SUN ITALIA

Technical Handbook
&
User Manual

KING 420US

Distributed exclusively in North America by Sun Italia, Inc.
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INDEX

SECTION		PAGE
1.0	INTRODUCTION	3
2.0	SAFETY WARNINGS	3
2.1	Photosensitivity – know the symptoms	
3.0	FEDERAL REGULATIONS	4
3.1	Guidelines for the Salon Owner	
3.2	Labeling requirements	
3.3	Timer requirements	
3.4	Protection from UV lamps	
3.5	Certified UV lamps	
3.6	Protective eyewear	
3.7	Prescription and non prescription drugs	
4.0	INSTALLATION REQUIREMENTS & GUIDELINES	7
4.1	Space requirements	
4.2	Electrical requirements	
4.3	Ventilation requirements	
4.4	Equipment check list	
4.5	Step by step installation instructions	
5.0	USER INSTRUCTIONS	8
5.1	Fundamental precautions	
5.2	Instructions for use	
5.3	Funtioning	
6.0	PROGRAMMING INSTRUCTIONS	11
7.0	PREVENTIVE MAINTENANCE & CLEANING	12
7.1	Sanitize	
7.2	Log UV Output	
7.3	Cleaning the UV Filters	
7.4	Replacing the Lamp Acrylics	
7.5	Replacing the UV Filters	
7.6	Lamp replacement	
7.7	Certified UV Lamps	
7.8	Maintenance Log Sheets	
9.0	TECHNICAL SPECIFICATIONS	17
10.1	TROUBLESHOOTING & ADJUSTMENTS	18
11.0	ELECTRICAL DIAGRAMS	20/27

1.0 INTRODUCTION

For the best results and for the safety of your clients, please read this Manual carefully. Please pay particular attention to the correct safety, installation and maintenance instructions.

It is important that this Manual stays with the tanning system, particularly if the unit is relocated for any reason.

Note that improper electrical installation of the equipment or unauthorized substitution of electrical components or optical devices (lamps, filters etc.) may invalidate FDA and/or electrical standards (ETL, UL) conformance.

The King 420, distributed in North America exclusively by Sun Italia, combines a futuristic Italian design with state of the art components to offer your Salon clients a truly unique tanning experience.

With its breathtaking open design (no claustrophobia for even the most sensitive of customers) and 360° all round tanning rays (no need to turn over halfway through the session), your clients are sure to be delighted by the comfort and the effectiveness of their 12 minute tan. And the advanced body cooling, integrated ventilation system ensures a really cool experience.

2.0 SAFETY WARNINGS

2.1 Photosensitivity – know the symptoms

Although natural tanning by the sun, and tanning by exposure to ultraviolet lamps is popular throughout the world, there is still a great deal of confusion regarding the risks and benefits of exposure to ultraviolet rays.

What is known however is that some are more susceptible to sunburn than others, and we generally classify this susceptibility by skin type. Type I will burn easily while Type IV is insensitive to the sun and rarely burns.

However, an individual's sensitivity to ultraviolet light can be heightened by the presence of certain chemicals on the skin - from the use of common skin care products and cosmetics for instance. These chemicals are called photo sensitizers and it is important for tanning salon operators to be able to identify them and to recognize the symptoms.

Photosensitivity can cause a variety of symptoms but is usually observed as red or discolored patches on small areas of the body. It can also be seen as blotchy form which is sometimes caused by heat as well as ultraviolet radiation. Other symptoms include rashes and uneven pigmentation, sometimes accompanied by itching.

Diseases, allergies, medications, cosmetics and lotions can increase photosensitivity, leading to some of the symptoms described. Photosensitizing diseases include Psoriasis (uncontrolled skin cell growth), Porphyria (severe, uncontrolled melanin production) and Lupus Erythematosys (swelling of nerve ends)

Medications such as diuretics, birth control pills, antibiotics, tranquilizers and high blood pressure prescriptions, and other over the counter drugs may affect ones photosensitivity.

The safety and well being of your Salon clients is of the utmost importance, so if there is ever any doubt about an individual's photosensitivity, then please do not allow them to tan. If a reaction is noted or brought to your attention, suggest that your client checks with their physician. Always have your clients read and sign a consent form before a tanning program commences.

3.0 FEDERAL REGULATIONS

3.1 Guidelines for the Salon Owner and Operator

Many States are now actively enforcing Federal Regulations for Sunlamps and Sunlamp Products as defined by the US Department of Health and Human Services publication 21 CFR. These regulations have been in effect for many years and are common sense, minimum safety precautions that all of us in the Tanning Industry should welcome and support.

In the interests of promoting a safe tanning environment for our customers, Sun Italia™ is including a simplified form of these guidelines in all User Manuals, and we are ready to help any Salon in demonstrating compliance in their Salon.

Federal Regulations for sunlamp products require compliance in the following categories:

- Labeling
- Timers
- Protection from UV lamps
- Certified UV lamps
- Protective eyewear
- Photosensitivity information

In addition to these mandatory Federal Regulations, we at Sun Italia™ recommend the following health and safety precautions:

- Warning Posters
- Equipment Maintenance Logs
- Consumer Use Records
- Trained Operators
- Under age 14 prohibition
- Age 14 through 17 restrictions
- Pregnancy prohibition
- Contact Lens removal
- New and yearly client consultations

3.2 LABELING REQUIREMENTS FOR SUNLAMP DEVICES

3.2.1 Warning Labels (21 CFR 1040.20(d)(1)

- Labels must be affixed to all tanning systems in your salon, to inform the user of possible danger in their exposure to ultraviolet radiation.
- DANGER. Ultraviolet radiation. Follow instructions. Avoid overexposure. As with natural sunlight, overexposure can cause eye and skin injury and allergic reactions. Repeated exposure may cause premature ageing of the skin and skin cancer.
- WEAR PROTECTIVE EYEWEAR. FAILURE TO MAY RESULT IN SEVERE BURNS OR LONG TERM INJURY TO THE EYES. DO NOT USE THE SUNBED IF ANY OF THE BLUE FILTERS ARE BROKEN

- Medications or cosmetics may increase your sensitivity to ultraviolet radiation. Consult a physician, before using a sunlamp product, if you are using medications or have a history of skin problems or believe yourself especially sensitive to sunlight. If you do not tan in the sun, you are unlikely to tan from the use of this product.
- Minimum use distance is 12 inches. Tanning may appear after one session provided your skin is capable of developing a tan. Allow 24 hours between sessions to obtain a base tan, and up to two times per week to maintain appearance. Note the recommended exposure schedule for this product. If you have a base tan you may start at Week 3 of the schedule.

3.2.2 Recommended Exposure Schedule:

Skin Type	WEEK 1	WEEK 2	WEEK 3	MAXIMUM
Sensitive (I)	Not recommended	Not recommended	Not recommended	Not recommended
Light (II)	3 Minute	5 Minutes	7 Minutes	10 Minutes
Normal (III)	5 Minutes	7 Minutes	10 Minutes	12 Minutes
Dark (IV)	8 Minutes	10 Minutes	12 Minutes	12 Minutes

Skin Type I	Sensitive.	Burns easily and severely. Does not tan.
Skin Type II	Light.	Burns easily and severely. Tans minimally.
Skin Type III	Normal.	Burns moderately. Average tan.
Skin Type IV	Dark.	Burns minimally. Tans easily. Above average tan.

3.2.3 Identification Label

Each tanning device in your Salon must have a Manufacturer's Label affixed to the device and contain the following information:

Name and address of the Manufacturer
Manufacturing Model Number and Serial Number
Date of Manufacture – Month and Year

3.2.4 Certification Label

Each tanning device must have a label certifying that, at the time of delivery of the device, it complied to all applicable standards of the Federal Regulations 21 CFR.

For example:

THIS UNIT IS CERTIFIED TO COMPLY WITH ALL APPLICABLE FEDERAL PERFORMANCE STANDARDS FOR SUNLAMPS AND SUNLAMP PRODUCTS AS DETAILED IN THE UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLICATION NUMBER 21CFR PART 1040.20. ONLY THE FOLLOWING LAMPS ARE CERTIFIED FOR USE IN THIS EQUIPMENT: B.L.V. MHL 1200 and B.L.V. MHL 600

3.3 Federal Requirements for Timers:

Each tanning device is required to have a timer with a maximum timer interval that does not exceed the Manufacturer's maximum recommended exposure time. This maximum exposure time is calculated from the results of precise and extensive measurements mandated by the FDA, using the recommended lamps for that particular device.

No timer interval shall have an error greater than 10%. For instance, if the timer is set to 10 minutes, it must time out between 9 and 11 minutes.

Each tanning device is required to incorporate a control that allows the user to manually switch off the lamps at any time during the session, even if the timer has not timed out.

3.4 Protection from Ultraviolet Lamps:

There shall be physical barriers to protect users of the tanning device from injury caused by touching the lamps, or by breakage of the lamps. The King™ systems use two polished glass UV filters for safety plus acrylic covers for added protection.

