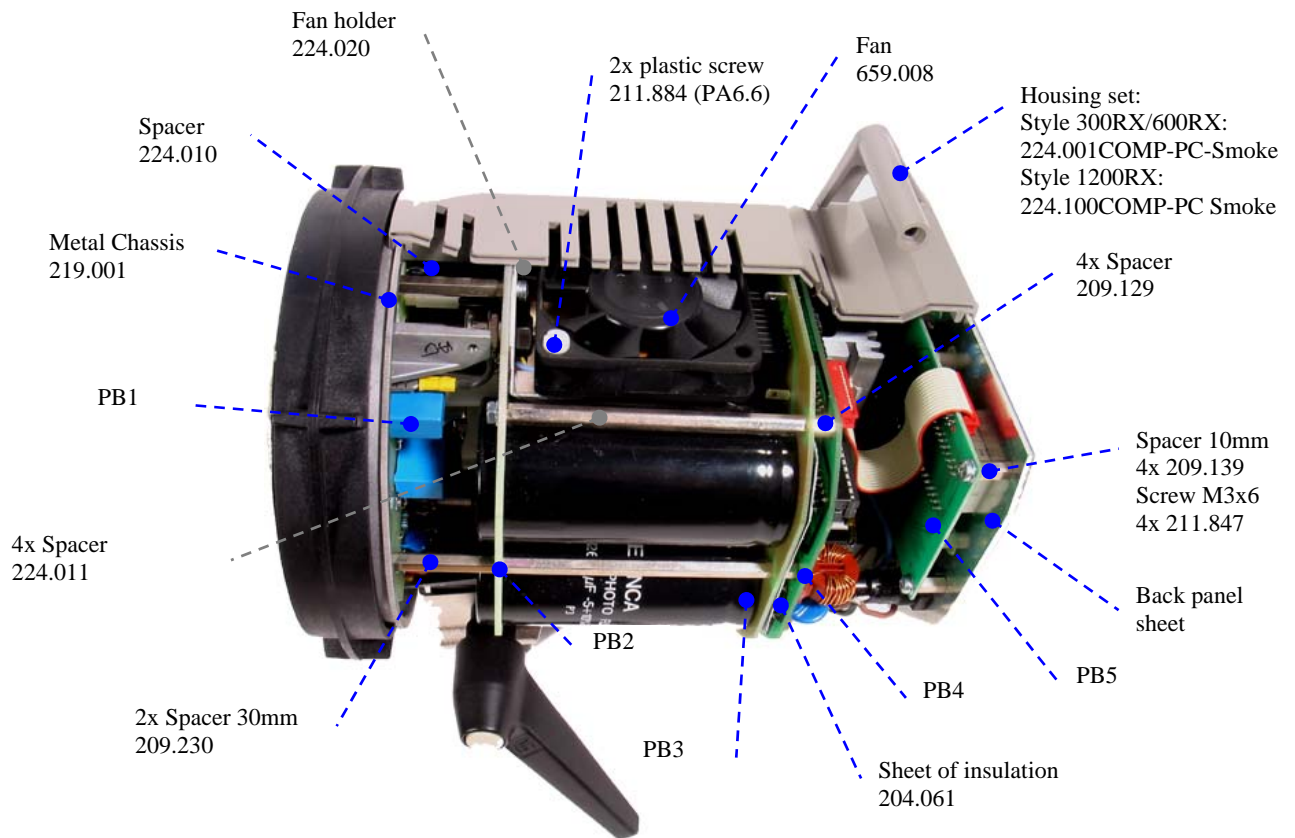
Front view (all)

Flashtube, Modelling lamp and reflector

Version	Unit	Flashtube Code No.	Modelling lamp		Modelling socket		Reflector Code No.
			Lamp type	Code No	Socket type	Code N°	Code N°
230VAC	Style 300RX	24029	250W	23018	E27	112.017	224.013
	Style 600RX	24029	250W	23018	E27	112.017	224.013
	Style 1200 X	24068	300W	23022	GX6.35	112.011	224.014
115VAC	Style 300RX	24029	100W	23036	BA15D	112.099	224.027
	Style 600RX	24029	150W	23037	BA15D	112.099	224.027
	Style 1200 X	24068	250W	23038	BA15D	112.099	224.028
115VAC Canada	Style 300RX	24029	150W	23019	E27	112.017	224.013
	Style 600RX	24029	150W	23019	E27	112.017	224.013
	Style 1200 X	24068	250W	23018	E27	112.017	224.013



Side view (all)



Service Menu

Unit Service adjustments

Start service menu:

1. Switch unit "On" and select minimum power – wait until ready
2. Press the following buttons together: **MODUP + MODDOWN + BEEP**
3. Service menu is active

Exit service menu without store changes

=> Press **BEEP**

Store changes and exit

=> Press **CELL** when in service menu – all changes are saved

Change value

=> Press push button "12" PWRUP or "11" PWRDOWN to change setting

Menus

1. Select Unit Identity / Type

- 0: Style RX 300 0.5 – 5.5
- 1: Style RX 600 1.5 – 6.5
- 2: Style RX 1200 2.5 – 7.5
- 3: not used (=2)

2. Temperatur (IGBT)

Display in °C (only read)

3. 50/60Hz Mode

- 50 (Hz)
- 60 (Hz)

4. HTT Delay (this menu is not active in the first series units!)

1 .. 7: 100..700 ms delay time of enabling HTT

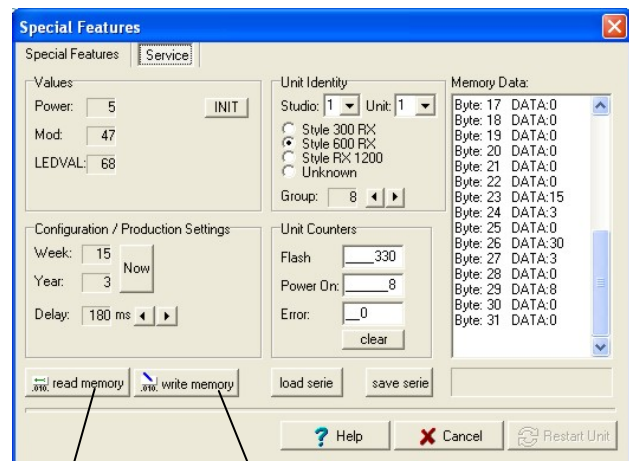
use E.R.S. Software with integrated Service Menu to adjust this setting!

Adjustments with Elinchrom Remote Studio Software E.R.S (PC only)

You need a licensed version of E.R.S. (PC) and a Password to get into the Software Service Menu

Steps

1. Connect the unit (only one) to the E.R.S. "Multi Link" converter and your PC
2. Switch unit on
3. Start E.R.S. Software, Open Port and Scan Net to find the connected unit
4. If found, select EXTRAS then SPECIAL FEATURES and the tab Service
5. Type in the correct SERVICE Password
6. Press "read memory"
7. Do changes and press "write memory" to update unit settings
8. Press "Restart Unit" to activate new unit settings



Press read memory to update display

Press write memory to update unit settings with display informations



Trouble Seeking Guide for Style RX

Important Note

ALWAYS DISCHARGE UNIT BEFORE COMMENCING WORK !
(d  chargez l'appareil avant de commencer la travail)

Elinchrom repairing tools

INPUT CURRENT LIMITER with flash capacitor discharge

(code 11931)

This device limits the current that the unit may draw from the mains supply to around 1 ampere. This prevents damage due to shorts-circuits, slow down recharging and improves the voltage stabilisation.

With experience, the activity of the LIMITER lamp can give many clues regarding malfunctions in the unit.

Use flash capacitor discharge function included LIMITER

Known problems

Here is a small list of modifications or solutions with Style RX troubles.

1. Low Photo cell sensitivity

Check Photo cell circuitry resistor values on PB5

Board 50.0007.03

R124 = 0R, R126 = 100R; R128, R130 = 2,2k

Board 50.0007.04

R126 = 100R; R128, R130 = 2,2k

2. Error 'E4' only at maximum Power after 20-40 seconds

Cause 1: The input mains supply voltage is lower than 210VAC

Solution 1: use unit only 1/10 or 2/10 lower than maximum Power setting

Solution 2: reduce the maximum flash capacitor voltage HTD to 580 to 585VDC @ Pmax

3. Test push button and synchronisation problems

Only with key board 50.0007.03 and 50.0007.04

- add an 100k Ohm (121.104) resistor between +5V (R131=>+5V) and 'TEST' push button S107 (high side to C108, R137)

Error Message

This error messages are shown by the units display if an error is detected by the units Micro-Controller.

Error Message Display Value	Description	Check	Note
E 1	Temperature Sensor Fault	PB4: Check D202, R200	1
E 2	Over temperature	Unit is overheated – wait cooling	2
E 3	Discharge time out error	PB4: T200 PB2: T1, R4, R5, ZD1;SWTH1	3
E 4	Charge time out error	Low mains supply input voltage>210VAC PB4: Check circuit T207 PB3: Doublers, D5, D6	4
E 5	Main supply zero detect error	PB4: Check circuit T203, T204, T205	5
E 6	After charge time out error	PB4: Check D209, circuit T207	6

Note1: Temperature sensor D202 with 10mV/  C(=> 0  C=2,73V, 25  C=2,98V; 80  C=3,53V)

Note2: Over temperature is detected Temp.>90  C on heat sink M201, Normal mode if Temp.<70  C

Note3: Discharge time out after approx. 100 seconds without READY

Note4: Charge time out after approx. 25 seconds without READY

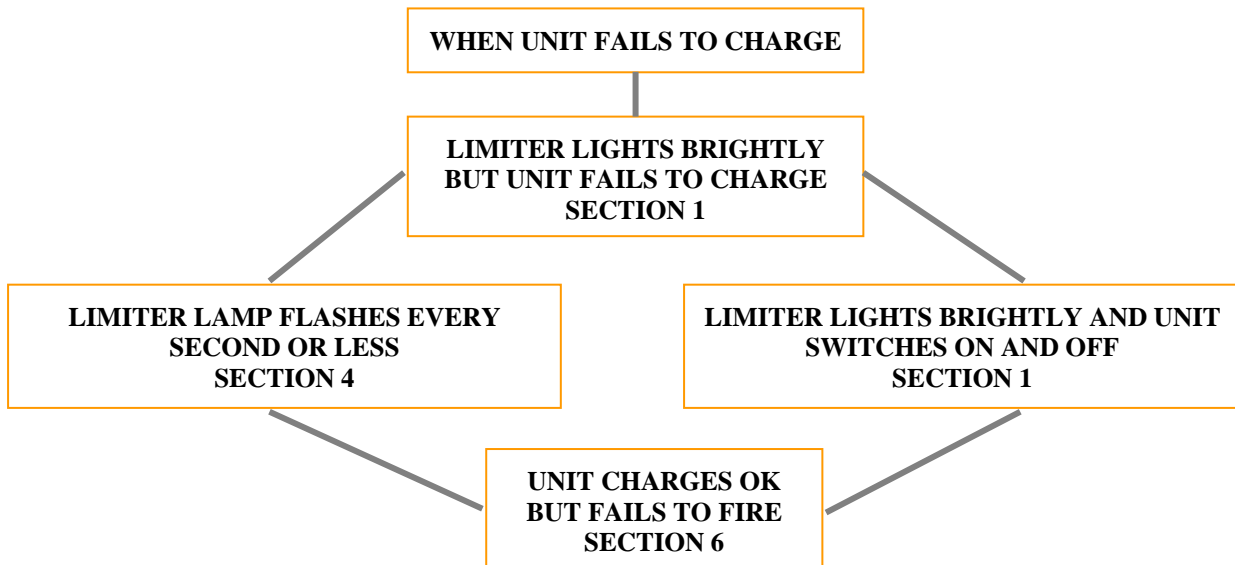
Note5: The Micro detects each zero crossing of the mains supply voltage. This signal is needed for triggering modelling lamp.

