TA-903B

SERVICE MANUAL

PROMAX

ADJUSTMENT AND VERIFICATION PROCEDURES

TA-903B

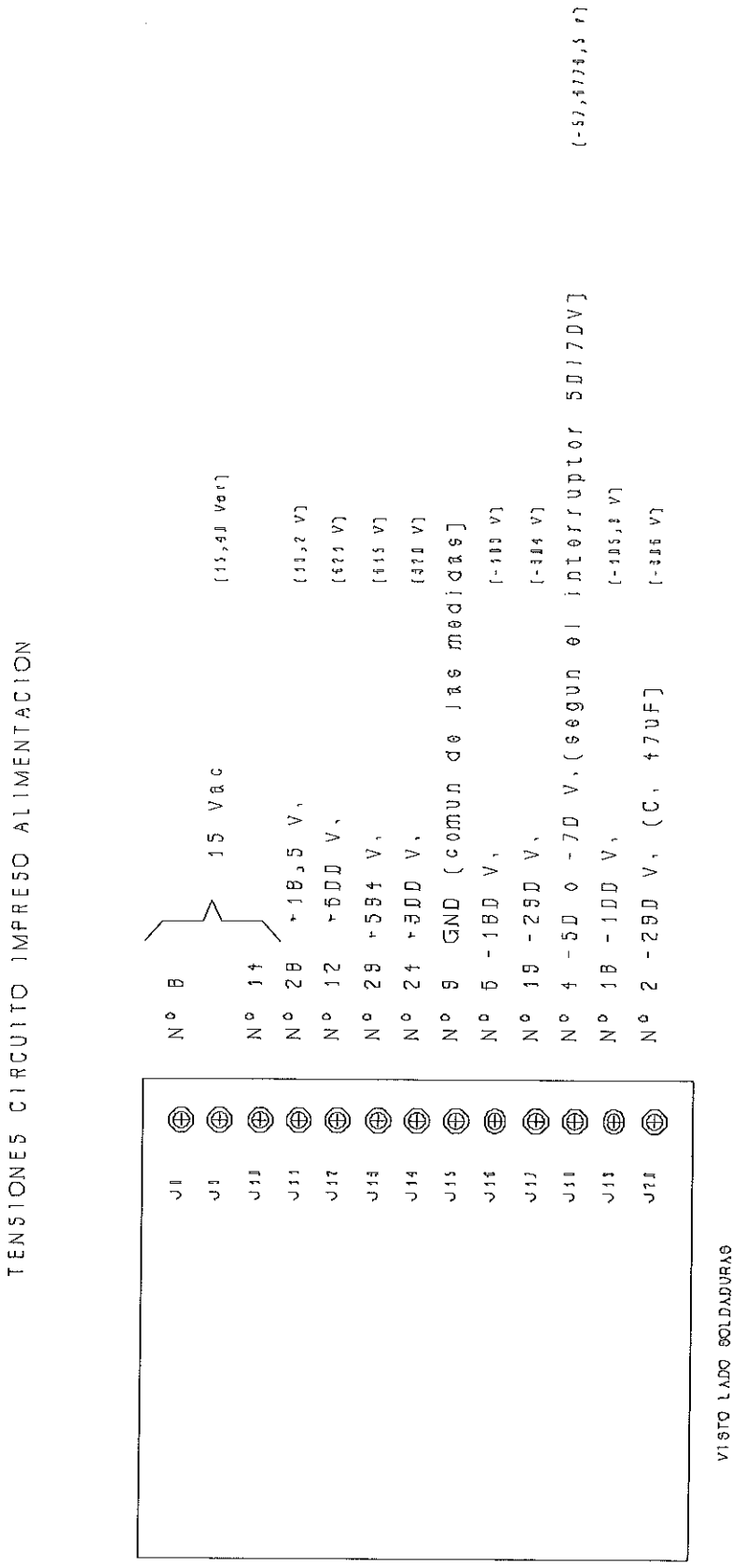
Hospitalet 8-10-1998
V.3

INSTRUMENTS REQUIRED

- Digital multimeter of 3 1/2 digits or better.
- Oscilloscope.
- 300 kΩ, 1 W resistor.

START UP AND ADJUSTMENT

- With the **POWER** [6] button at the ON position and the appliance disconnected from the mains supply, check total insulation between phases and ground.
- Adjust the mechanical zero of the three measuring instruments **R, G** and **B** [2].
- Move all the sliding switches (RESTORER CURRENT, CUT OFF VOLTAGE...) to its left position.
- Turn all the adjusting potentiometers of the printed circuit board to the middle of its excursion.
- Connect the appliance to the mains supply. The neon indicator **POWER** [5] should light. Measure following voltages at the power supply circuit:


TENSIONES CIRCUITO IMPRESO ALIMENTACION
Nº 8 15 Vac [15,98 Vac]
Nº 14
Nº 28 +18,5 V. [18,2 V]
Nº 12 +600 V. [621 V]
Nº 29 +594 V. [615 V]
Nº 24 +300 V. [310 V]
Nº 9 GND (comun de las medidas)
Nº 6 -180 V. [-180 V]
Nº 19 -290 V. [-304 V]
Nº 4 -50 o -70 V.(segun el interruptor 50/70V] [-52,5/73,5 V]
Nº 18 -100 V. [-105,8 V]
Nº 2 -290 V. (C. 47uF] [-306 V]
VISTO LADO SOLDADURAS

Check heater voltages:

1 Press **HEATER VOLTAGE 6,3V** (SW1) [19] and **SHORTS** (SW3) [18] keys. Measure 7.5 V AC approx. between **H** (pin6-J1) and **H1**(pin4-J1) at the **SOCKET** (J1) [9] connector.