3.5 Certified Ultraviolet Lamps

During the Federal Guidelines conformance process, the tanning device Manufacturer completed an exhaustive and precise evaluation of radiation safety using the UV lamps and optical filters designed for use with your particular tanning device.

The only way to ensure an equivalent lamp (and to protect your clients) is to compare that lamp with the original, by accurately plotting radiation output against wavelength. This comparison is the responsibility of the alternate lamp manufacturer and the FDA, and certification of the new lamp is provided only if the lamp is a true equivalent.

Use of non equivalent lamps is a safety hazard to your Clients, and it is the Tanning Salon owner's responsibility to ensure that only original equipment lamps are used, or true FDA certified equivalents.

The surest way to ensure the safety of your customers is to request the lamp manufacturer to provide the FDA conformance number, and for the Manufacturer or Importer of the tanning device to confirm equivalent lamps in writing.

This is probably the most important aspect of tanning safety in your salon, as the wrong lamps (or filters) could change completely the tanning pattern of your device – maximum exposure times and recommended initial exposure times etc. Please take the time to make an informed decision when your lamps need replacing.

3.6 Protective Eyewear

The FDA guidelines require that protective eyewear, that meets or exceeds the requirements of 21 CFR 1040.20, shall be provided for your clients.

It is the responsibility of the Salon Owner to provide each client with properly sanitized protective eyewear before each tanning session, with instructions for its mandatory use. There should be documentation in the salon to verify that the protective eyewear conforms to these Federal standards.

Protective eyewear must be properly sanitized before each use, using an effective sanitizing agent at the right temperature and for the correct length of time. A test kit or other device to measure the concentration of the sanitizing solution (at least daily) is recommended.

3.7 Prescription and non prescription drug information

Your Salon should maintain a list of common photosensitising agents available for inspection by your Clients.

Abnormal or increased sensitivity or burning may be caused by certain foods, medications, cosmetics or skin care products. Some prescription and non prescription drugs, including but not limited to tranquilizes, diuretics, anti biotics, hypertension medication and birth control pills may cause this effect.

Posters and leaflets are available from the Sun Tanning Association for Education. Telephone number (301) 698 9707.

4.0 INSTALLATION REQUIREMENTS & GUIDELINES

4.1 Space Requirements

The sunbed is 86” long, 65” deep and 81” high. However, for installation and maintenance of the bed, there should be a minimum clearance of 12 inches from the rear of the bed to the wall, and 18 inches clearance at both ends.

The recommended room size is 12 ft by 12ft with a minimum of 9ft by 9ft if necessary.
The minimum door size is 36 inches wide. Note that the bed is assembled in the room.

A step up transformer is supplied with the sunbed. This should be placed to the right, rear of the sunbed. The dimensions of the transformer are 24 inches by 14 inches by 24 inches tall. The Sun Italia™ supplied disconnect box is mounted on the transformer.

The ventilation system uses 2 twelve inch diameter, flexible exhaust tubes, attached to the rear of the bed and exiting through the ceiling of the room or directly to the outside air through the wall if available. 2 twelve inch fans exhaust air through the flexible tubes. The integral body cooling system includes a coupling to allow the salon to, optionally, connect cool air to the system.

Note that the construction of the room should allow for a make up air flow of 3,000 cubic ft per minute (cfm). If the room is airtight, this will prevent the proper flow of exhausted hot air.

4.2 Electrical Requirements.

- The supply voltage required is 208 to 240 Volts, 3 Phase and Ground. At 208V the load is 100 Amps per Phase and at 240V it is 87 Amps per Phase. The equipment draws approximately 55 Amps per phase on the secondary side (380V) of the supplied transformer. For a 240 VAC supply, use a 100 amps per phase circuit breaker, and a 125 amps per phase circuit breaker for a 208 VAC supply. **IF THE SALON SUPPLY HAS A HI (CRAZY) LEG, A SPECIAL TRANSFORMER IS REQUIRED. PLEASE CONTACT TANTECH (PETE OR PATRYK) AT 800 550 4056. NOTE THAT THE INRUSH CURRENT ON THIS SPECIAL TRANSFORMER REQUIRES A 150 AMPS PER PHASE BREAKER**

- The customer is required to supply the appropriate 3 phase, 208/240V power and ground connections, the circuit breakers, and the wiring to the Sun Italia ™ supplied power transformer. Sun Italia ™ supplies the wiring from the secondary of the transformer (380V, 3 Phase plus Ground plus Neutral) to the Sun Italia ™ supplied, transformer mounted, Emergency Disconnect Box , only if the transformer is in the same room as the King. The customer supplies this transformer secondary wiring if the transformer is not in the same room.

- Sun Italia™ will supply a 10ft, 380V, 3 Phase Neutral and Ground, flexible cable from the base of the sunbed to the Sun Italia™ supplied, Emergency Disconnect box which is activated by the Emergency Stop Button or the back up timer on the Sunbed.

4.3 Ventilation Requirements

- The hot air generated by the high pressure lamps is exhausted from the tanning room by two high efficiency fans (supplied by Sun Italia™) located at the exhaust outlets.

- Two, wire reinforced, opaque plastic tubes are connected at the rear of the unit, and are fed through the tanning room ceiling, exhausting the forced hot air directly outside (roof or wall mounting), or simply to the ventilated space.

- Care must be taken to allow approximately 3,000 cubic feet per minute of make up air back into the tanning room. If the make up air is blocked from entering the room, the partial vacuum created will reduce the efficiency of the hot air exhaust system.

4.4 Equipment Check List

King 420 sunbed
Accessories including:

Technical Manual
Sponge Air Filters (2)
Eye Protection Goggles (2 pairs)

After unpacking, check for any visible damage that may have been caused during delivery of the equipment. Please retain the packing materials to support your claim for any damages.

4.5 Step by Step Installation Instructions

Refer to the separate King, step by step installation Instructions with photographs

5.0 USER INSTRUCTIONS

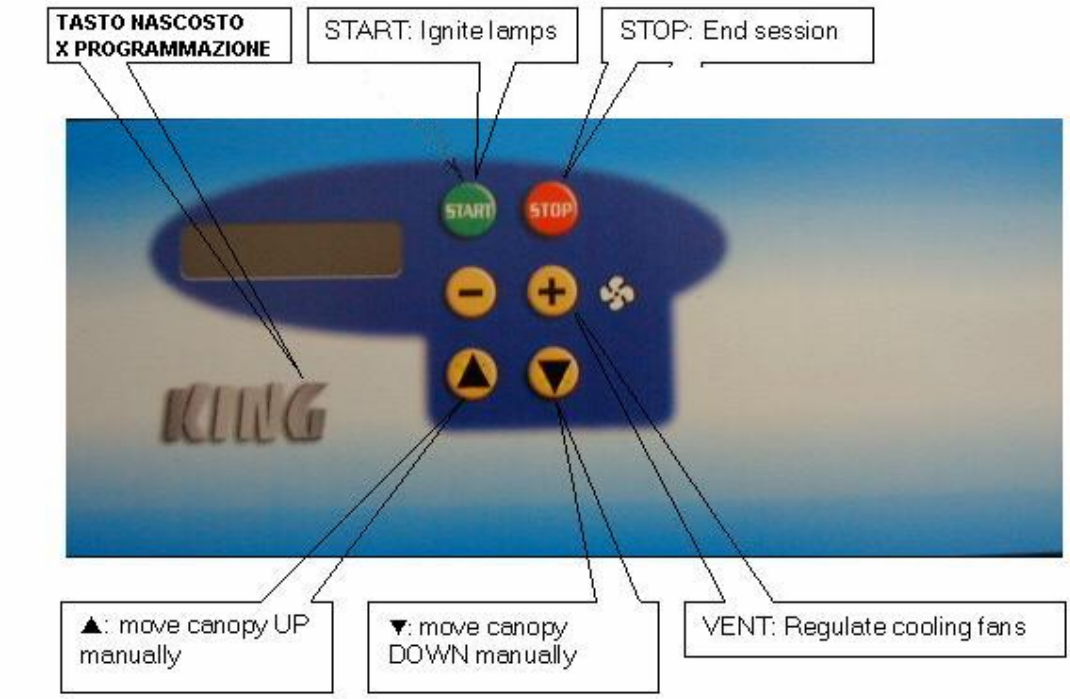
5.1 Fundamental precautions:

- Do not touch or work on the equipment with damp or wet hands.
- Do not pull the power cables to help move the equipment.
- Do not allow moisture to damage the equipment.
- Do not allow the equipment to be used by children or without trained supervision.
- Do not switch on the equipment while unattended.
- Be aware that some of the internal electrical and optical components operate at high temperatures. So wait a few minutes, after switching off and before removing protective covers, to allow for the components to cool before touching them.
- During normal operation, the cooling fans will remain on for a period after the lamps are turned off. Do not interrupt this cooling cycle or components may be damaged and the effectiveness of the lamps reduced.
- The use of protective goggles is mandatory as is adherence to the posted exposure schedule.