Note6: After charge time out after approx. 50 seconds without recharge

Repairing Help

Note: Switch off modelling lamp for charge fault diagram

Control board PB4 (code 14333) and Key board (code 14332) are part of exchange service.



1. Fault tracing for blown fuse or charge fails

- Wrong value fuse
- PB4 Charge circuit T207 or D209 short circuit
- PB3 Charge diodes D1-D6 short circuit
- PB4 Charge driver circuit U203A, OK200
- Photo flash capacitor short circuit

2. To trace for a faulty photo flash capacitor

Check the following with the LIMITER Lamp in circuit and the power setting to minimum.

Use two voltmeters, one for group A and one for the group B of the flash capacitors

- Place the common probe on the neutral point of test on the PB3, or on the neutral point on the PB4 and the other probe on the ½ voltage test point.
- Place the other Voltmeter on the positive test point on the PB3, and the other probe on the test point ½ voltage (common test point)

Briefly switch the unit "ON" and observe both Voltmeter readings. One side of the charge capacitors will rise, the other will not. This test will determine on which side the faulty component can be found.

3. Replacing a Photo flash capacitor

- Always discharge the unit before commencing work!
- Check that there is no voltage across the new capacitors!

WHEN A PHOTO FLASH CAPACITOR IS BEING REPLACED. IT MUST BE REFORMED WITH THE LIMITER IN LINE SET THE UNIT TO MINIMUM

4. Modelling lamp circuitry does not function

- Modelling lamp fuse blown (quick acting)
- Blown blub
- PB2: check TC1, D2, C1, R1
- PB4: Check Signal MODTRG (100Hz or 120Hz. Pulse 5V)
- PB4: Check Signal MOD when Modelling lamp function is active

5. Fault tracing for discharge resistor failure (E3)

- PB3: Check R4 (3.3k Ohm 25W)
- PB3: Check MOSFET T1 (BUZ51)
- PB3: Check SWTH1 (thermic switch open)

6. Fault tracing for firing faults

- Cracked flashtube
- PB1: check Trigger voltage at capacitor C6 (0.1µF/400V)
- PB1: check Trigger Boost circuitry D1 and TY1 (short circuit)
- Check READY LED (if off triggering flash tube is not possible)
- PB5: push button S107, T105 and T100

When there is no voltage present across the trigger capacitor try replacing D1 1N4007 Diode. This sometimes reads OK but is often 'leaky' when a voltage is applied.

Special circuitry and Graphs

MOSFET charge circuitry

ATTENTION:

Measurement GND (-) is **HIGH VOLTAGE**

Measurement GND (-): D209 (Anode)
Gate supply voltage (18V): D200(Cathode)

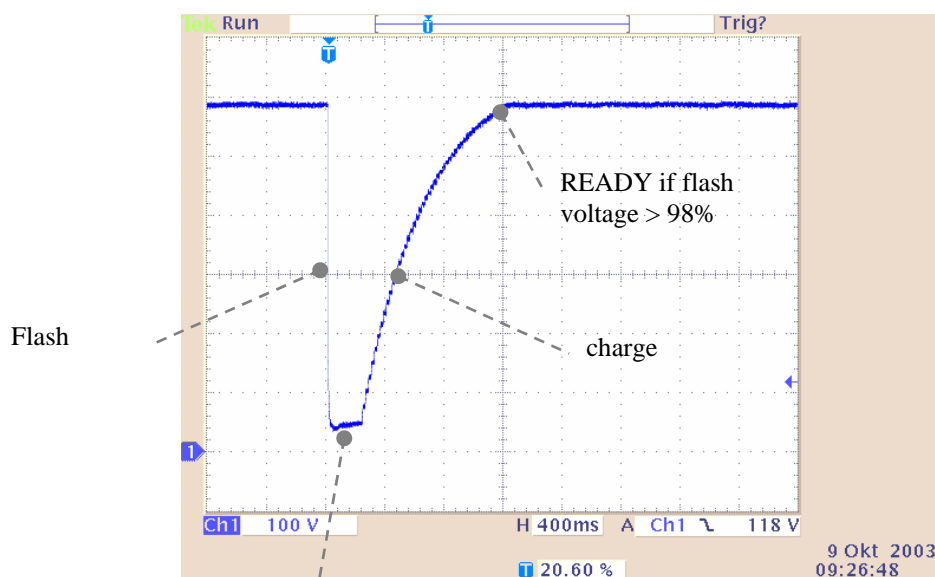
Function:

The MOSFET enables and disables flash capacitor charge. The Gate supply voltage is generated by R211, R238, D200 and C223 and is 18VDC. The Gate driver electronic includes a soft start function with T206 and T209.

On damage or malfunction change always T206, T207, T209 and D201together and check all resistor values.

Flash voltage HTD (PB3)

The Style RX series has a absolute stabile flash voltage and f-stop stability. The READY signal is generated only if the flash voltage is greater than 98% of the f-stop setting.

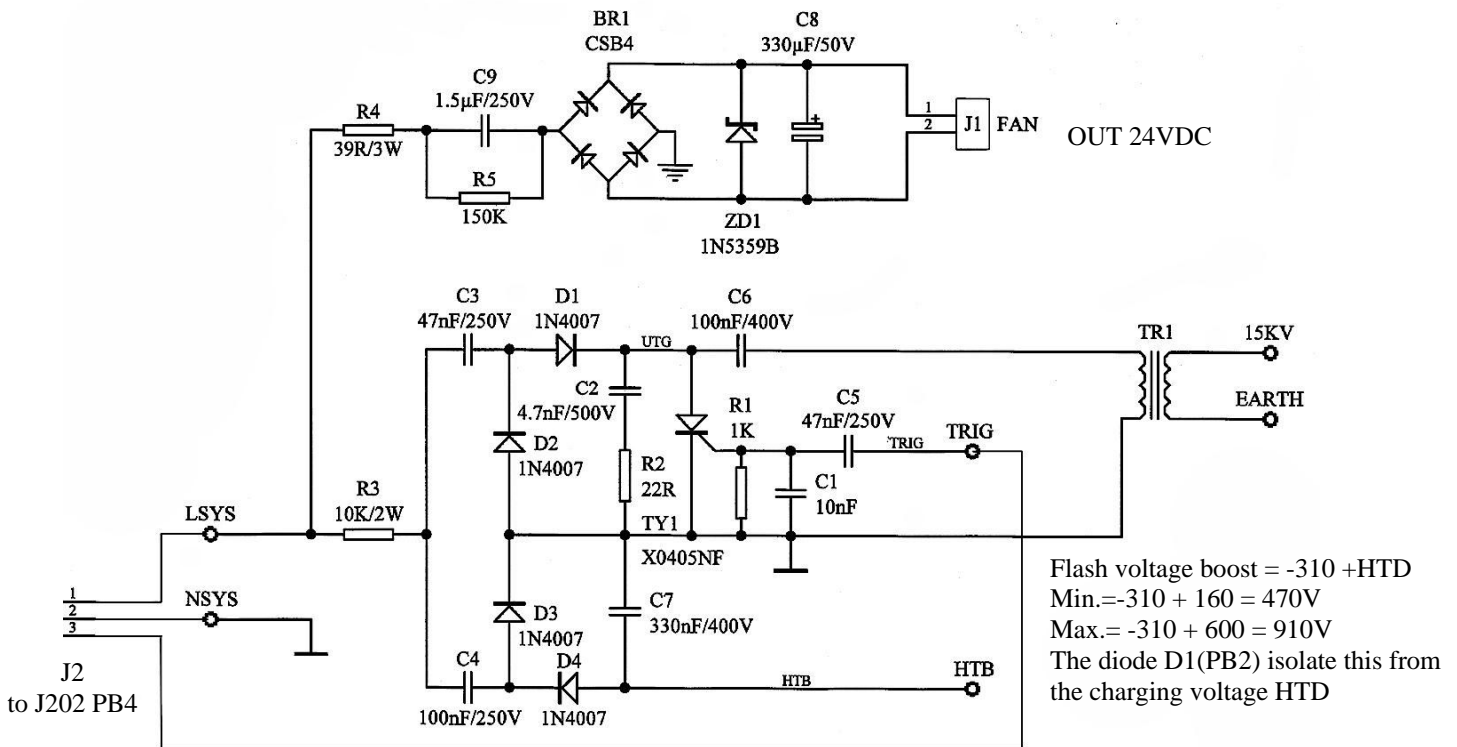


Delay time 150ms - 1.0sec.
(E.R.S. Service Menu)
Standard value approx. 200ms

PB1 Trigger- Booster Fan board

Style 300RX / 600RX (14377)

Schematics

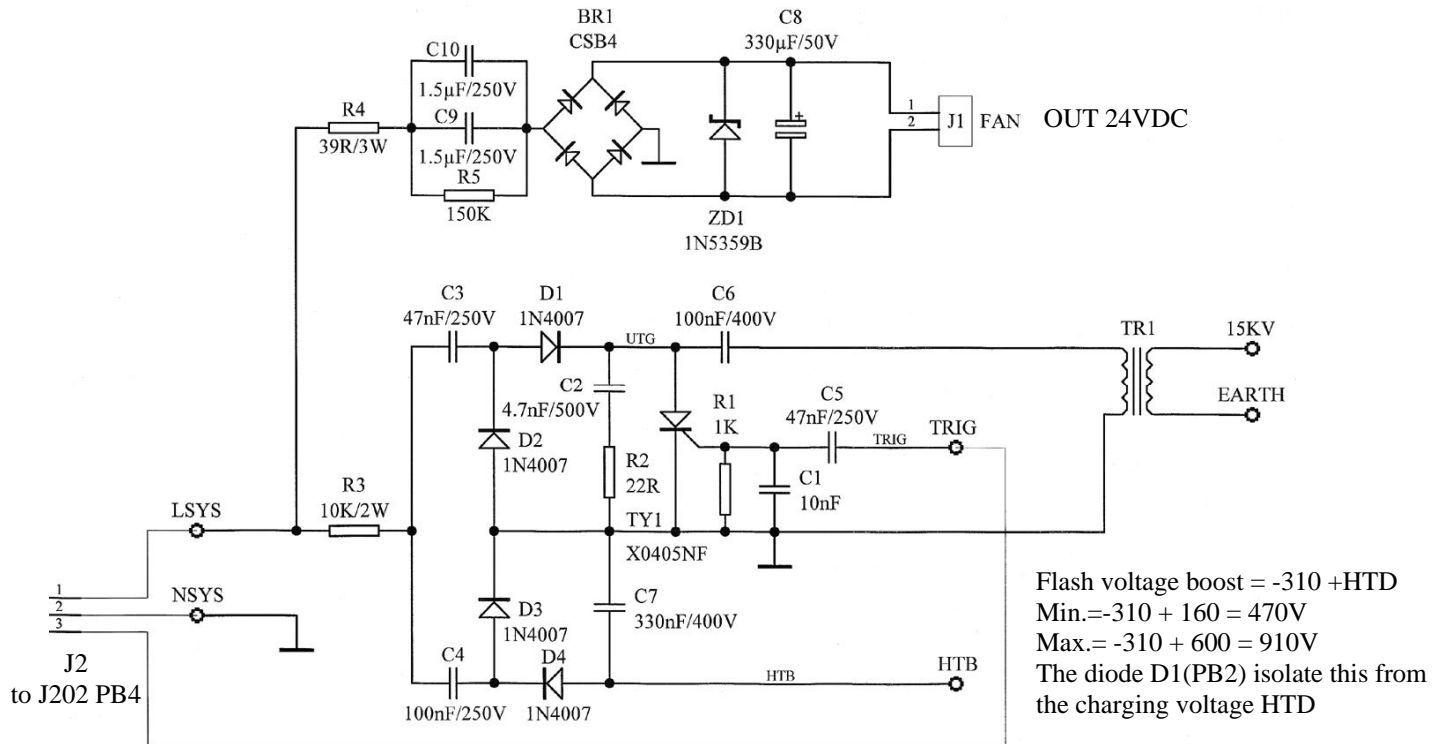


Bill of materials

Part N°	Used	Part Type	Designator
100.060	1	ZS1052/1	TR1
104.006	1	4.7nF/500V	C2
104.007	1	10nF	C1
104.012	1	47nF/250V	C5
104.016	1	100nF/250V	C4
104.017	1	100nF/400V	C6
104.026	1	1.5µF/250V	C9
104.124	1	330nF/400V	C7
105.011	1	1N5359B	ZD1
105.057	1	CSB4	BR1
105.116	1	X0405NF	TY1
110.072	1	FAN	J1
110.134	1	Connector 3p CSF-03001	J2
111.038	1	39R/3W	R4
111.065	1	10K/2W	R3
112.056	1	Trigger coil => Output very high voltage	15KV
112.071	1	LP2.8	HTB
121.102	1	1K	R1
121.220	1	22R	R2
121.154	1	150K	R5
14009	4	1N4007	D1 D2 D3 D4
14053	1	330uF/50V	C8