2 Press **LIFE TEST** [13] key. Check heater voltage decreases up to 0.5 V AC approx.

3 Press **HEATER VOLTAGE 12V** (SW2) [19] and **SHORTS** (SW3) [18] keys. Measure 13 V AC approximately between **H** (pin6-J1) and **H1** (pin4-J1) pins.

4 Press **LIFE TEST** [13] button. Check heater voltage decreases up to 1 V AC approximately.

5 Press **B/W R** (SW8) [23] key and the **RESTORER START** [10] button. Check heater voltages rises up to 2 V approximately when selected HEATER VOLTAGE is **6,3V** (SW1) [19] and rises up to 4 V approximately when selected HEATER VOLTAGE is **12 V** (SW2) [19] (16V approximately.).

6 Press the **G1 Variable**(SW5) [20] key only and move the **CUT OFF VOLTAGE** [25] sliding switch to **300 V** position. Using the multi-meter measure voltage between **B** (pin1-J1) and **G2** (pin3-J1). Check voltage varies between 30 and 300V when turning the **CUT OFF SET**(P3/P4) [26] potentiometer.

7 Move the **CUT OFF VOLTAGE** [25] sliding switch to **600V** position. Check voltage between **B** (pin1-J1) and **G2** (pin3-J1), varies between 300 and 600 V when turning the **CUT OFF SET**(P3/P4) [26] potentiometer.

8 Press the **CUT OFF** (SW6) [21] key and move the **CUT OFF VOLTAGE** [25] sliding switch to **300 V** position. Using the multimeter, measure the voltage between **B** (pin1-J1) and **G2** (pin3-J1). Check voltage varies between 30 and 300 V when turning the **CUT OFF SET**(P3/P4) [26] potentiometer.

9 Move the **CUT OFF VOLTAGE** [25] sliding switch to **600V** position. Check voltage between **B** (pin1-J1) and **G2** (pin3-J1) varies between 300 and 600 V when turning **CUT OFF SET** (P3/P4) [26] potentiometer.

10 Push **EMISSION TEST** (SW7) [22] key and move the **CUT OFF VOLTAGE** [25] sliding switch to **300 V** position. Using the multimeter measure voltage between **B** (pin1-J1) and **G2**(pin3-J1). Check voltage varies between 30 and 300 V when turning the **CUT OFF SET** (P3/P4) [26] potentiometer.

11 Move the **CUT OFF VOLTAGE** [25] sliding switch to **600 V** position. Check voltage between **B** (pin1-J1) and **G2** (pin3-J1) varies between 300 and 600 V when turning **CUT OFF SET** (P3/P4) [26] potentiometer.

12 Press **RESTORER B/W-R** (SW8) [23] key. You should measure -600 V approx. between **G2** (pin3-J1) and **R** (pin7-J1).

13 Press **RESTORER G** (SW9) [23] key. You should measure -600 V approx. between **G2** (pin3-J1) and **G**(pin8-J1).

14 Press **RESTORER B** (SW10) [23] key. You should measure -600 V approximately between **G2**(pin3-J1) and **B**(pin1-J1).

15 Press **SHORTS** (SW3) [18] key. You should measure -130 V approximately between **B** (pin3-J1) and **G1**(pin2-J1).

16 Press **REMOVE G1 SHORTS** (SW4) [17] key. You should measure 0 V between **B** (pin3-J1) and **G1**(pin2-J1). When pressing the **G1-K SHORT REMOVE** [16] button you should measure -290 V approx. between **B** (pin3-J1) and **G1**(pin2-J1).

17 Press **G1 VARIABLE** (SW5) [20] key. When turning **G1 VOLTAGE** (P1) [27] potentiometer you should measure from -100 to 0 V approximately between **B** (pin3-J1) and **G1**(pin2-J1).

18 Press **CUT OFF** (SW6) [21] key.
When the **G1 BIAS** [15] sliding switch is at **-50V** position, voltage between **B** (pin3-J1) and **G1** (pin2-J1) should be -50 V approximately.
When the **G1 BIAS** [15] sliding switch is at **-70V** position, voltage between **B** (pin3-J1) and **G1** (pin2-J1) should be -70 V approximately.
Press the **COLOUR TRACKING (CUT OFF)** [14] button, you should measure -4V approximately. between **B**(pin3-J1) and **G1**(pin2-J1).

19 Press **EMISSION TEST** (SW7) [22] key. You should measure 0 V approximately. between **B**(pin3-J1) and **G1**(pin2-J1).

20 Press **RESTORER B/W R** (SW8) [23] key. Set oscilloscope probe at 10/1 position. Using the oscilloscope, measure signal between **G1** (pin2-J1) and ground at **R** (pin7-J1). Press the **RESTORER START** [10] button, then the **RESTORER ON** (DL7) [11] led must light. Maximum signal voltage should be 300 V and period should oscillate between 54 µs and 74 µs approximately.

- Press **RESTORER G**(SW9) [23] and check the same signal, but now connect probe ground to **G**(pin8-J1).

- Press **RESTORER B**(SW10) [23] and check thesame signal, but now connect probe ground to **B**(pin1-J1).

21 Check displays. Press **SHORTS**(SW3) [18] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Make a short-circuit between the following pins:

Pin	SHORTS neons should light [24]
H1(pin4-J1) and **B**(pin1-J1)	F and B
H1(pin4-J1) and **G** (pin8-J1)	F and G
H1(pin4-J1) and R(pin7-J1)	F and R
G1(pin2-J1) and **B**(pin1-J1)	G1 and B
G1(pin2-J1) and **G**(pin8-J1)	G1 and G
G1(pin2-J1) and R(pin7-J1)	G1 and R
G1(pin2-J1) and **G2**(pin3-J1)	G1 and G2

22 Press **EMISSION TEST**(SW7) [22] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Make a short-circuit between **B**(pin1-J1) and **FOCUS**(pin5-J1). Check neon indicator **FOCUS** [8] lights and that **B Meter** [2] is in the middle of its scale (approx.).