5.2 Instructions for Use

- Lie down comfortably on the acrylic, with your head to the right
- Protect your eyes with the supplied goggles (remove any contact lenses)
- Press START to begin the tanning session. (The salon may use an external timer such as T MAX, in which case the Start Button will not be used)
- Push the DOWN arrow to lower the canopy
- You may push the stop button at any time to end the session
- Adjust the cooling to your comfort by pressing VENT and then the + or – buttons.
- At the end of your session the lamps will switch off automatically and the canopy will be raised. Note that the equipment cooling lamps will continue to run for a time after the lamps are switched off.
- There is also an EMERGENCY RED PUSH BUTTON which will instantly remove electrical power from the equipment. To raise the canopy under battery control, simply push the Emergency Button one more time.

Hidden Key for Programming (Tasto Nascosto. . .)



The control board (above) is used to check the status of the King and to control various functions:

1. To set session time
2. To monitor the operating temperature of the sunbed
3. To control the speed of the body fans
4. To check various timers that monitor run time and maintenance schedules etc.
5. To provide an optional remote link via an RS485 port

Control and Timing Functions

Once the display is turned on the following message appears:

PLEASE
WAIT

Then, after the automatic check of the electronics:

READ THE WARNINGS
10 MIN

The message “READ THE WARNINGS” appears on the display and also the previously set session time (see Programming) starts to flash.

To begin the session press START, and after two seconds the following message appears:
TIME REMAINING in minutes and seconds

REMAINING 9:59
0 0 0 0 0 0 0 0

The session has now started and the lamps turn on. After a delay the body fans start at the MINIMUM speed. To increase the fan speed press the button V+, and to decrease the speed press the V- button. The fan speed is shown in the lower line of the display. Note that the remaining session time is continuously updated.

During the session it is possible to monitor the room temperature by pressing the START button. The display will show the temperature in degrees centigrade and the remaining session time:

30 C 9:42
0 0 0 0 0 0 0 0

At the end of the session the lamps are extinguished automatically and the cool down cycle begins with the equipment fans at maximum speed for the programmed time (normally 3 to 4 minutes). The display will indicate:

COOLING
APPLIANCE

To end the session at any time during the session, press the STOP button.

6.0 USER PROGRAMMING

To access the Programming Mode, press buttons V+ and V- at the same time for about 3 seconds.

The following will appear on the display:

U1 SESSION TIME
MINUTES: 10

To change the session time press V+ (increase time) or V- (decrease time) for the required time.
To memorize and to pass to the next program step, press V+ and V- at the same time

The display will then show:

U2 REMOTE
CONTROL

Press either V+ or V- to set the type of function desired AUTONOMOUS (this is the normal mode) or SERIAL. To memorize and to pass to the next program step
press V+ and V- at the same time

The display will then show:

U3 DEVICE
NUMBER
1

A device number is required only when the device is in Serial Function Mode (RS485) to set the recognition number. Press either V+ or V- to change to the desired number.
To memorize and to pass to the next program step press V+ and V- at the same time.

The display will then show:

U4 SESSION
NUMBER
10

This is a read only display and shows the total number of sessions.
To pass to the next program step press V+ and V- at the same time

The display will then show

U5 PARTIAL
COUNTER

MINUTES: 10

The minutes exceeding the hour of the time the device was in use. To pass to the next program step press V+ and V- at the same time.

The display will then show

U6 HOUR COUNTER

HOURS: 10

The hours that the device was in use. To pass to the next program step, press V+ and V- at the same time.

Programming is now complete and the regular display will appear.

7.0 PREVENTIVE MAINTENANCE AND CLEANING

Disconnect electrical power from the equipment before working on any part of the sunbed.

- To clean the external structure use only a soft cloth, clean water and neutral soap if necessary. Never use alcohol or chemicals or abrasives of any kind.
- Clean the UV filters only with alcohol or proprietary glass cleaners. Never use abrasives. After cleaning, check the integrity of the adhesive that keeps the filter in place. Replace as necessary.
- Do not touch the lamp glass, even when cold. Remove touch prints with a clean soft cloth moistened with alcohol if necessary. Clean the lamps and reflectors with a dry, soft brush or lint free cloth.
- Check the uninterrupted flow of cooling air.

1. The lamps should be replaced approximately every 1,000 hours of operation.
2. Periodically verify the operation of the lamp cooling fans.
3. Do not obstruct air vents with towels etc..
4. Do not interrupt the 3 or 4 minute cooling cycle between sessions.
5. Periodically lubricate all moving parts.
6. Check and log the lamp output weekly.
7. Periodically check the correct operation of the Emergency Push Button, the override timer and the calibration of the external timer.

7.1 BEFORE EACH TANNING SESSION. SANITIZE

- Thoroughly clean and sanitize the unit, particularly the body acrylic and the head rest.
- Clean the 4 lamp acrylics and the body acrylic.
- Clean the Control Panel.

7.2 EVERY 50 HOURS (WEAR PROTECTIVE GOGGLES) LOG UV OUTPUT

- Measure and log the power output of each lamp at the maximum reading points along the horizontal acrylics. Compare with the readings at installation.

- Check that there are no broken or misaligned clear or cobalt blue filters. Replace immediately if any are broken. Note that there is a micro switch on each filter to detect broken or misaligned filters. If one of these micro switches is activated, the lamps will not ignite and a red warning LED (to the right of each lamp assembly will light up)

7.3 EVERY 200 HOURS – CLEANING THE UV FILTERS

- Carefully remove each horizontal acrylic by removing the two plastic end caps on each lamp assembly (secured by one screw each). Slide the acrylic to the left or right if you have room, or bend each acrylic, and remove it from the front of each lamp assembly.

- The filter housings in each assembly are secured with one screw. Simply loosen this screw and push the individual filter assembly to the right and pull each assembly forward. Each filter assembly slots into two holes so by mowing the assembly to the right you allow the filter assembly to be released.

- Slide out the clear filter first and then the blue filter from their spring loaded slots. Gently clean both with an alcohol moistened soft cloth and replace in the housing.

- Take this opportunity to clean each reflector and lamp with a soft brush or alcohol moistened soft cloth. Do not touch the glass of the lamps. Remove any accidental finger prints from the lamps with the alcohol moistened soft cloth.

- Replace the filter housing by engaging the slots at the back of the filter housing and moving the whole assembly to the left. Tighten down on the previously loosened screw.

- Replace acrylics carefully and replace the plastic end caps. Wear protective goggles before starting the unit to check ignition on all lamps and the integrity of all filters.

7.4 REPLACEMENT OF THE LAMP ACRYLICS

- Carefully remove the horizontal acrylic by removing the two plastic end caps on the lamp assembly (secured by one screw each). Slide the acrylic to the left or right if you have room, or bend each, and remove it from the front of the lamp assembly.

- Replace the new acrylic carefully and replace the plastic end caps. Wear protective goggles before starting the unit to check ignition on all lamps and the integrity of all filters.

7.5 REPLACEMENT OF THE UV FILTERS

- Carefully remove the appropriate horizontal acrylic by removing the two plastic end caps on the lamp assembly (secured by one screw each). Slide the acrylic to the left or right if you have room, or bend the acrylic, and remove it from the front of each lamp assembly.

- The filter housings in each assembly are secured with one screw. Simply loosen this screw and push the individual filter assembly to the right and pull each assembly forward. Each filter assembly slots into two holes so by mowing the assembly to the right you allow the filter assembly to be released.

- Remove the filter to be replaced. Gently clean both with an alcohol moistened soft cloth and insert the replacement filter.

- Replace the filter housing by engaging the slots at the back of the filter housing and moving the whole assembly to the left. Tighten down on the previously loosened screw

- Replace the acrylic carefully and replace the plastic end caps. Wear protective goggles before starting the unit to check ignition on all lamps and the integrity of all filters.

7.6 LAMP REPLACEMENT

- Remove the appropriate filter assembly as in 7.5

- Remove the two screws securing the lamp and reflector. Note that the reflector is positioned INSIDE the housing.

- Unscrew the two terminal screws securing the two lamp wires to the white ceramic block.

- Insert the new lamp in the reflector clips, and secure the wires to the ceramic block.

- Replace the reflector and lamp assembly inside the housing and secure with the two screws.

- Replace the filter assembly and the lamp acrylic. Secure the two end caps.

7.7 CERTIFIED ULTRAVIOLET LAMPS

During the Federal Guidelines conformance process, the tanning device Manufacturer completed an exhaustive and precise evaluation of radiation safety using the UV lamps and UV filters designed for use with your particular tanning device.