Style 1200RX (14393)

Schematics

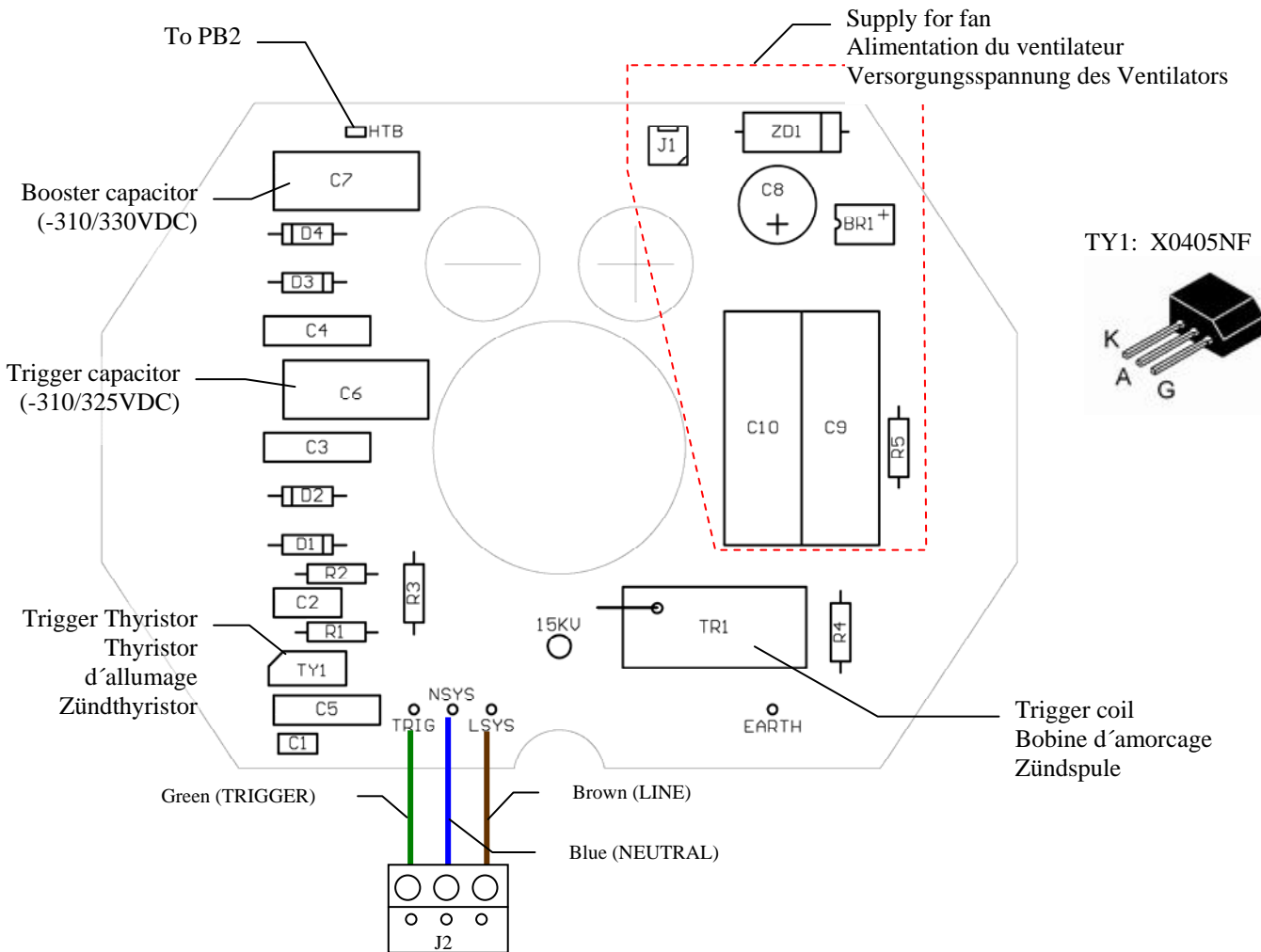


Bill of materials

Part N°	Used	Part Type	Designator
100.060	1	ZS1052/1	TR1
104.006	1	4.7nF/500V	C2
104.007	1	10nF	C1
104.012	2	47nF/250V	C3 C5
104.016	1	100nF/250V	C4
104.017	1	100nF/400V	C6
104.026	2	1.5µF/250V	C9 C10
104.124	1	330nF/400V	C7
105.011	1	1N5359B	ZD1
105.057	1	CSB4	BR1
105.116	1	X0405NF	TY1
110.072	1	FAN	J1
110.134	1	Connector 3p CSF-03001	J2
111.038	1	39R/3W	R4
111.065	1	10K/2W	R3
112.056	1	Trigger coil => Output very high voltage	15KV
112.071	1	LP2.8	HTB
121.102	1	1K	R1
121.220	1	22R	R2
121.154	1	150K	R5
14009	4	1N4007	D1 D2 D3 D4
14053	1	330uF/50V	C8

Assembly drawing PB1

14377 /14393 (14082a without components)

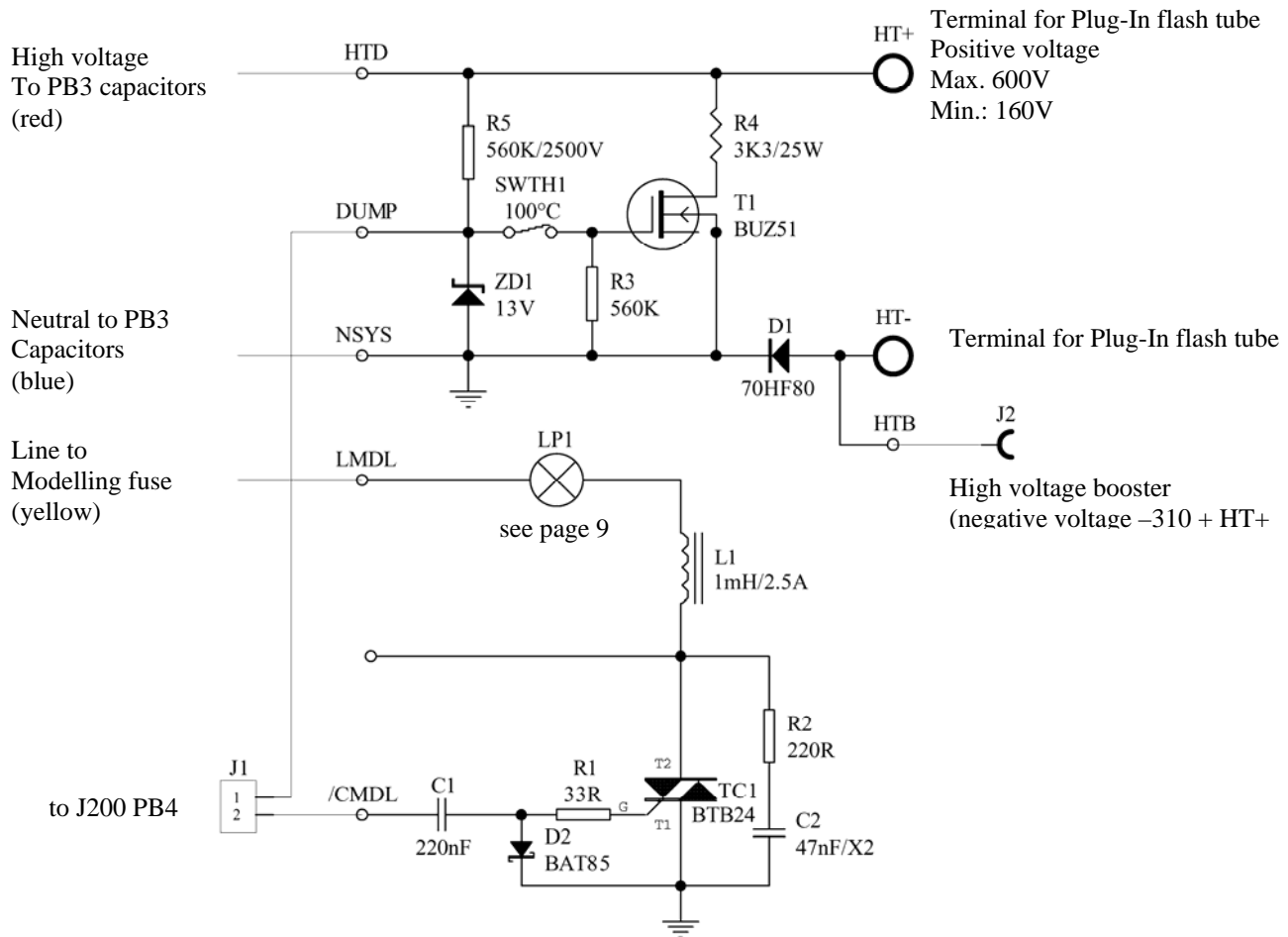


PB2 Modelling lamp and Dump

Style 300RX / 600RX (14396RX), Style 1200RX (14397RX)