23 Press **EMISSION TEST**(SW7) [22] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Make a short-circuit between **FOCUS**(pin5-J1) and R(pin7-J1). Check that neon indicator **FOCUS** [8] lights and that **B/W R Meter** [2] is in the middle of its scale (approx.).

24 Press **EMISSION TEST**(SW7) [22] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Make a short-circuit between **FOCUS**(pin5-J1) y **G**(pin8-J1). Check that neon indicator **FOCUS** [8] lights and that **G Meter** [2] is in the middle of its scale (approx.).

Current test. Instruments full scale deviation (f.s.d.) adjustment.

25 Press **EMISSION TEST**(SW7) [22] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Connect a miliammeter and a 300k 1 W resistor in series between **G2**(pin3-J1) and **R**(pin7-J1). Adjust **CUT OFF SET**(P3/P4) [26] potentiometer to obtain 1.6 mA. Adjust **P1** (B3 PCB) in order to **B/W-R Meter** [2] instrument needle reaches f.s.d.. Check that turning **B/W.R**(P6) [3] frontal panel potentiometer, instrument needle changes its position slightly (several tenth parts).

26 Press **EMISSION TEST**(SW7) [22] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Connect a miliammeter and a 300k 1W resitor in series between **G2**(pin3-J1) and **G**(pin8-J1). Adjust **CUT OFF SET**(P3/P4) [26] potentiometer to obtain 1.6 mA. Adjust **P2** (B3 PCB) in order to **G Meter** [2] instrument needle reaches f.s.d.. Check that turning **G**(P5) [3] frontal panel potentiometer, instrument needle changes its position slightly (several tenth parts).

27 Press **EMISSION TEST**(SW7) [22] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Connect a miliammeter and a 300k 1W resitor in series between **G2**(pin3-J1) y **B**(pin1-J1). Ajust **CUT OFF SET**(P3/P4) [26] potentiometer until 1,6 mA. Adjust **P3** (B3 PCB) in order to **B Meter** [2] instrument needle reaches f.s.d.. Check that turning **B**(P7) [3] frontal panel potentiometer, instrument needle changes its position slightly (several tenth parts).

28 Press **RESTORER B/W-R**(SW8) [23] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Set slidable switch in **RESTORER CURRENT** [12] in **50 mA**. Make a short-circuit between **G1**(pin2-J1) and **R**(pin7-J1). Press **RESTORER STAR** [10] push button and, an this moment, **RESTORER ON**(DL7) [11] led indicator should light. Regeneration cycle starts up. Adjust **P4** (B3 PCB) in order to **B/W R Meter** instrument needle readout oscillates between **1,3 and 1,6 mA** approx..

Set **RESTORER CURRENT** [12] slidable switch in **25 mA**. Press **RESTORER STAR** [10] push button (regeneration cycle starts up). Check that instrument needle readout oscillates between **0,7 and 1 mA** approx..

Press **RESTORER G**(SW9) [23] key. Make a short-circuit between **G1**(pin2-J1) and **G**(pin8-J1). Check that **G Meter** instrument needle readout oscillates between **1,3 and 1,6 mA** approx. (depending on if the **RESTORER CURRENT** [12] slidable switch is on **50 mA** o en **25 mA**).

Press **RESTORER B**(SW10) [23] key. Make a short-circuit between **G1**(pin2-J1) and **B**(pin1-J1). Check **B Meter** [2] instrument needle oscillates between **1,3 and 1,6 mA** too, or **0,7 and 1 mA** depending on whether **RESTORER CURRENT** [12] slidable switch is set on **50 mA** or **25 mA**.