The only way to ensure an equivalent lamp (and to protect your clients) is to compare that lamp with the original, by accurately plotting radiation output against wavelength. This comparison is the responsibility of the alternate lamp manufacturer and the FDA, and certification of the new lamp is provided only if the lamp is a true equivalent.

Use of non equivalent lamps is a safety hazard to your Clients, and it is the Tanning Salon owner's responsibility to ensure that only original equipment lamps are used, or true FDA certified equivalents.

The surest way to ensure the safety of your customers is to request the lamp manufacturer to provide the FDA conformance number, and for the Manufacturer or Importer of the tanning device to confirm equivalent lamps in writing.

This is probably the most important aspect of tanning safety in your salon, as the wrong lamps (or filters) could change completely the tanning pattern of your device – maximum exposure times and recommended initial exposure times etc. Please take the time to make an informed decision when your lamps need replacing.

7.8 MAINTENANCE LOG SHEETS

1) Date: hours operation:_____
Maintenance Category (description):_____

☐ Measure U.V. Radiation	☐ Check air filters	☐ Replace lamps
☐ Check lamp cooling fans	☐ Exhaust system	☐ Replace filters U.V.
☐ Check external timer	☐ Push-button Emergency	☐ Replace acrylics
☐ Check UV Filters	☐ Clips connection	☐ Replace Igniters
☐ Lubrication of moving parts	☐ Timer emergency	☐ Replace reflectors

Technician _____ Manager _____

1) Date: hours operation:_____
Maintenance Category (description):_____

☐ Measure U.V. Radiation	☐ Check air filters	☐ Replace lamps
☐ Check lamp cooling fans	☐ Exhaust system	☐ Replace filters U.V.
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Technician _____ Manager _____

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☐ Check UV Filters	☐ Clips connection	☐ Replace Igniters
☐ Lubrication of moving parts	☐ Timer emergency	☐ Replace reflectors

Technician _____ Manager _____

9.0	TECHNICAL SPECIFICATIONS
Model Number	KING 4 US
Dimensions	Length : 87 inches Width : 65 inches Height : 91 inches
Tanning Surface	77 inches by 39 inches
Minimum Room Dimensions	9ft by 9ft (Recommend 12' by 12')
Total Power	23 KWatts (23 KVA)
UV Lamps	16 x 1,200W B.L.V. MHL 1200 23110602. 4 x 600W BLV MHL 600
Power Supply	208 - 240 VAC, 3 Phase plus Ground, 50 – 60 Hz
Load	60 Amps per phase at 208V, 50 Amps at 240V Approximately 39 Amps per phase at 380V on the secondary side of the transformer.
External Transformer	208/240 to 380V 3 Phase Transformer. 24" x 14" x 24" 250lbs
Make up air required	3,000 cubic ft/min
UV Filter (blue)	EuroeleKtrica 240 x 270 mm. Tonianticato 3mm
UV Filter (clear)	EuroeleKtrica 240 x 270 mm. Tempered glass 3mm
Maximum exposure time	12 minutes
Exhaust	Two flexible tubes, diameter 12 inches (300 mm). Max 16 ft each
Features:	4 levels of body cooling Easy access component trays Temperature sensors Diagnostic display 360° tanning experience

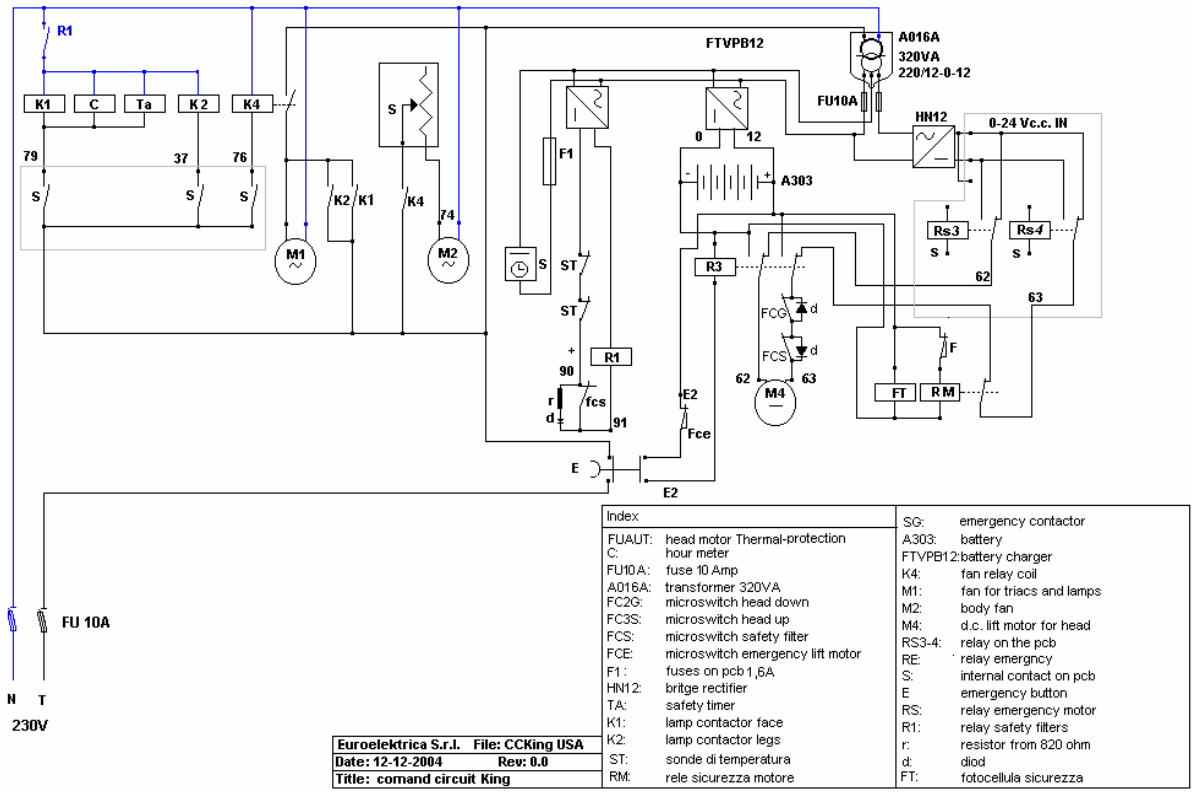
10.1 To adjust the Upper Limit Switch

This adjustment will allow you to control how far the canopy is raised between sessions. It is checked during installation and, normally, no subsequent adjustment is required. However, if the canopy is lifting too high, or not high enough, here is the step by step adjustment procedure:

i. Switch off all power to the machine and disconnect one lead of the battery inside of the right hand component drawer. Note that to access the battery, the drawer must be opened about two thirds of the way. Make sure the cables are disconnected from the main control board, otherwise the cables will be damaged as the drawer is opened this far.
ii. Remove the 2 screws and washers securing the rear metal flaps (2) to the iron bar hinge.
iii. On the left side, remove the two screws securing the upper limit micro switches. Remove the micro switch assembly for easy access.
iv. Adjust the 2 micro switches equally, back or forward to adjust the height to which the canopy is raised during sessions. Positioning the micro switches forward (away from the rear of the machine) will reduce the height to which the canopy is raised. The micro switches are secured by a nut and a lock nut.
v. Replace the micro switch assembly, connect up the battery and replace the cables on the main printed circuit board. Turn on power to the bed.
vi. Check the lift operation. Secure the rear metal flaps when working correctly. Close right hand drawer.

ELECTRICAL DIAGRAMS

Control Circuits



Euroelektrica S.r.l. File: CCKing USA
Date: 12-12-2004 Rev: 0.0
Title: comand circuit King

Index			
FUAUT:	head motor Thermal-protection	SG:	emergency contactor
C:	hour meter	A303:	battery
FU10A:	fuse 10 Amp	FTVPB12:	battery charger
A016A:	transformer 320VA	K4:	fan relay coil
FC2G:	microswitch head down	M1:	fan for triacs and lamps
FC3S:	microswitch head up	M2:	body fan
FCS:	microswitch safety filter	M4:	d.c. lift motor for head
FCE:	microswitch emergency lift motor	RS3-4:	relay on the pcb
F1 :	fuses on pcb 1,6A	RE:	relay emergncy
HN12:	britge rectifier	S:	internal contact on pcb
TA:	safety timer	E	emergency button
K1:	lamp contactor face	RS:	relay emergency motor
K2:	lamp contactor legs	R1:	relay safety filters
ST:	sonde di temperatura	r:	resistor from 820 ohm
RM:	rele sicurezza motore	d:	diod
		FT:	fotocellula sicurezza

LAMP CIRCUITS

Euroelektrica S.r.l.	**File:** F King
Date: 12-12-2004	**Rev:** 0.0
Title: Power circuit Forza King	