Style 300RX / 600RX (14373RX) Canada, Style 1200RX (14392RX.V) Canada

Schematics

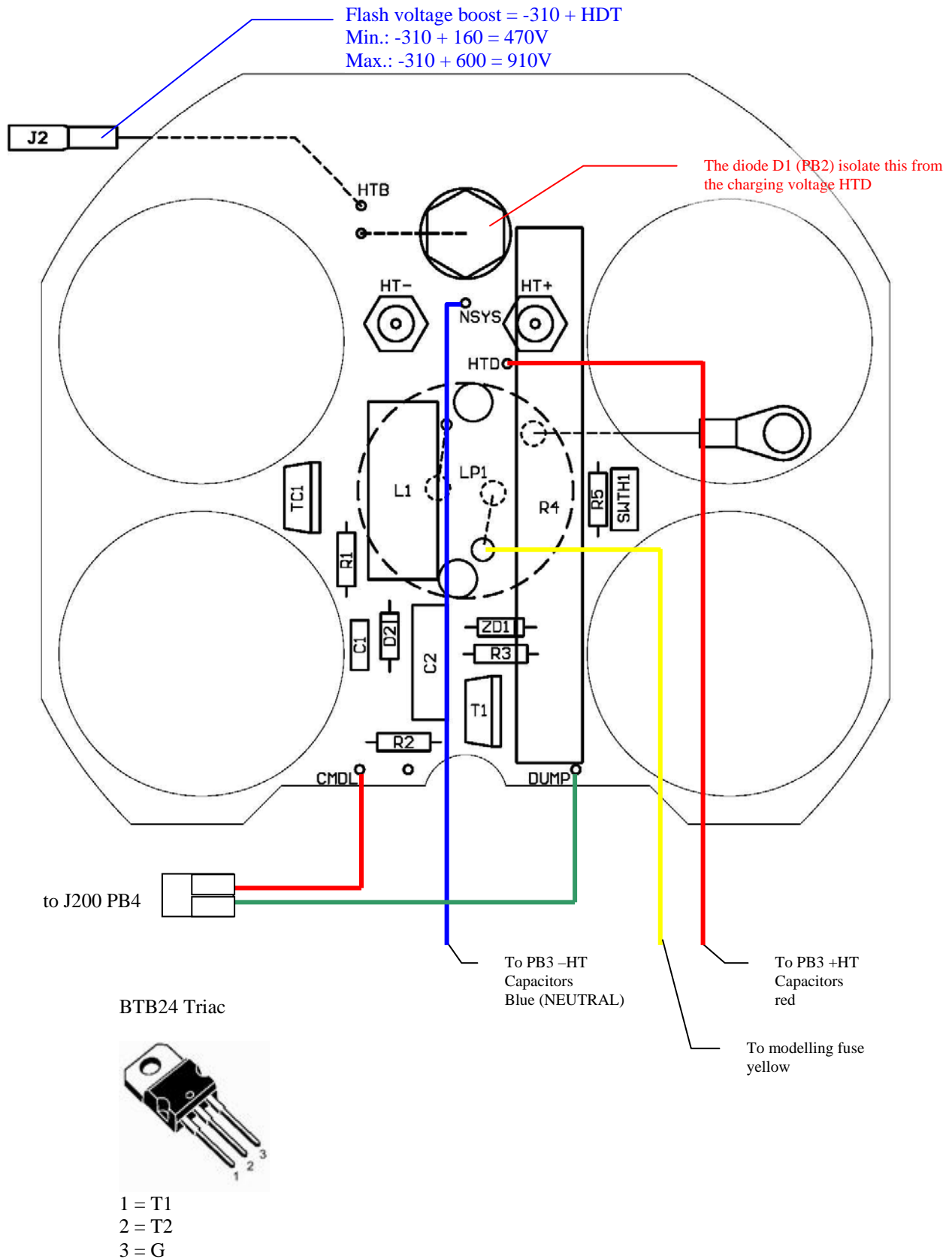


Bill of materials

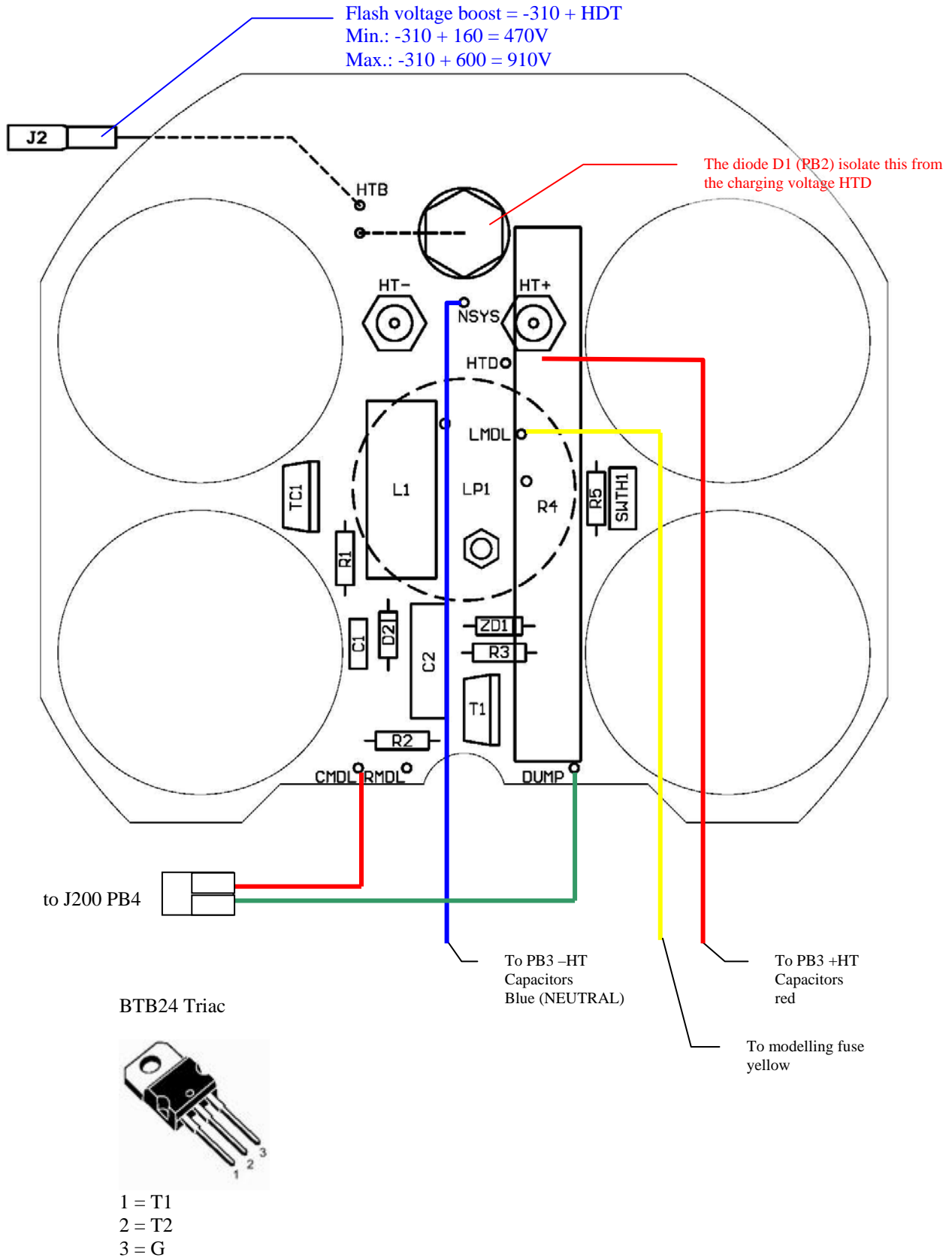
<i>Part N°</i>	<i>Used</i>	<i>Part Type</i>	<i>Designator</i>
100.047	1	1mH/2.5A	L1
101.229	1/3	isolation tube SIL 12x50	R4
104.013	1	47nF/X2	C2
104.065	1	220nF	C1
105.006	1	13V	ZD1
105.049	1	BTB24	TC1
105.087	1	70HF80	D1
105.125	1	BAT85	D2
111.524	1	3K3/25W	R4
112.099	1	Socket BA15d (not Canada)	LP1
209.134	2	Distance holder PA M3x22 F/F (not Canada)	LP1
211.203	4	Screw M3x8 (not Canada)	LP1
500.090	1	Wire J/V + connector 3023A (not Canada)	LP1
112.070	2	Broche 1365 B (Canada)	LP1
112.017	1	Socket E27 (Canada)	LP1
203.031	1	M3 security nut (Canada)	LP1
211.207	1	M3x20 screw (Canada)	LP1
112.101	2	Terminal for Plug-In flash tube	HT+ HT-
121.229	1	220R	R2
121.330	1	33R	R1
121.564	1	560K/2500V	R5
121.569	1	560K	R3
14032	1	100°C	SWTH1
14033	1	BUZ51 or ST4N100 MOSFET transistor	T1
203.010	2	M5 nut for terminal flash tube	HT+ HT-
204.128	1	Inductor for modelling lamp	L1
209.132	2	spacer Ø8x5	R4
210.004	2	security washer	HT+ HT-
210.119	1	M6x0.8 washer	D1
500.439	1	Wire 0.75mm2 black L=40mm	D1
500.440	1	Wire 0.75mm2 red L=180mm	HTD
500.441	1	Wire 0.75mm2 blue L=190mm	NSYS
500.444	1	Wire 0.5mm2 black L=40mm + Connector 2.8 x 0.8	J2
500.446	1	Wire 0.5mm2 yellow L=210mm	LP1
% 101.163	1	Wire 0.5mm2 yellow L=210mm	LP1
501.057	1	Cable 2PF Molex L=170mm	J1

Assembly drawing PB2

For Style 300RX / 600RX / 1200RX (not Canada)
14083 for 14396RX/14397RX



For Style 300RX / 600RX / 1200RX (Canada)
14083 for 14373RX/14392RX.V



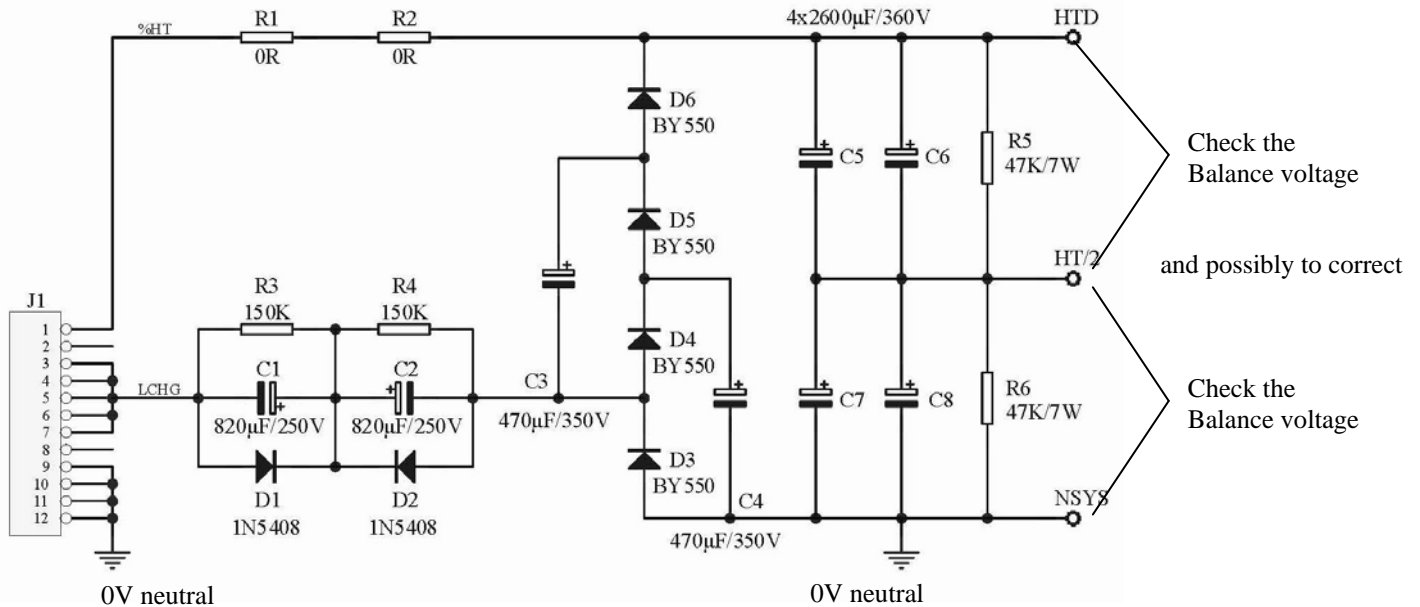
PB3 Main Capacitors

Style 300RX (14389RX) and 600RX / 1200RX (14379RX)