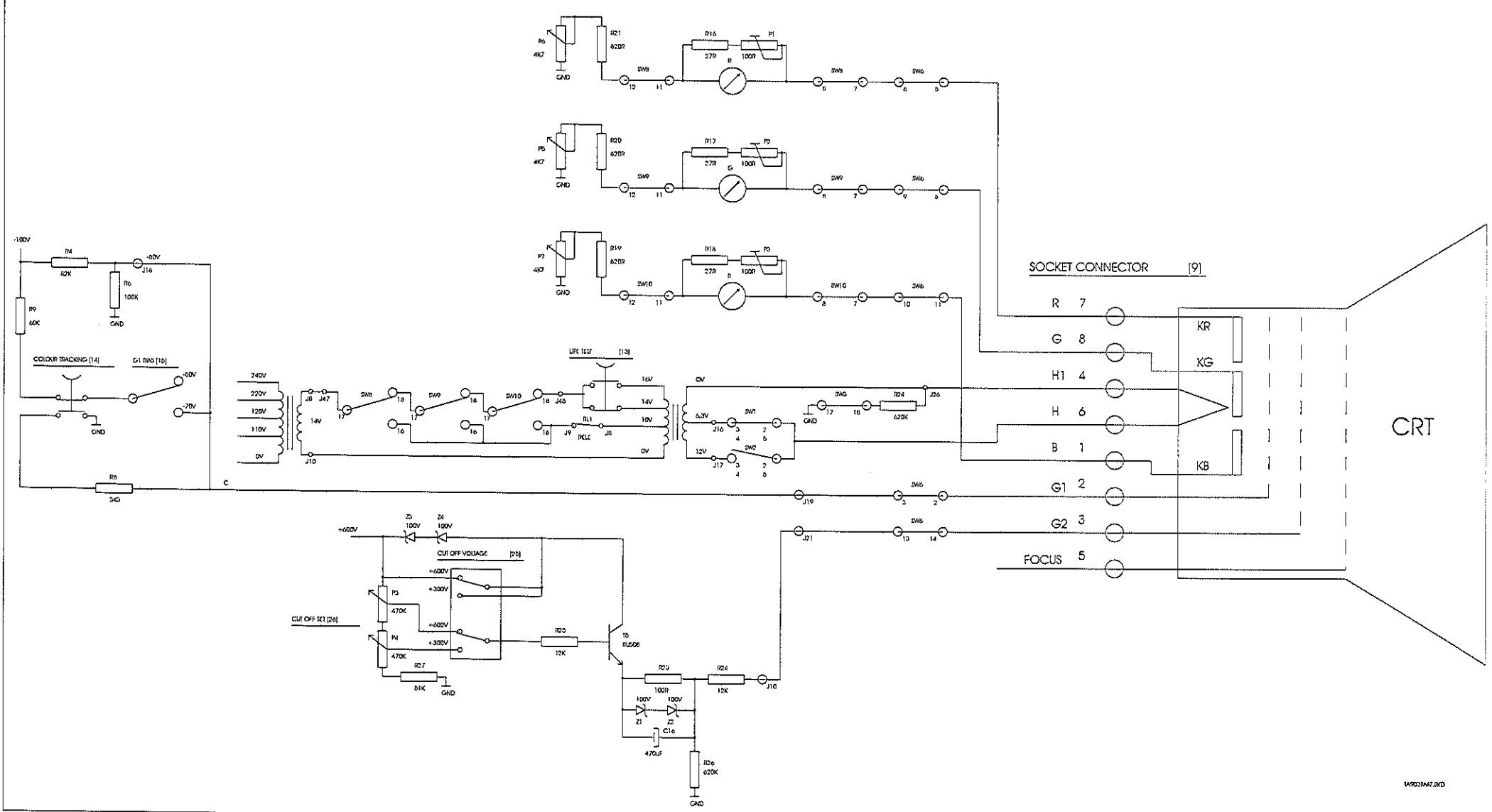
29 Press **EMISSION TEST**(SW7) [22] and **HEATER VOLTAGE 6,3V**(SW1) [19] keys. Pressing **RESTORER STAR** [10] push button starts regeneration cycle and **RESTORER ON**(DL7) should light. Adjust total duration to 75 s by means of **P1** (B2 Board). Adjust to 15 s the interval between each relay "CLICK" by means of **P2** (B2 board). Remember that first "CLICK" occurs 23 s from the start and the others between 14 and 15 s.

30 Press **EMISSION TEST**(SW7) [22]. Mesured voltage between **ANODE** [4] and **B**(pin1-J1) should be +600V approx..

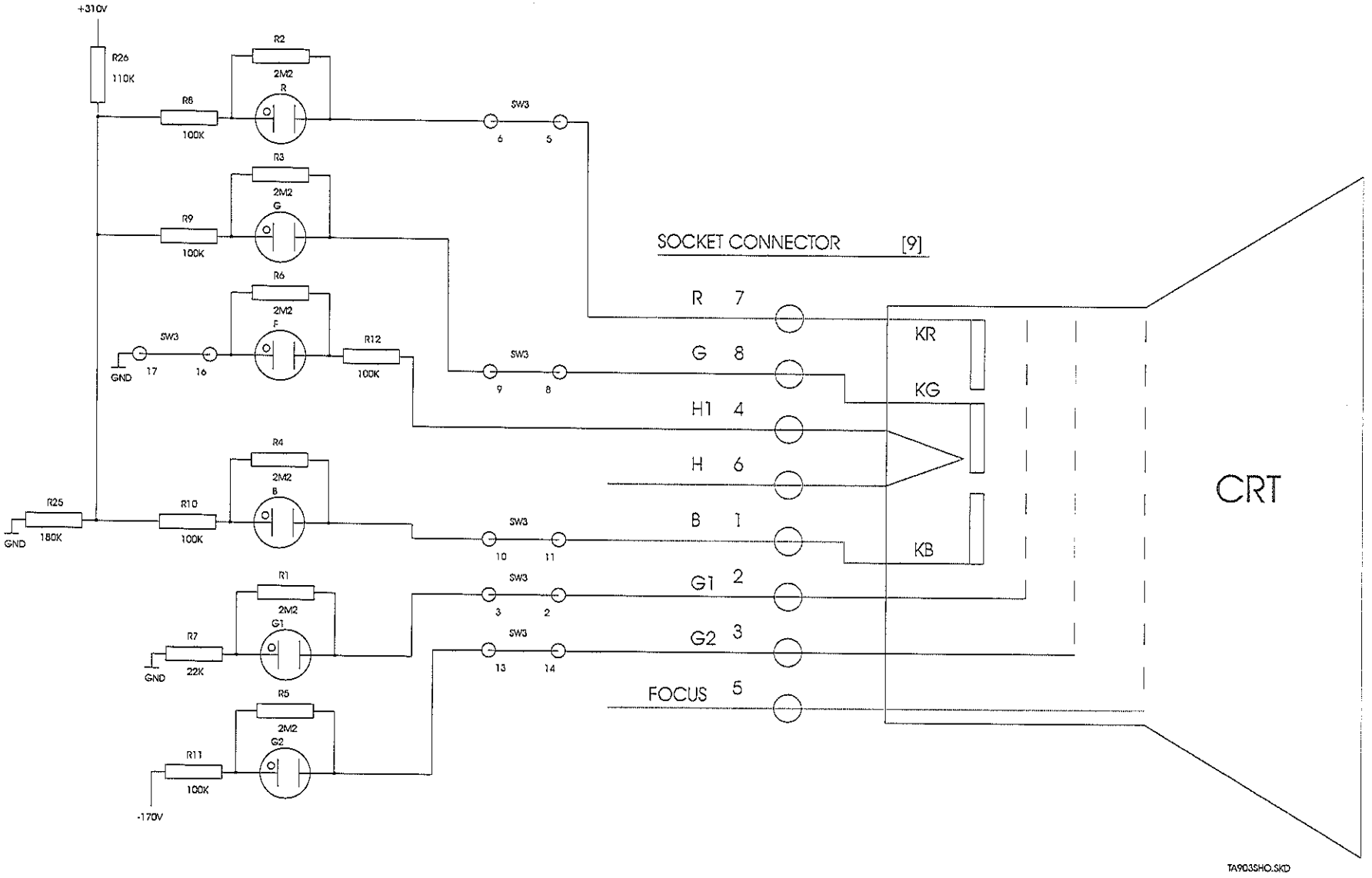
4.3 g Prueba TRACKING

PULSAR CUT OFF(SW6) [21]