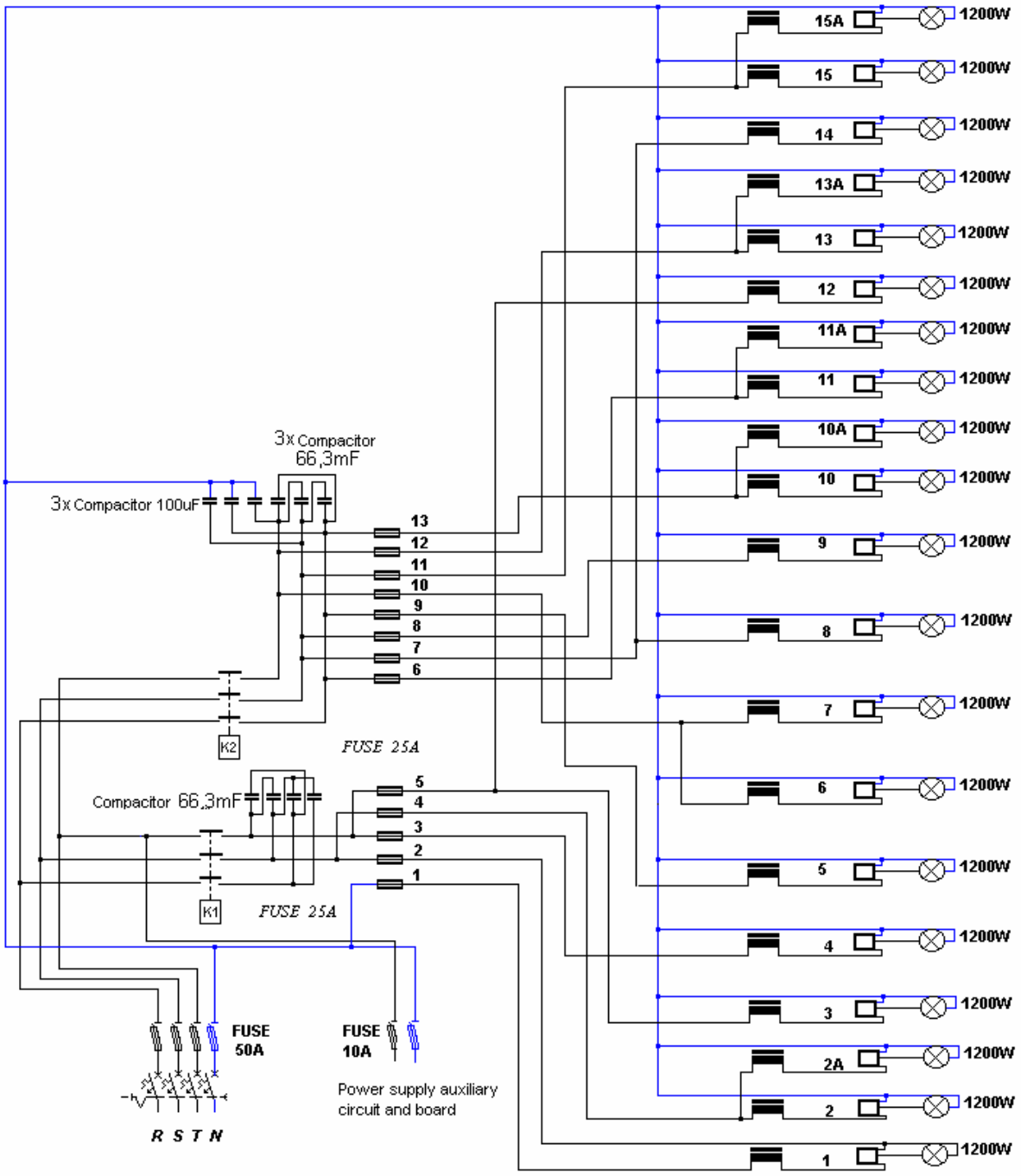
Index

Ballast:

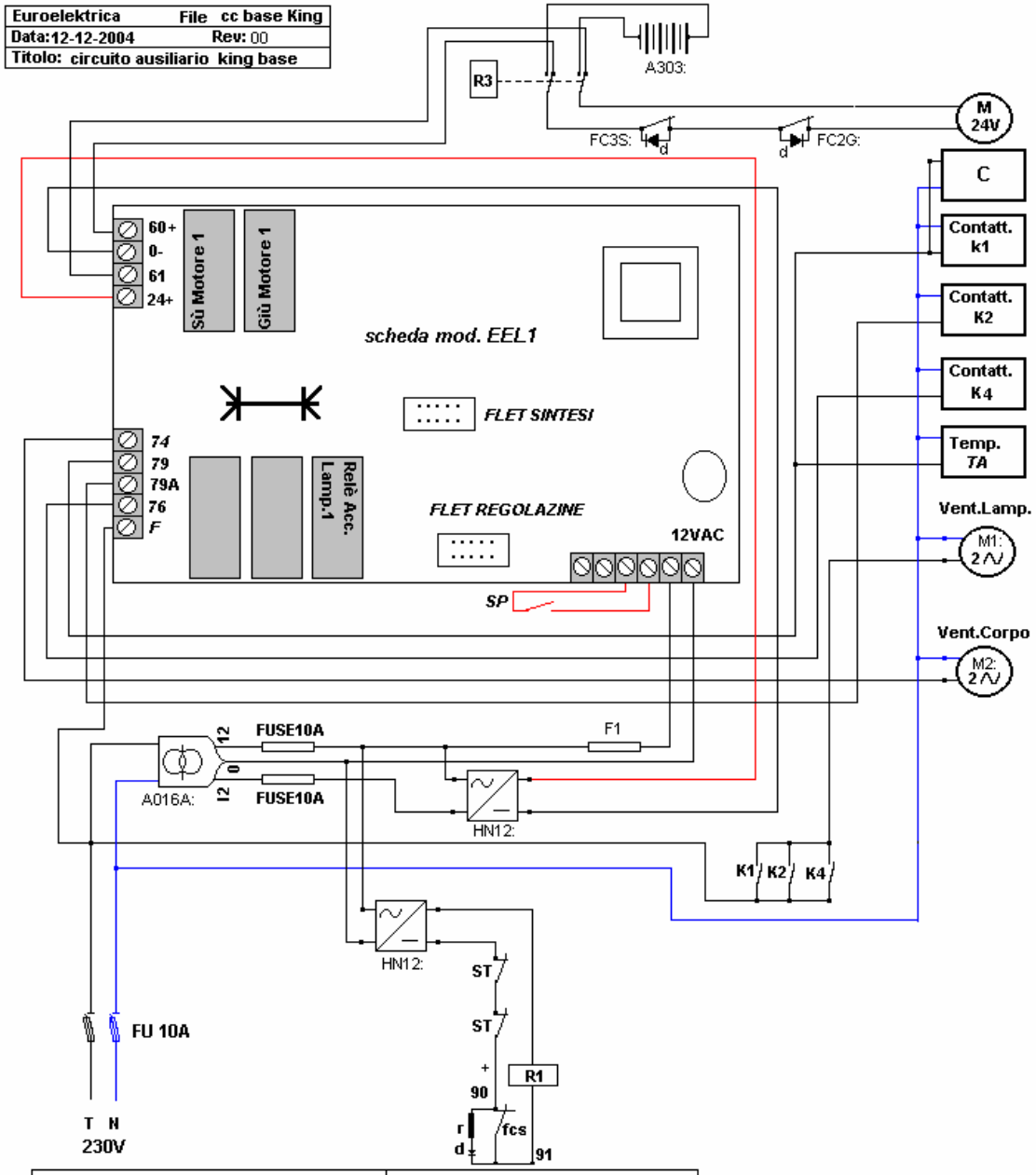
Lamp:

Ignictor:

Triac: G



PRINTED CIRCUIT BOARD CONTROLS



SP:	Tasto nascosto x programmazione	SG:	emergency contactor
FUAUT:	head motor Thermal-protection	A303:	battery
C:	hour meter	FTVPB12:	battery charger
FU10A:	fuse 10 Amp	K4:	fan relay coil
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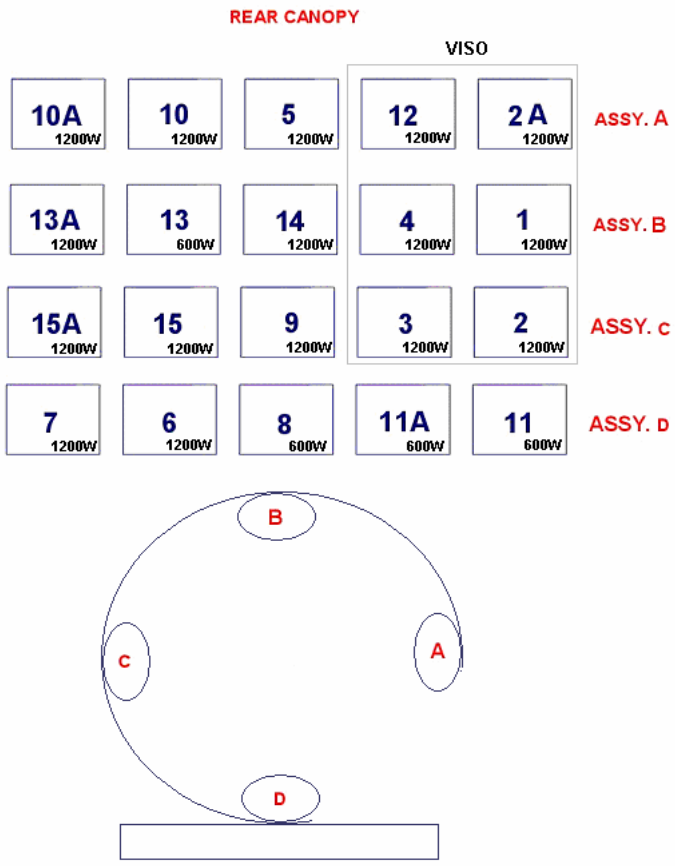
TA:	safety timer	RS:	relay emergency motor
K1:	lamp contactor face	R1:	relay safety filters
K2:	lamp contactor legs	r:	resistor from 820 ohm
ST:	sonde di temperatura	d:	diod