Schematics

Bill of materials

+HT max. 600V
min.: 160V

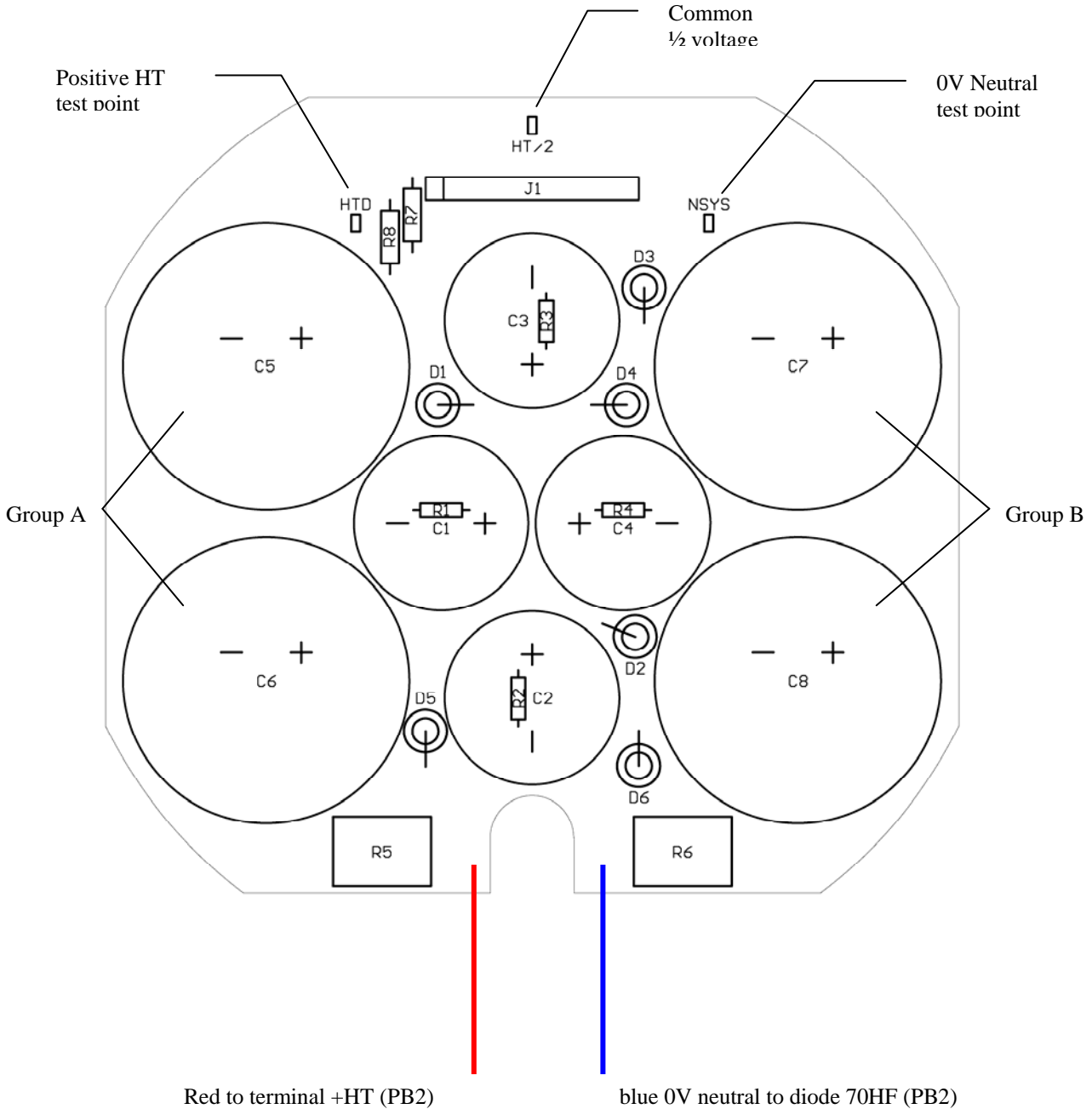


4x 2600µF for 600RX / 1200 RX
2x 2600µF for 300RX

Part Nb	Used	Part Type	Designator
104,122	2	390µF/385V	C3 C4
104,123	2	150µF/385V	C1 C2
105.050	2	BY550	D5 D6
110,129	1	BL 11/508/12 Z	J1
111.104	2	47K/7W	R5 R6
112.071	3	LP2.8	HTD HT/2 NSYS
120.001	2	0R	R7 R8
121,394	4	390K	R1 R2 R3 R4
14084b	1	PCB without components	-
14342	4	2600µF/360V for Style 600RX / 1200RX	C5 C6 C7 C8
14342	2	2600µF/360V for Style 300RX	C6 C8 only
14430	4	1N5408	D1 D2 D3 D4

Assembly drawing PB3

Complete board for Style 300RX, code 14388RX
 Board without components 14084b for all PB3 RX series
 Complete board for Style 600RX / 1200RX, code 14374RX

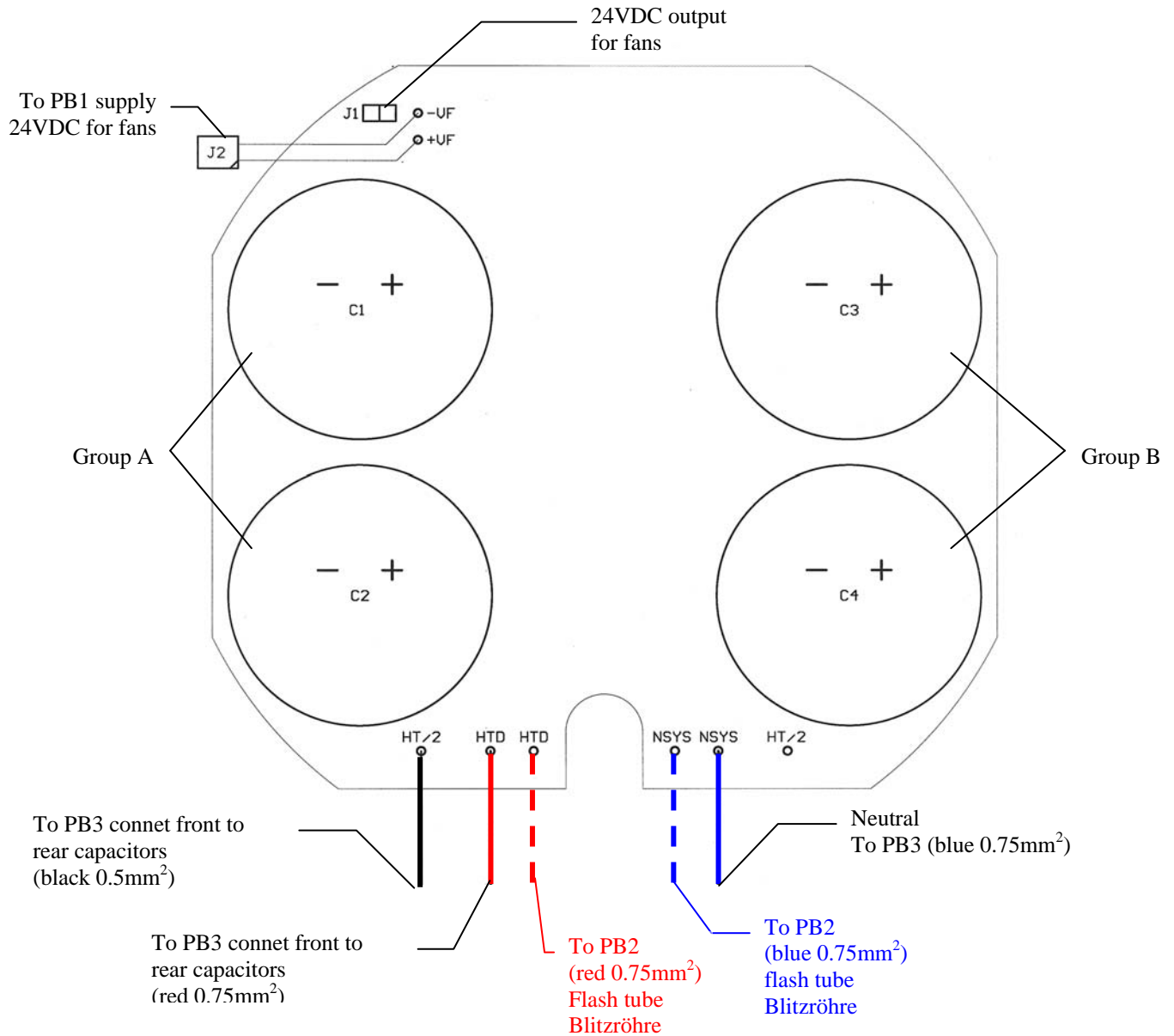


NOTE !
Style 300RX: C5 and C7 are not assembled

PB3+ Front Capacitors

Only for Style 1200RX, code 14381

Assembly drawing



Bill of materials

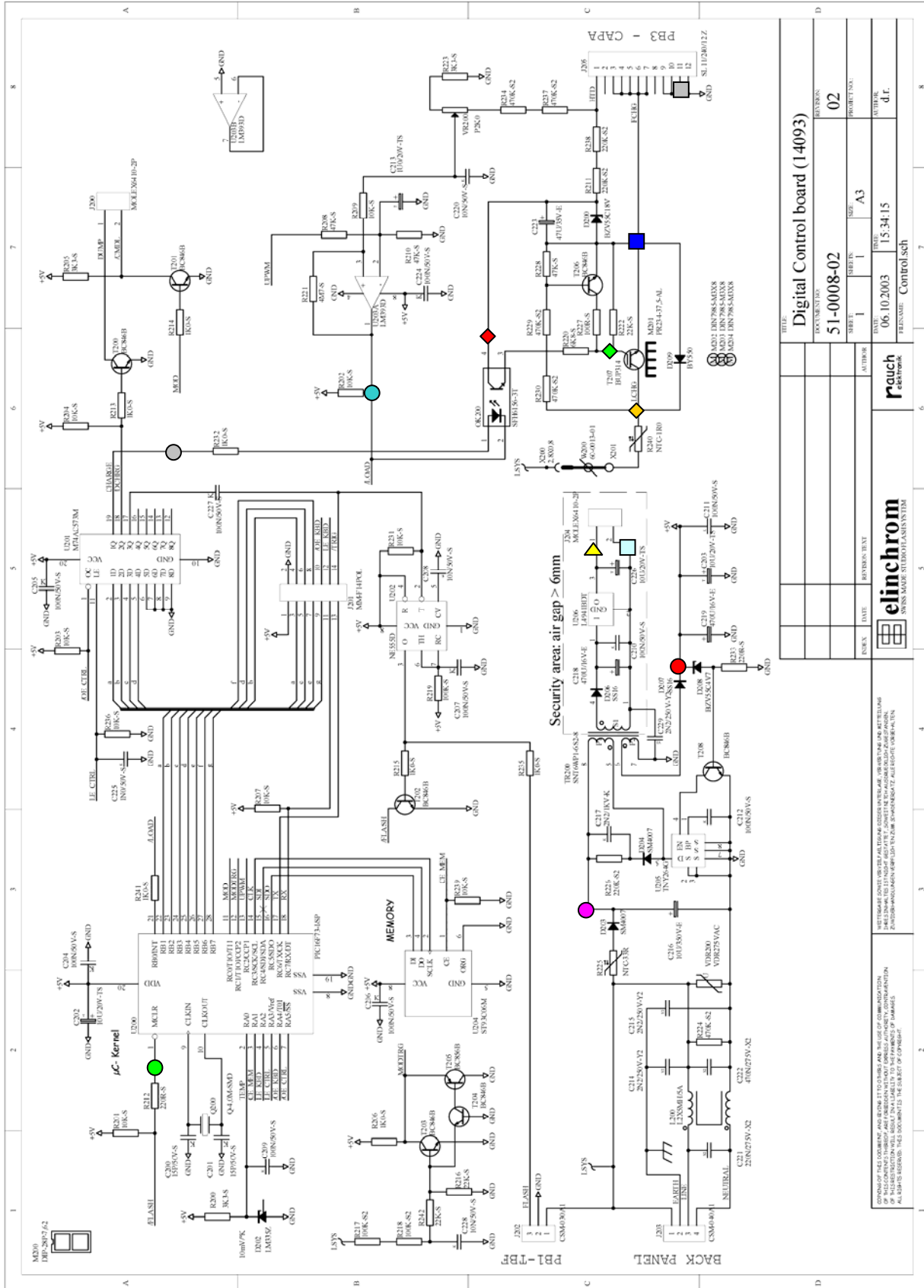
<i>Part Nb</i>	<i>Used</i>	<i>Part Type</i>	<i>Designator</i>
14088	1	PCB (without components)	
14342	4	2600µF/360V (flash capacitors)	C1 C2 C3 C4
110.130	1	1/6SL 11/240/12Z modified	J1
501.038	1	Cable with 2PF connector Molex L=130mm	J2
500.276	1	Red cable 0,75mm2 x 150mm	HDT
500.451	1	Blue cable 0,75mm2 x 150mm	NSYS
500.452	1	Black cable 0,75mm2 x 150mm	HT/2