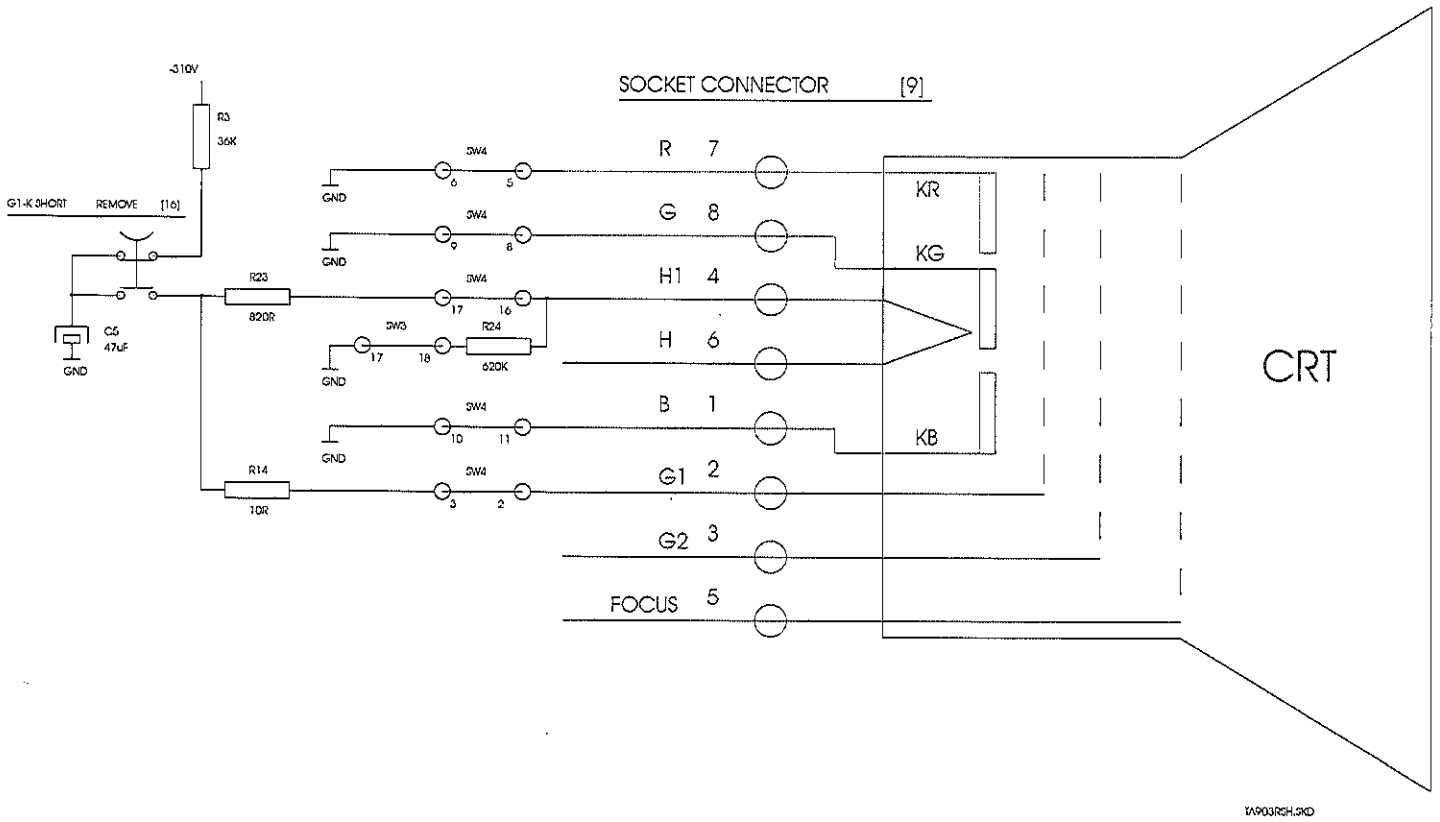
G1 BIAS [15], COLOUR TRACKING (CUT OFF) [14]