LAMP LAYOUT AND FUSES

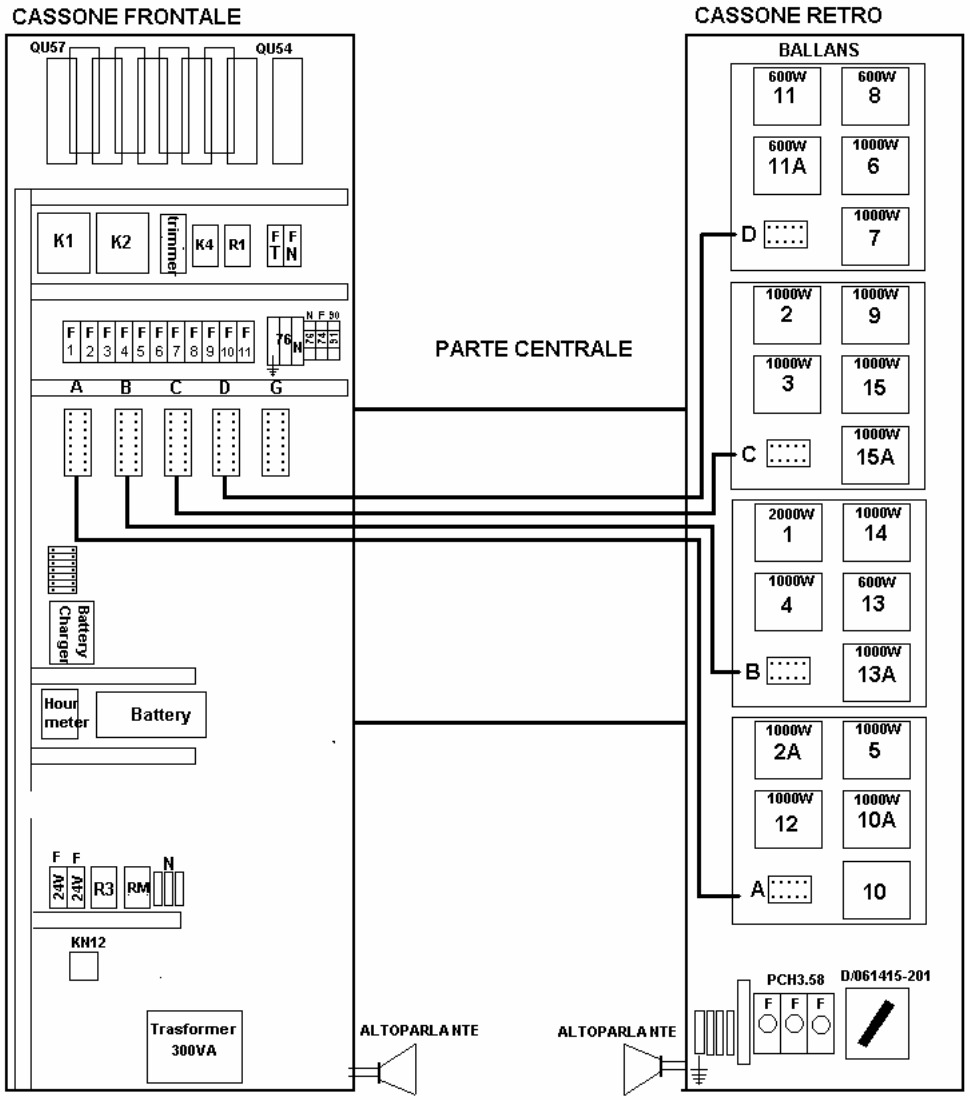
LAMP ADJUSTMENT FOR THE KING BASE



Lamp	1	1	4	2 2A	3	11 11A	8 14	9	5	6 7	15 15A	13 13A	10 10A
Fuse	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13
Phase	R1	S1	R1	S1	T1	R2	S2	S2	R2	T2	S2	T2	R2