PB4 Control board 14433

Style 300RX / 600RX / 1200RX (14433)

Schematics (PCB release 50.0008.02)

Note !
This board is part of
Exchange Service



Bill of materials (PCB release 50.0008.02)

Note: This board is part of exchange service

This board is not repairable by the importer, it is deliverable only in standard exchange with a guarantee of 2 years (after 2 years guarantee expired , deliverable to a special price)

<i>Quantity</i>	<i>Components</i>	<i>Comment</i>	<i>ELINCA_N*</i>	<i>DESCRIPTION</i>
1	R219	100K-S		Resistor 1% SMD
2	R217, R218	100K-S2		Resistor 5% 1W SMD
10	C204, C205, C206, C207, C209, C210, C211, C212, C224, C227	100N/50V-S		Capacitor SMD
1	R227	100R-S		Resistor 1% SMD
9	R201, R202, R203, R204, R207, R209, R231, R236, R239	10K-S		Resistor 1% SMD
3	C208, C220, C228	10N/50V-S		Capacitor SMD
3	C202, C203, C226	10U/20V-TS		Capacitor Tantal SMD
1	C216	10U/350V-E		Capacitor
2	C200, C201	15P/50V-S		Capacitor SMD
7	R206, R213, R214, R215, R232, R235, R241	1K0-S		Resistor 1% SMD
1	C225	1N0/50V-S		Capacitor SMD
1	C213	1U0/20V-TS		Capacitor Tantal SMD
1	X200	2,8x0,8	112.076	2,8x0,8 stehend
3	R211, R226, R238	220K-S2		Resistor 5% 1W SMD
1	C221	220N/275V-X2	104.130	Capacitor X2
2	R212, R233	220R-S		Resistor 1% SMD
3	R216, R222, R242	22K-S		Resistor 1% SMD
1	C217	2N2/1KV-K		Capacitor Ceramic
3	C214, C215, C229	2N2/250V-Y2	104.106	Capacitor Y2
3	R200, R205, R223	3K3-S		Resistor 1% SMD
5	R224, R229, R230, R234, R237	470K-S2		Resistor 5% 1W SMD
1	C222	470N/275V-X2	104.131	Capacitor X2
2	C218, C219	470U/16V-E	104.053	ELKO
3	R208, R210, R228	47K-S		Resistor 1% SMD
1	C223	47U/35V-E	104.033	ELKO
1	R221	4M7-S		Resistor 1% SMD
1	W200	60-0013-01	500.089	0,5mm2 brown L=60mm E1:soldered 5mm; E2: 2,8x0,8
1	R220	6K8-S		Resistor 1% SMD
7	T200, T201, T202, T203, T204, T206, T208	BC846B		Transistor SMD
1	T205	BC856B		Transistor SMD
1	T207	BUP314	105.154	IGBT 35A
1	D209	BY550	105.050	Diode 1000V 5A
1	D200	BZV55C18V		Diode Zener
1	D208	BZV55C4V7		Diode Zener
1	J202	CSM-030A1	110.136	Power Connector 3 pol.
1	J203	CSM-040A1	110.135	Power Connector 4 pol.

3	M202, M203, M204	DIN7985-M3X8	211.203	SCREW DIN7985 M3x8
1	M200	DIP-28P-7,62		Dual Inline Socket 28P 7,62mm
1	L200	L2X5MH/5A	100.049	Inductor 2x 5mH 5A
1	U206	L4941BDT		Regulator LDO 5,0V SMD
1	D202	LM335Z	105.201	Sensor Temp.
1	U203	LM393D		COMP SMD
1	X201	LOTPAD		
1	U201	M74AC573M		Latch SMD
1	J201	MM-F14POL		Mico Match Federleite 14POL
2	J200, J204	MOLEX6410-2P		Connector 2P LP
1	U202	NE555D		TIMER SMD
1	R240	NTC-1R0		NTC 1R0 16A
1	R225	NTC-33R		NTC 33R
1	VR200	P2K0	109.023	Trimmer
1	U200	80.0003.02	105.145SRX	Style RX uC
1	M201	PR234-37,5-AL		Heatsink
1	Q200	Q-4,0M-SMD		Quarz SMD
1	OK200	SFH6156-3T		Optocoupler Transistor SMD
1	J205	SL 11/240/12 Z	110.130	Connector LP 12P
2	D203, D204	SM4007		Diode 1A 1000V SMD
1	TR200	SNT6WP1-6S2-8		Transformator SNT 6VA 85-265V 1x8V 1x6V
2	D206, D207	SS16		Shottky 1A Diode SMD
1	U204	ST93C06M		EEPROM SMD
1	U205	TNY264G		Switch Mode Controller 6W
1	VDR200	VDR275VAC	111.061	Varistor 275VAC

Adjustment (50.0008.02)

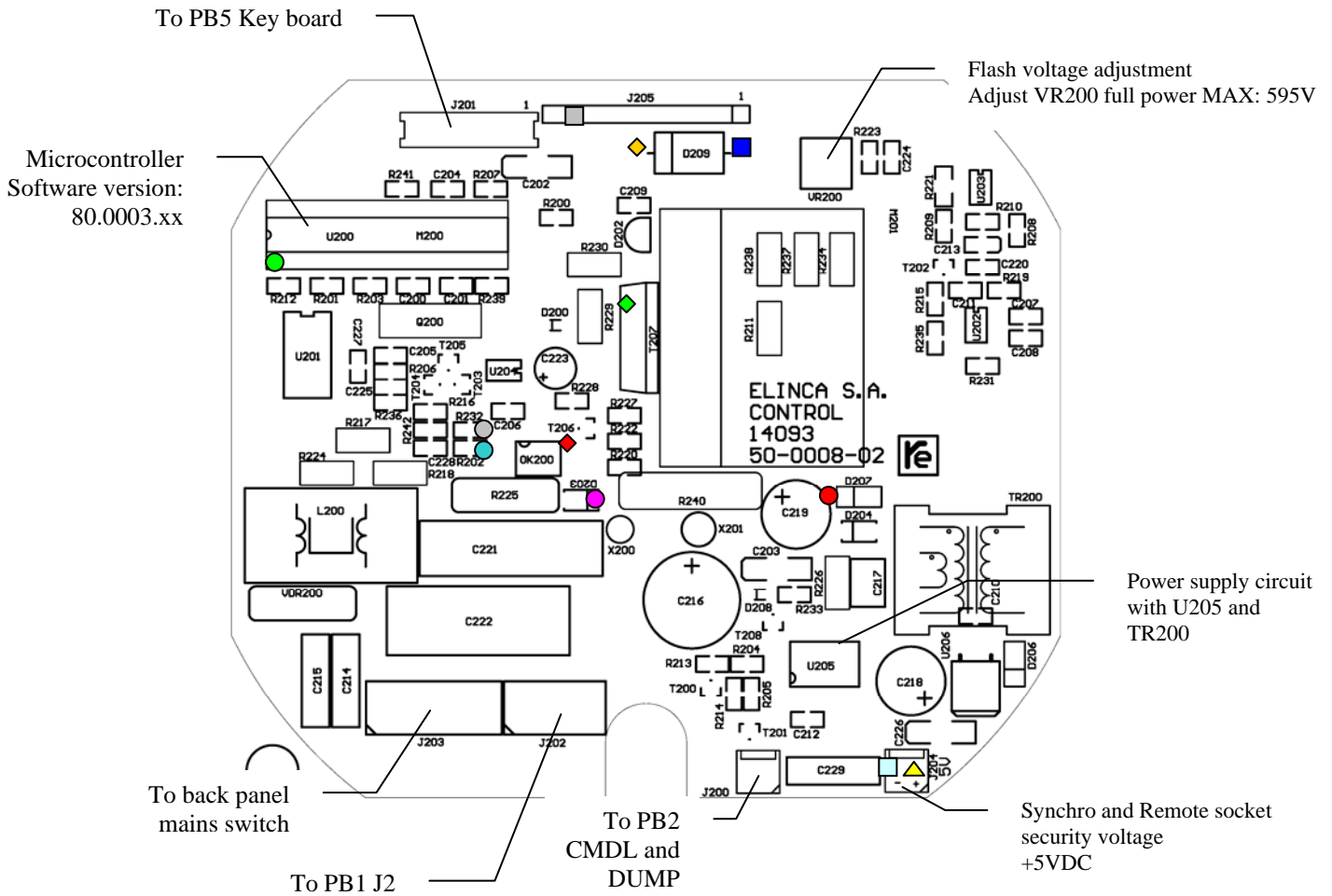
Flash voltage adjustment for all Style RX units

1. Open the discharged unit
2. Connect the plus pole of the Voltmeter (set to High Voltage >600V) to PB3 Measurement pin "HTD"
3. Connect the negative pole of the Voltmeter (set to High Voltage >600V) to PB3 Measurement pin "NSYS"
4. Connect unit to mains supply and switch unit on
5. Check Voltmeter if voltage is always lower than 600V
6. Increase the power to maximum and check always the flash voltage
7. Adjust VR200 full power to a maximum flash voltage of 595V to 600V
8. Verify if the voltage is equilibrated between negative capacitors and positive capacitors (difference max: 20Vdc)

(check PB3 documentation above)

Assembly drawing (PCB release 50.0008.02) Board 14433

Top Overlay



■ Ground

- 250VDC .. 350VDC
- +5V
- +5V (0V=μC Reset)
- Charge: approx. 4.5V on charge
- Load: 0V on charge

ATTENTION: HIGH VOLTAGE

- Charge circuit Ground !
- ◆ 230VAC LSYS
- ◆ +18VDC
- ◆ +18VDC on charge

■ Security Ground for Remote and Synchro Supply

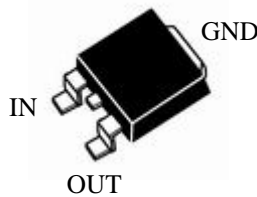
- ▲ +5VDC

Bottom Overlay (top view)

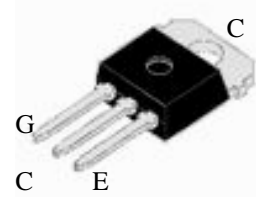
To PB3 J1 capacitor board



U206: L4941BDT



T207: BUP 314



Bill of materials (PCB release 50.0008.03)

Note: This board is part of exchange service

This board is not repairable by the importer, it is deliverable only in standard exchange with a guarantee of 2 years (after 2 years guarantee expired , deliverable to a special price)