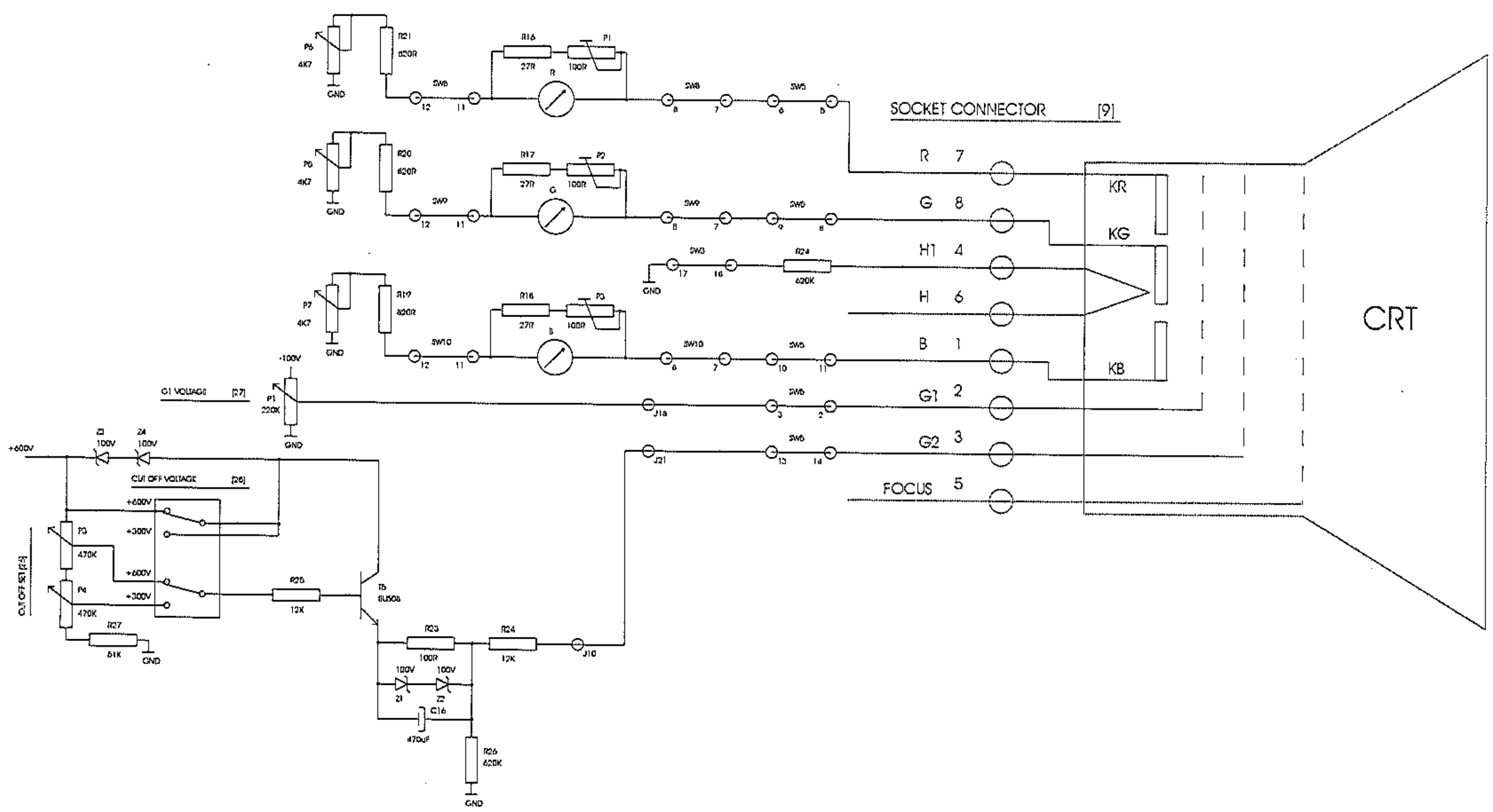
INSTRUCCION 15 PULSAR SHORTS(SW3) [18]



INSTRUCCION 16 PULSAR REMOVE G1 SHORTS(SW4) [17]



INSTRUCCION 17 PULSAR G1 VARIABLE(SW5) [20]