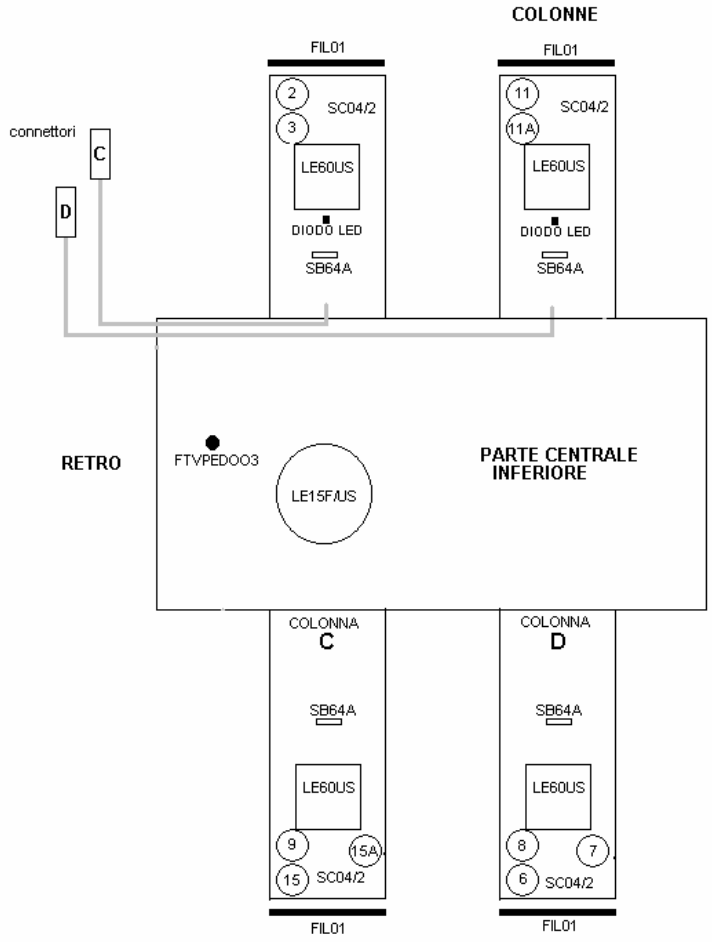
COMPONENT LAYOUT BASE FRONT AND REAR TRAYS

DISPOSIZIONE COMPONENTI KING

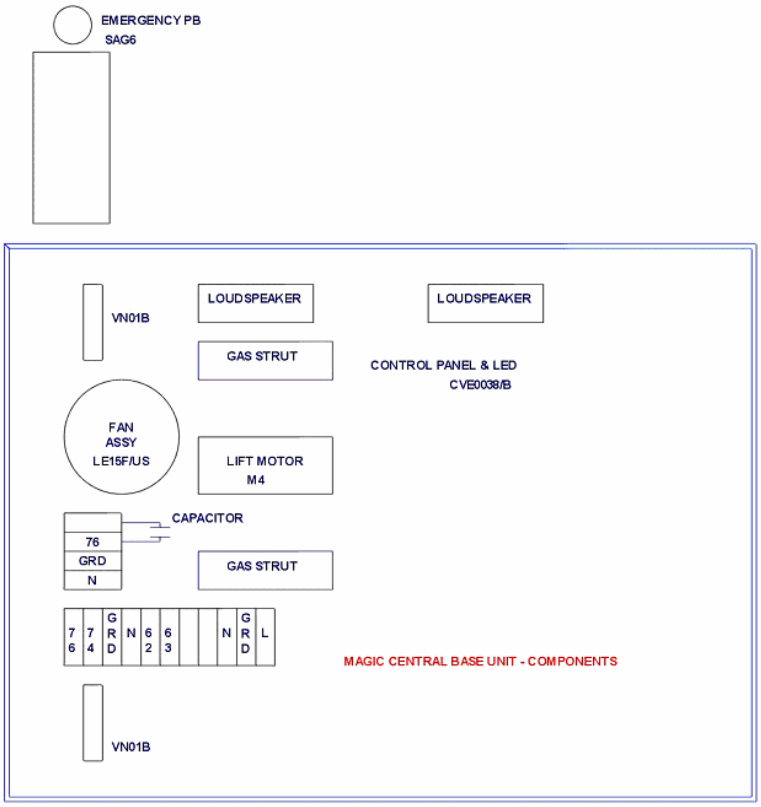


BASE LAYOUT

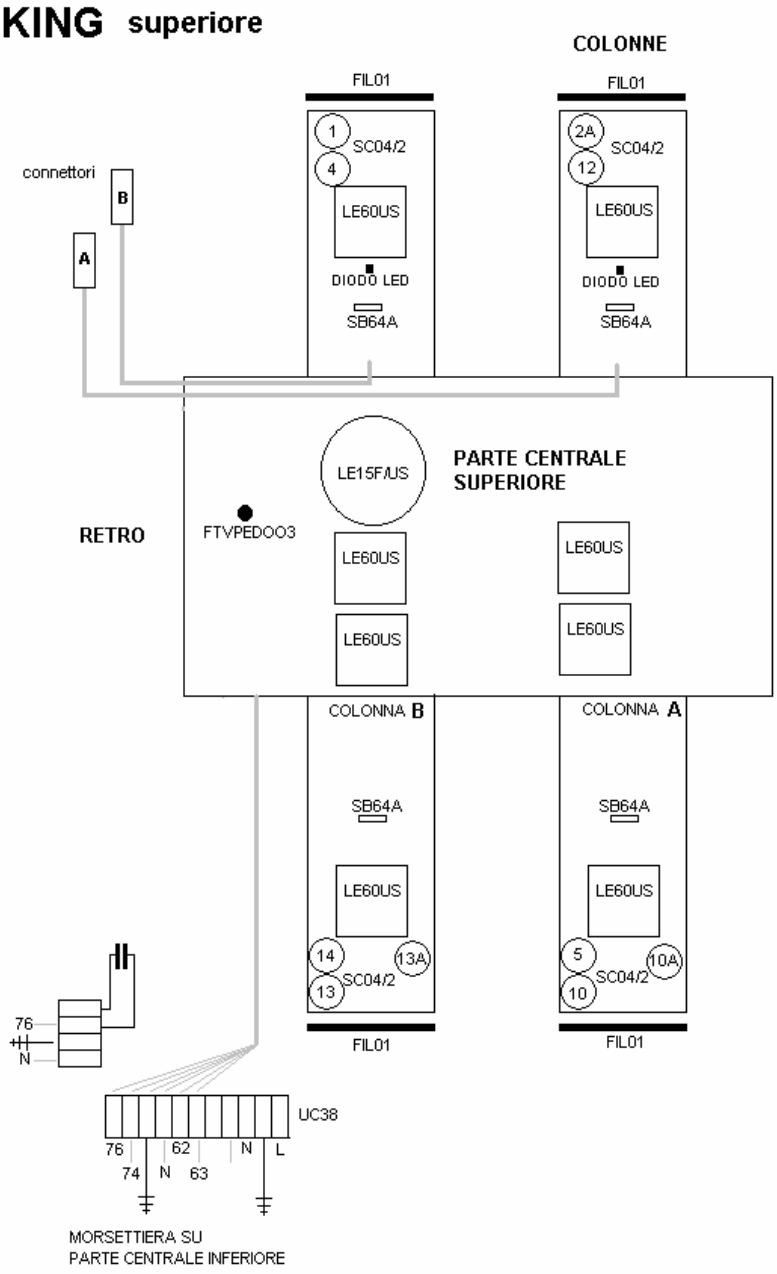
KING INFERIORE



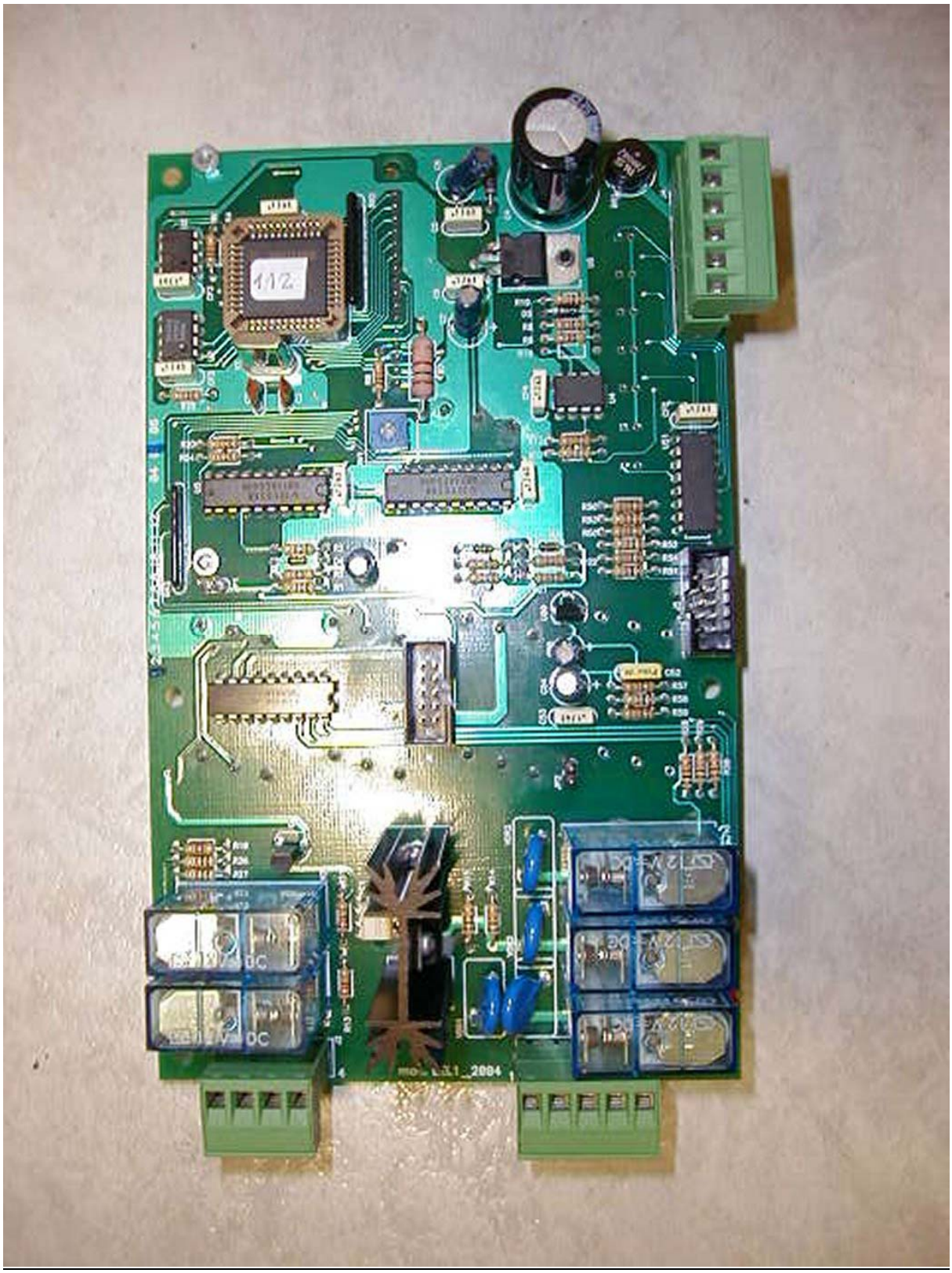
BASE LAYOUT CENTER



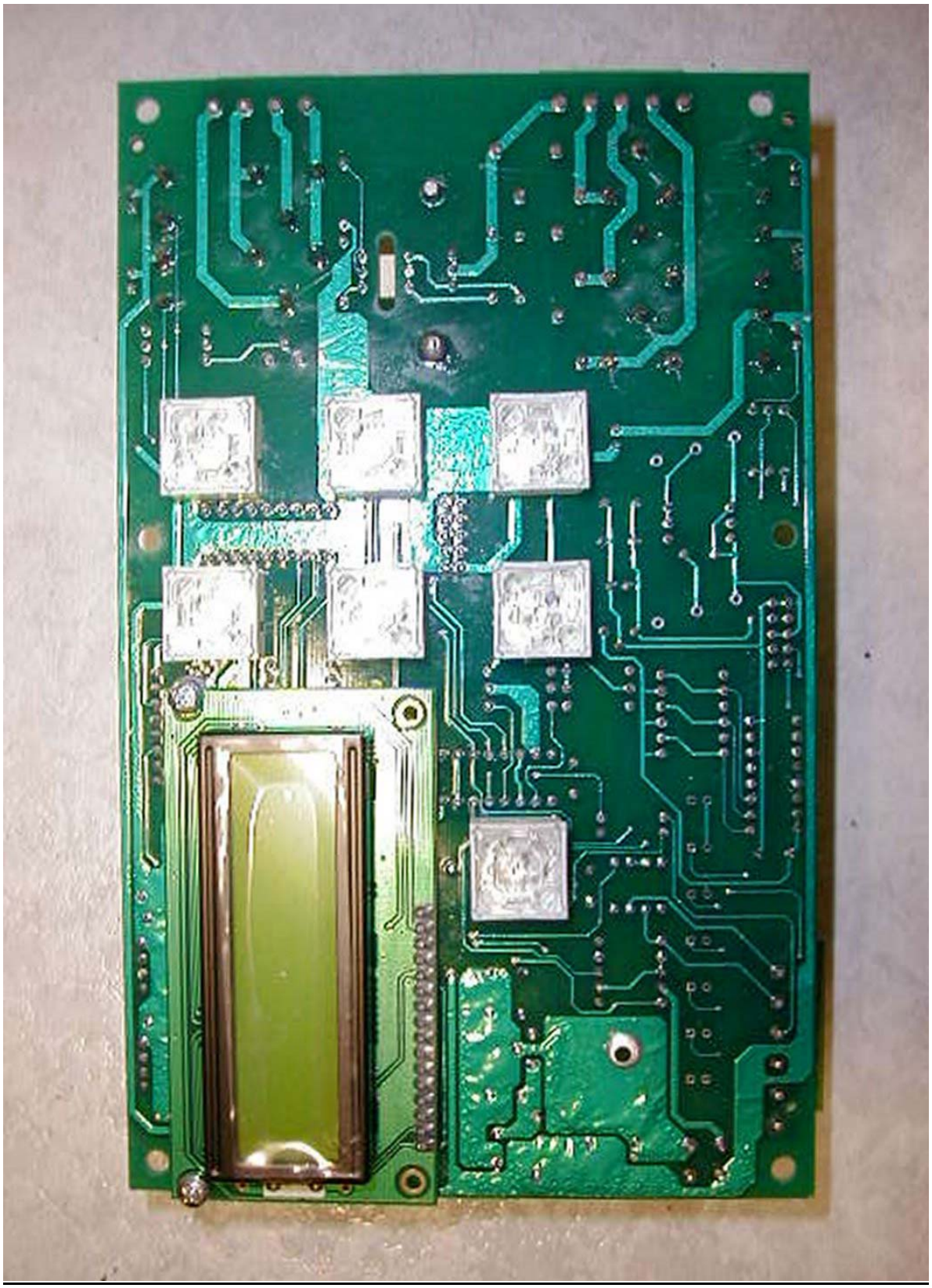
CANOPY LAYOUT



KING PRINTED CIRCUIT BOARD FRONT VIEW

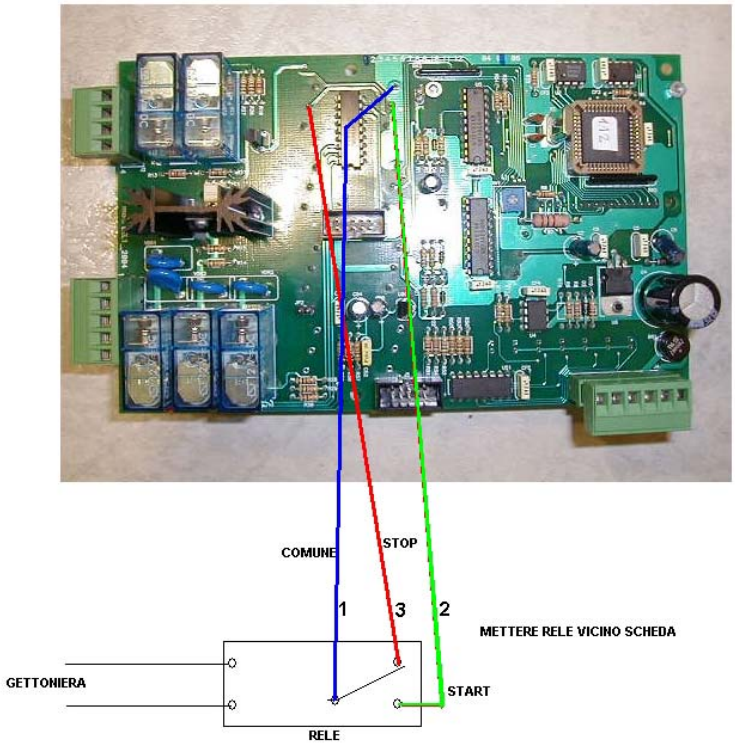


KING PRINTED CIRCUIT BOARD BACK VIEW