<i>Quantity</i>	<i>Components</i>	<i>Comment</i>	<i>ELINCA_NO</i>	<i>Description</i>
2	R217, R218	100K-S2		Resistor 5% 1W SMD
10	C204, C205, C206, C207, C209, C210, C211, C212, C224, C227	100N/50V-S		Capacitor SMD
8	R201, R202, R203, R207, R209, R231, R236, R239	10K-S		Resistor 1% SMD
2	C220, C228	10N/50V-S		Capacitor SMD
3	C202, C203, C226	10U/20V-TS		Capacitor Tantal SMD
1	C216	10U/350V-E		Capacitor
2	C200, C201	15P/50V-S		Capacitor SMD
9	R204, R206, R213, R214, R220, R232, R235, R241, R243	1K0-S		Resistor 1% SMD
1	C225	1N0/50V-S		Capacitor SMD
1	C213	1U0/20V-TS		Capacitor Tantal SMD
1	X200	2,8x0,8	112.076	2,8x0,8 stehend
2	R219, R245	220K-S		Resistor 1% SMD
3	R211, R226, R238	220K-S2		Resistor 5% 1W SMD
1	C221	220N/275V-X2	104.130	Capacitor X2
3	R212, R233, R244	220R-S		Resistor 1% SMD
4	R216, R222, R227, R242	22K-S		Resistor 1% SMD
1	C217	2N2/1KV-K		Capacitor Ceramic
3	C214, C215, C229	2N2/250V-Y2	104.106	Capacitor Y2
4	R200, R205, R215, R223	3K3-S		Resistor 1% SMD
5	R224, R229, R230, R234, R237	470K-S2		Resistor 5% 1W SMD
1	C222	470N/275V-X2	104.131	Capacitor X2
2	C218, C219	470U/16V-E	104.053	ELKO
3	R208, R210, R228	47K-S		Resistor 1% SMD
1	C223	47U/35V-E	104.033	ELKO
1	R221	4M7-S		Resistor 1% SMD
1	W200	60-0013-01	500.089	0,5mm2 brown L=60mm E1:soldered 5mm; E2: 2,8x0,8
7	T200, T201, T203, T204, T206, T208, T209	BC846B		Transistor SMD
2	T202, T205	BC856B		Transistor SMD
1	T207	BUP314	105.154	IGBT 35A
1	D209	BY550	105.050	Diode 1000V 5A
1	D200	BZV55C18V		Diode Zener
1	D208	BZV55C4V7		Diode Zener
1	J202	CSM-030A1	110.136	Power Connector 3 pol.
1	J203	CSM-040A1	110.135	Power Connector 4 pol.
3	M202, M203, M204	DIN7985-M3X8	211.203	SCREW DIN7985 M3x8
1	M200	DIP-28P-7,62		Dual Inline Socket 28P 7,62mm
1	L200	L2X5MH/5A	100.049	Inductor 2x 5mH 5A

1	U206	L4941BDT		Regulator LDO 5,0V SMD
1	D201	LL4148		Diode SMD
1	D202	LM335Z	105.201	Sensor Temp.
1	U203	LM393D		COMP SMD
1	X201	LOTPAD		
1	U201	M74AC573M		Latch SMD
1	J201	MM-F14POL		Mico Match Federleite 14POL
2	J200, J204	MOLEX6410-2P	110.072	Connector 2P LP
1	R240	NTC-1R0		NTC 1R0 16A
1	R225	NTC-33R		NTC 33R
1	VR200	P2K0	109.023	Trimmer
1	U200	80.0003.02	105.145SRX	uC Style RX
1	M201	PR234-37,5-AL		Heatsink
1	Q200	Q-4,0M-SMD		Quarz SMD
1	OK200	SFH6156-3T		Optocoupler Transistor SMD
1	J205	SL 11/240/12 Z	110.130	Connector LP 12P
2	D203, D204	SM4007		Diode 1A 1000V SMD
1	TR200	SNT6WP1-6S2-8		Transformator SNT 6VA 85-265V 1x8V 1x6V
2	D206, D207	SS16		Shottky 1A Diode SMD
1	U204	ST93C06M		EEPROM SMD
1	U205	TNY264G		Switch Mode Controller 6W
1	VDR200	VDR275VAC	111.061	Varistor 275VAC

Adjustment (50.0008.03)

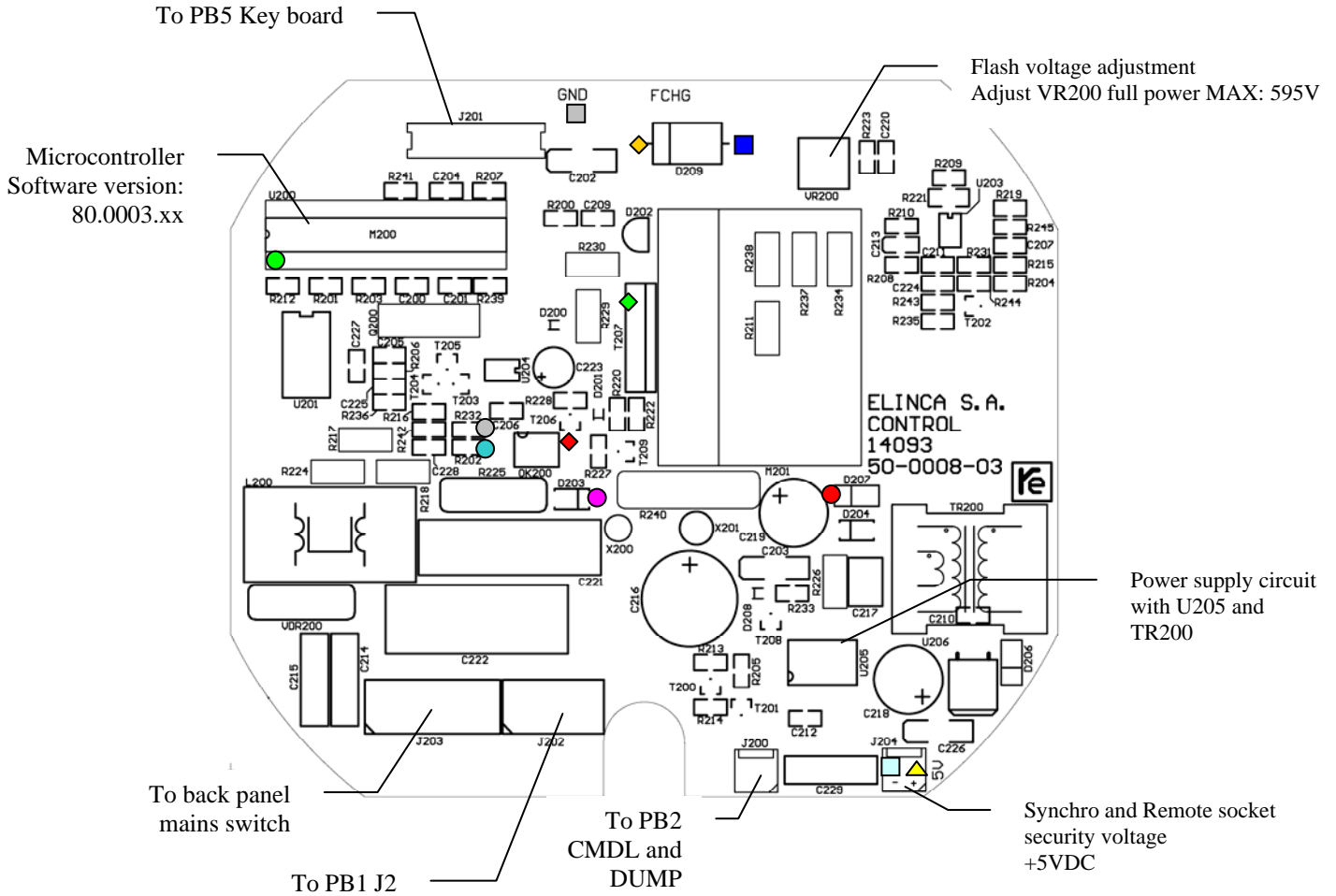
Flash voltage adjustment for all Style RX units

1. Open the discharged unit
2. Connect the plus pole of the Voltmeter (set to High Voltage >600V) to PB3 Measurement pin "HTD"
3. Connect the negative pole of the Voltmeter (set to High Voltage >600V) to PB3 Measurement pin "NSYS"
4. Connect unit to mains supply and switch unit on
5. Check Voltmeter if voltage is always lower than 600V
6. Increase the power to maximum and check always the flash voltage
7. Adjust VR200 full power to a maximum flash voltage of 595V to 600V
8. Verify if the voltage is equilibrated between negative capacitors and positive capacitors (difference max: 20Vdc)

(check PB3 documentation above)

Assembly drawing (PCB release 50.0008.03) Board 14433

Top Overlay



Ground

- 250VDC .. 350VDC
- +5V
- +5V (0V= μ C Reset)
- Charge: approx. 4.5V on charge
- Load: 0V on charge

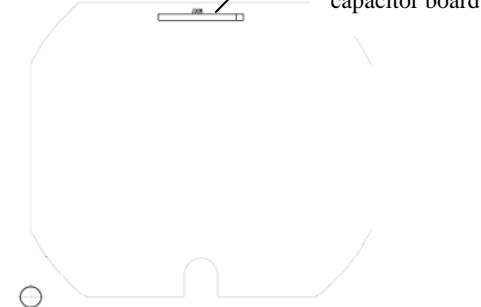
ATTENTION: HIGH VOLTAGE

- Charge circuit Ground !
- ◆ 230VAC LSYS
- ◆ +18VDC
- ◆ +18VDC on charge

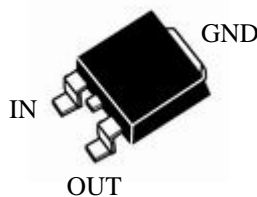
Security Ground for Remote and Synchro Supply

- ▲ +5VDC

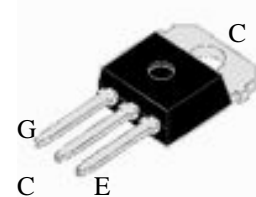
Bottom Overlay
(top view)



U206: L4941BDT



T207: BUP 314

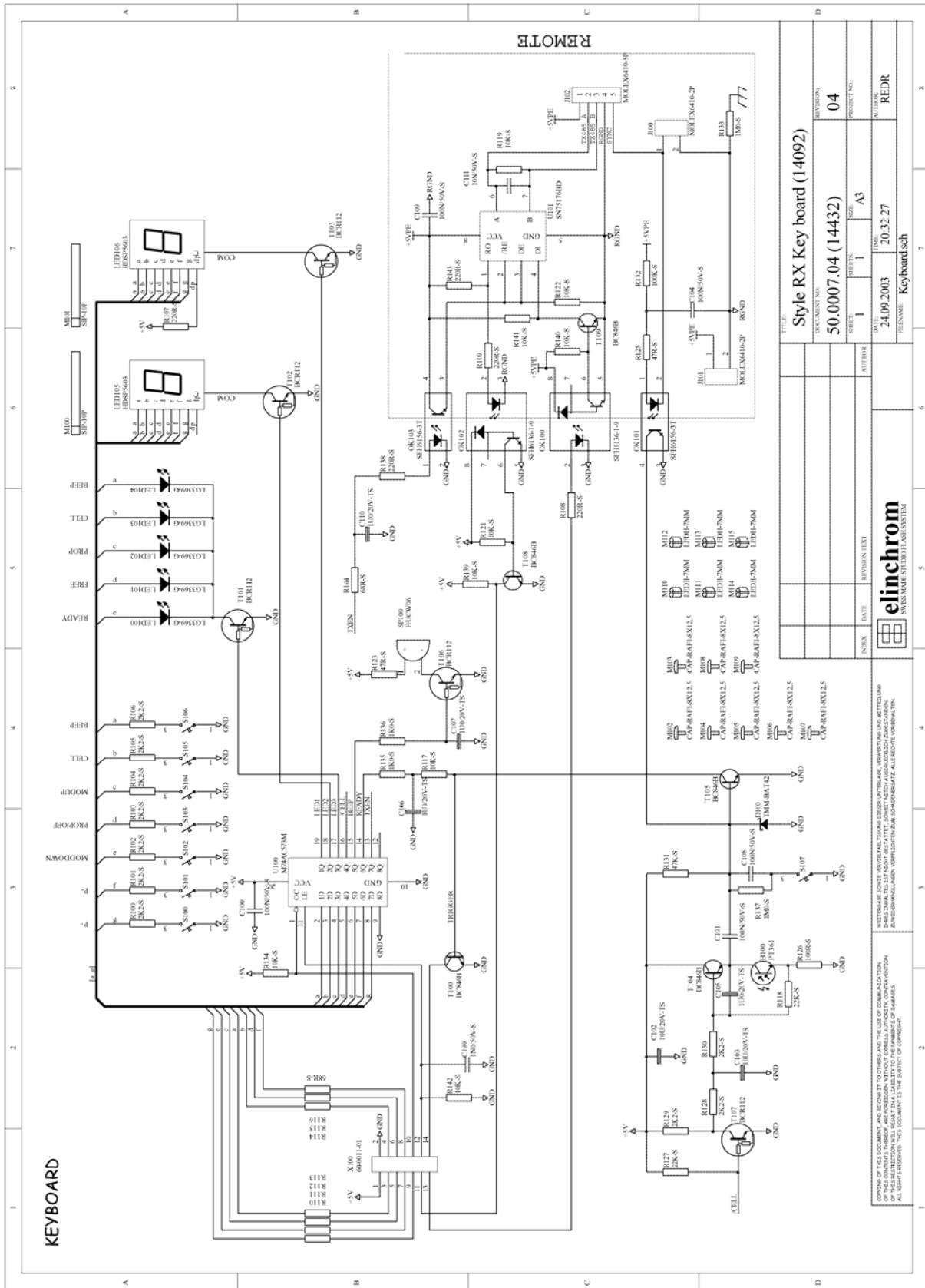


PB5: Key board 14432

Style 300RX / 600RX / 1200RX (14432)