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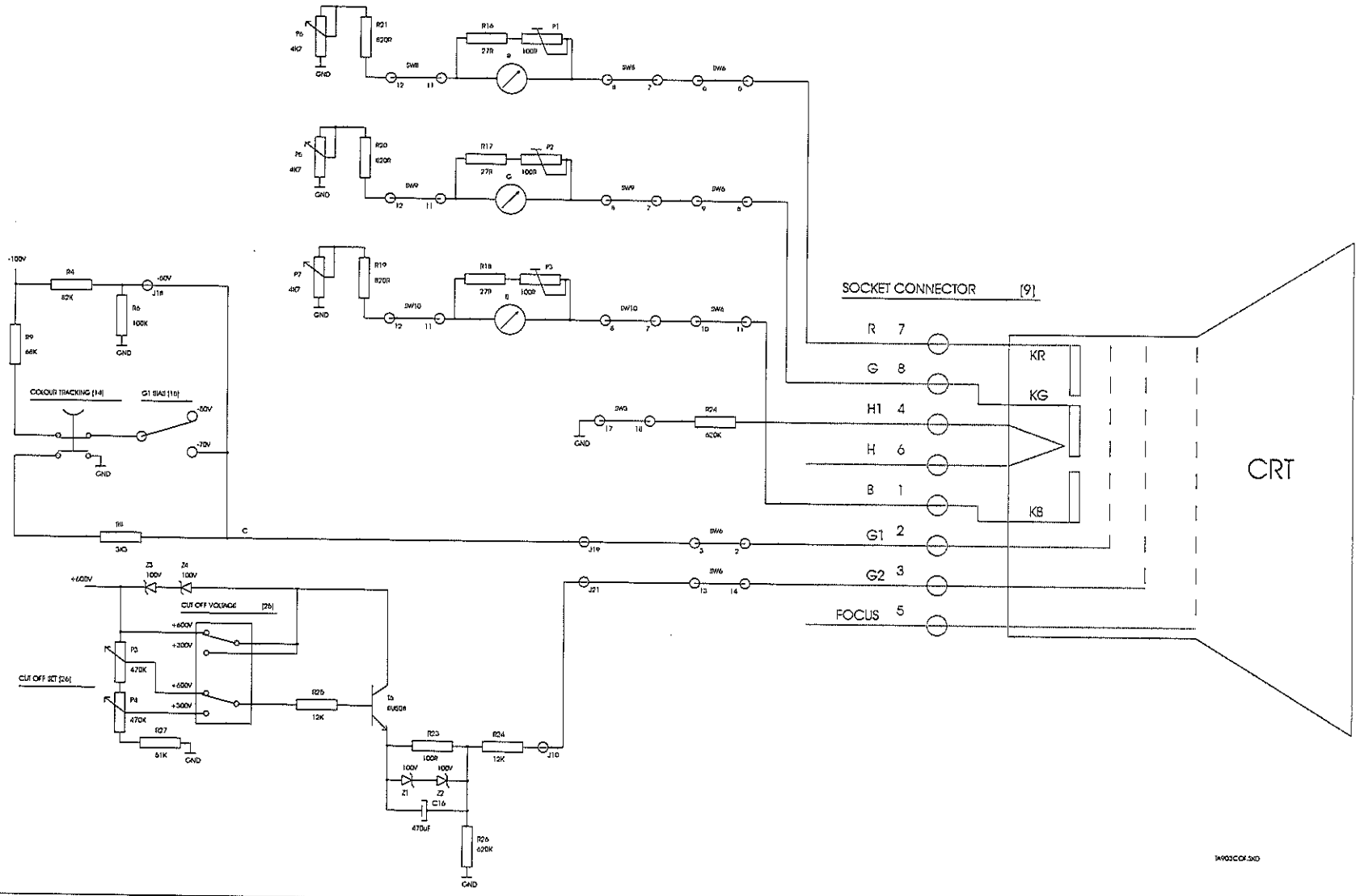
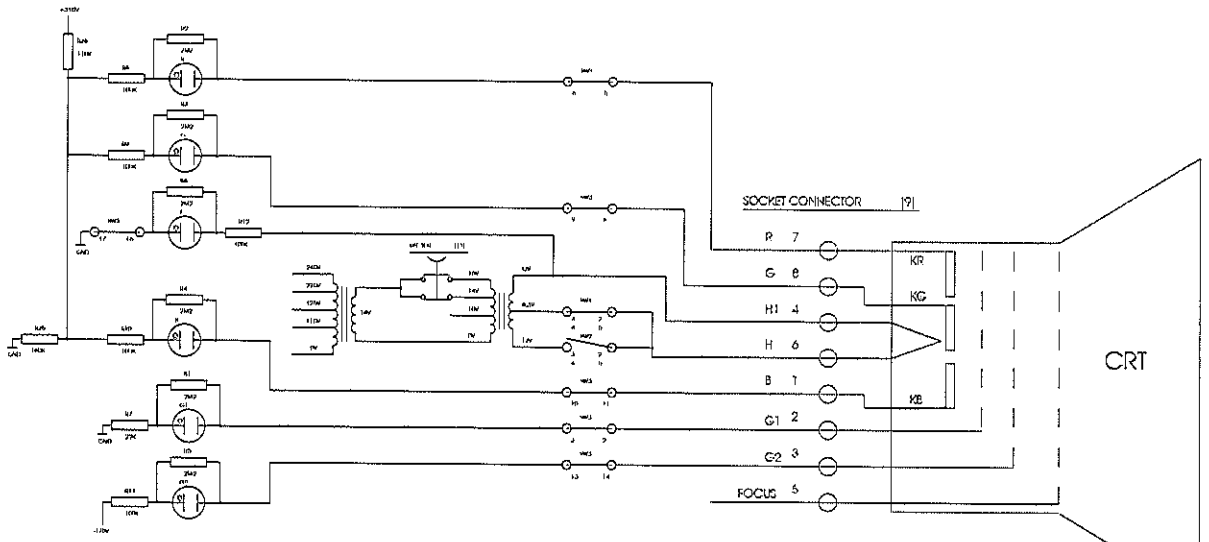
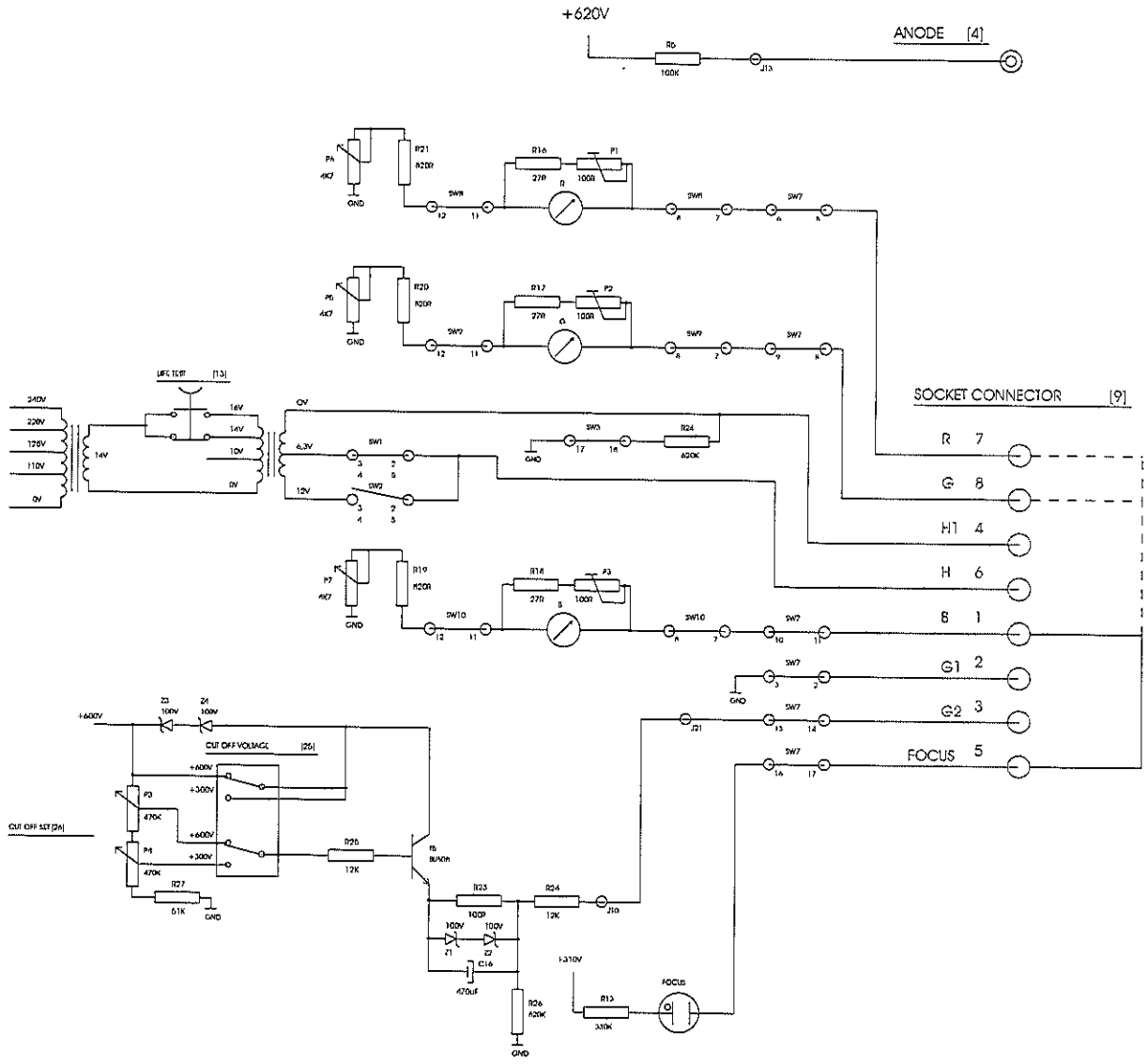
INSTRUCCION 18 PULSAR CUT OFF(SW6) [21]
G1 BIAS [15], COLOUR TRACKING (CUT OFF) [14]