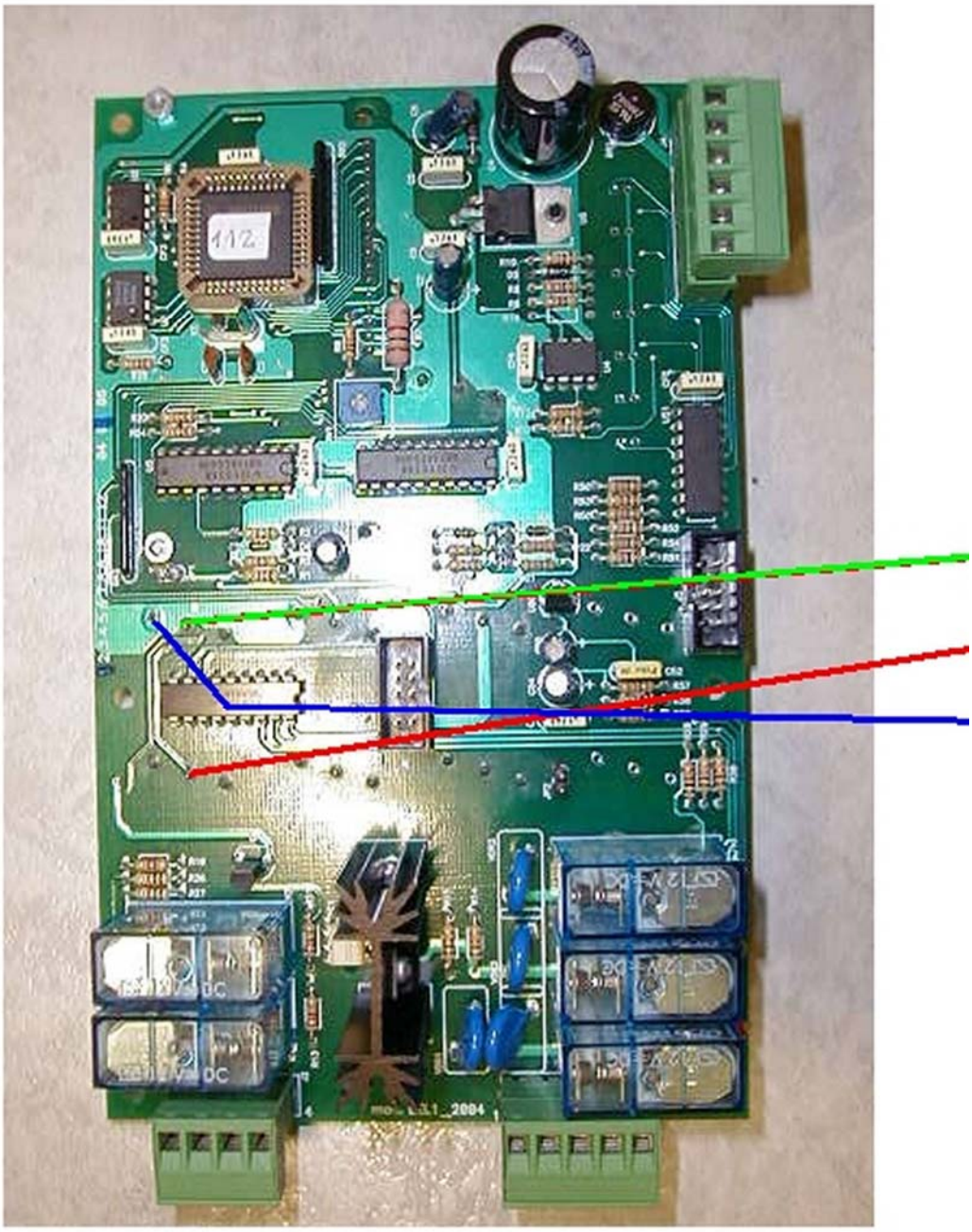


KING PRINTED CIRCUIT BOARD EXTERNAL TIMER CONNECTION

Connect the T3A directly to the blue and green wires (ignore the relay)



Remove the plastic button to disable START from the control panel



SAMPLE CUSTOMER CARD

Name:_____ Skin Type:_____

N°	Date	Tanning Equipment Used	Exposure time in minutes	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
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22				
23				
24				
25				