Schematics (PCB release 50.0007.04)

Note !
 This board is part of
Exchange Service



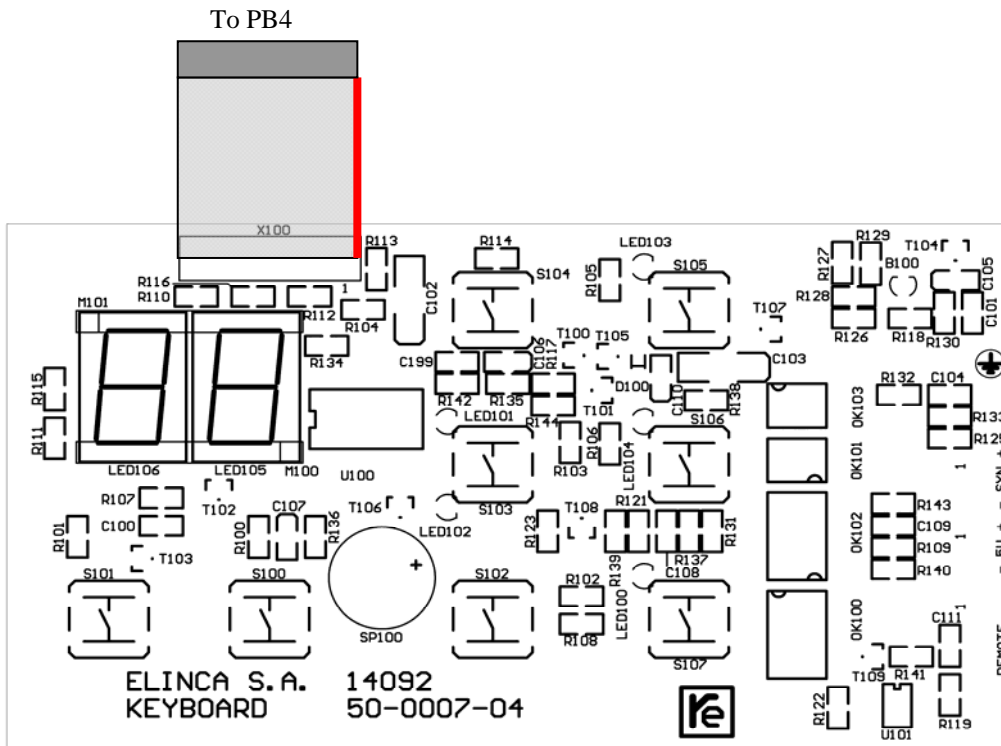
Bill of materials (50.0007.04)

Note: This board is part of exchange service

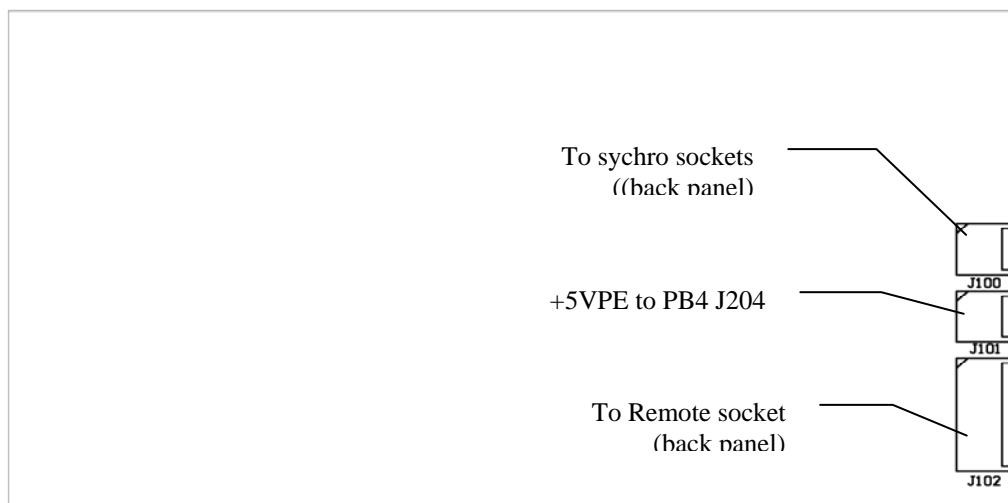
<i>Quantity</i>	<i>Components</i>	<i>Comment</i>	<i>ELINCA_N°</i>	<i>Description</i>
1	R132	100K-S		Resistor 1% SMD
5	C100, C101, C104, C108, C109	100N/50V-S		Capacitor SMD
1	R126	100R-S		Resistor 1% SMD
9	R117, R119, R121, R122, R134, R139, R140, R141, R142	10K-S		Resistor 1% SMD
1	C111	10N/50V-S		Capacitor SMD
2	C102, C103	10U/20V-TS		Capacitor Tantal SMD
2	R135, R136	1K0-S		Resistor 1% SMD
2	R133, R137	1M0-S		Resistor 1% SMD
1	C199	1N0/50V-S		Capacitor SMD
4	C105, C106, C107, C110	1U0/20V-TS		Capacitor Tantal SMD
5	R107, R108, R109, R138, R143	220R-S		Resistor 1% SMD
2	R118, R127	22K-S		Resistor 1% SMD
10	R100, R101, R102, R103, R104, R105, R106, R128, R129, R130	2K2-S		Resistor 1% SMD
1	R131	47K-S		Resistor 1% SMD
2	R123, R125	47R-S		Resistor 1% SMD
1	X100	60-0011-01		Flat Cable 14P AWG28 100mm
8	R110, R111, R112, R113, R114, R115, R116, R144	68R-S		Resistor 1% SMD
5	T100, T104, T105, T108, T109	BC846B		Transistor SMD
5	T101, T102, T103, T106, T107	BCR112		Transistor SMD R1/R2=4k7
8	M102, M103, M104, M105, M106, M107, M108, M109	CAP-RAFI-8X12,5	103.102 (female type) 103.105 (male type)	Push button cap 8mm
1	SP100	F/UCW06	107.026	Buzzer 5V with electronic
2	LED105, LED106	HDSP5603	105.158	LED 7SEG green
6	M110, M111, M112, M113, M114, M115	LEDH-7MM	108.030	LED distance holder h=7mm
5	LED100, LED101, LED102, LED103, LED104	LG3369-G	108.031	3mm LED
1	U100	M74AC573M		Latch SMD
2	J100, J101	MOLEX6410-2P	110.072	Connector 2P LP
1	J102	MOLEX6410-5P		Connector 5P LP
1	B100	PT361	105.028	Sensor Photo
8	S100, S101, S102, S103, S104, S105, S106, S107	RACON-8H-S		Push button SMD
2	OK100, OK102	SFH6136-1-9		Optocoupler
2	OK101, OK103	SFH6156-3T		Optocoupler Transistor SMD
2	M100, M101	SIP-10P		Single Inline Socket 10P
1	U101	SN75176BD		RS485 Bus driver SMD
1	D100	TMM-BAT42		Shottky SMD

Assembly Drawings (PCB release 50.0007.04) Board 14432

Top Overlay



Bottom Overlay (top view)



Service Notes / FAQ's

Photo Cell sensitivity

Check Photocell circuitry resistors for correct values

R118, R126, R128, R130

Remote RX

Mechanics

Code numbers:

19340 Universal Digital Remote for all RX Units

- **Style 300 RX**
- **Style 600 RX**
- **Style 1200 RX**
- **Digital 1200 RX**
- **Digital 2400 RX**
- **and future products**

Remote cords

All cables with 5 poles RX connector

- 111.000 Remote cord 1.2m length
- 111.001 Remote cord 2.4m length
- 111.002 Remote cord 4.8m length
- 111.003 Remote cord 9.6m length
- 111.004 Remote cord 19.2m length



Bill of Materials

Note: This board is part of exchange service

This board is not repairable by the importer, it is deliverable only in standard exchange with a guarantee of 2 years (after 2 years guarantee expired , deliverable to a special price)

Quantity	Components	Comment	ELINCA_N*	DESCRIPTION
1	R15	0R0-S		0R bridge SMD
3	C5, C6, C9	100N/50V-S		Capacitor SMD
9	R16, R21, R22, R23, R24, R25, R26, R27, R28	100R-S		Resistor 1% SMD
4	R4, R18, R19, R20	10K-S		Resistor 1% SMD
2	C10, R29	10N/50V-S		Capacitor SMD
3	C1, C2, C3	10U/20V-TS		Capacitor Tantal SMD
2	C7, C8	15P/50V-S		Capacitor SMD
1	C4	1U0/20V-TS		Capacitor Tantal SMD
1	R30	22K-S		Resistor 1% SMD
13	R1, R2, R3, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14	2K2-S		Resistor 1% SMD
1	R17	47K-S		Resistor 1% SMD
4	T1, T2, T3, T4	BC846B		Transistor SMD
3	T5, T6, T7	BCR112		Transistor SMD R1/R2=4k7
1	M1	DIP-28P-7,62		Dual Inline Socket 28P 7,62mm
2	LED1, LED2	HDSP7803		LED 7SEG green
5	LED3, LED4, LED5, LED6, LED7	LG3369-G		3mm LED
1	D1	LL4148		Diode SMD
1	U1	80.0005.02		uC Microchip Remote RX
1	B1	PT361	105.028	Sensor Photo
1	Q1	Q-4,0M-SMD		Quarz SMD
9	S1, S2, S3, S4, S5, S6, S7, S8, S9	RACON-8H-S		Push button SMD
1	U2	SN75176BD		RS485 Bus driver SMD
9	M12, M13, M14, M15, M16, M17, M18, M19, M20	CAP-RAFI-8X12,5	103.102 (female type) 103.105 (male type)	Push button cap 8mm

Service Notes / FAQ's

Photo Cell sensitivity

Check Photocell circuitry resistors for correct values
R3, R14, R15, R16

Display or Remote problems

Check if R29 = 10nF !

(or R29 = 10k parallel 10nF)

Assembling drawing

Note !
The electronic board is part of Exchange Service

This board is not repairable by the importer, it is deliverable only in standard exchange with a guarantee of 2 years (after 2 years guarantee expired , deliverable to a special price)