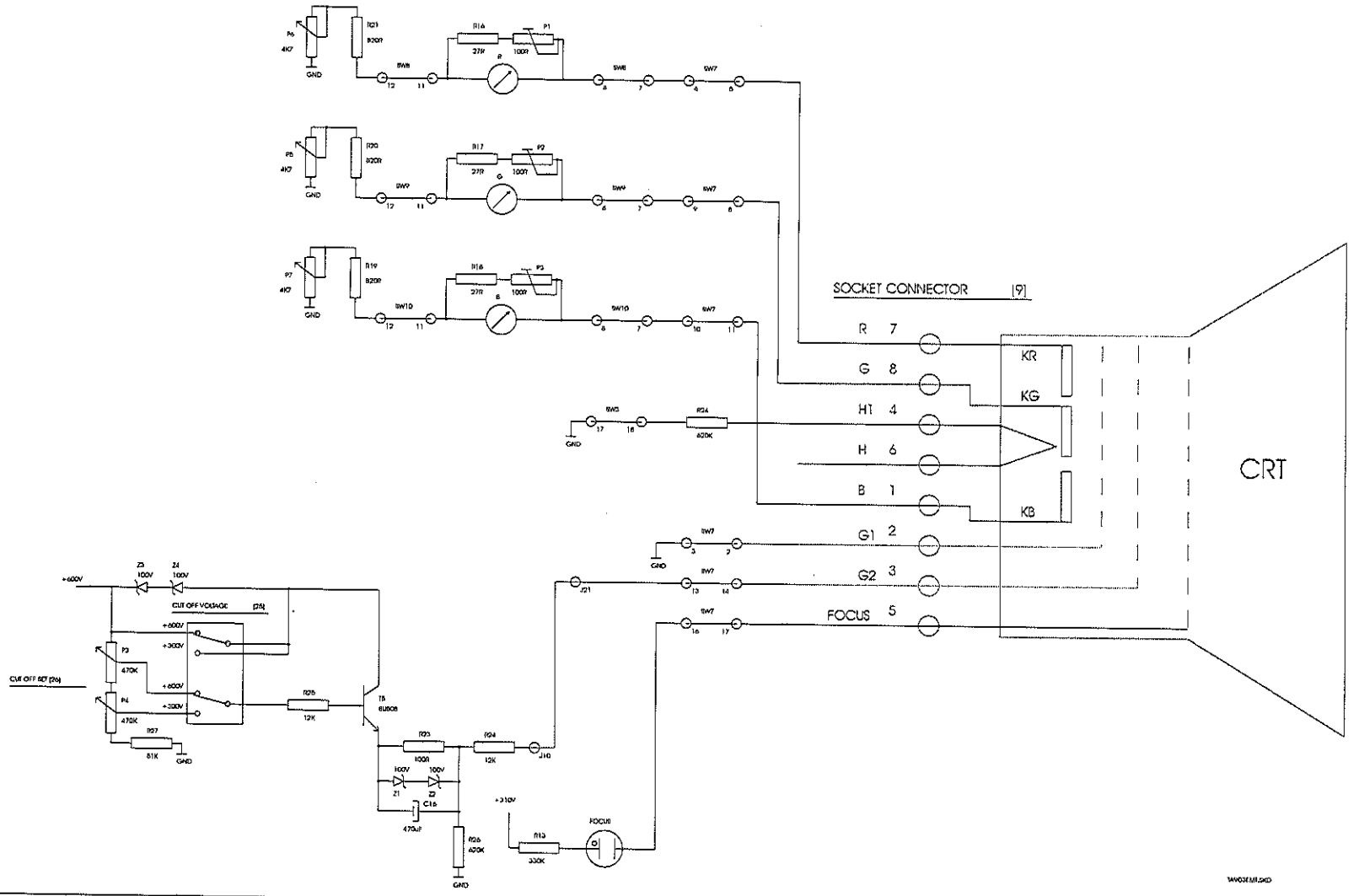
INSTRUCCION 21 PULSAR SHORTS(SW3) [18] , HEATER VOLTAGE 6,3V (SW1) [19]



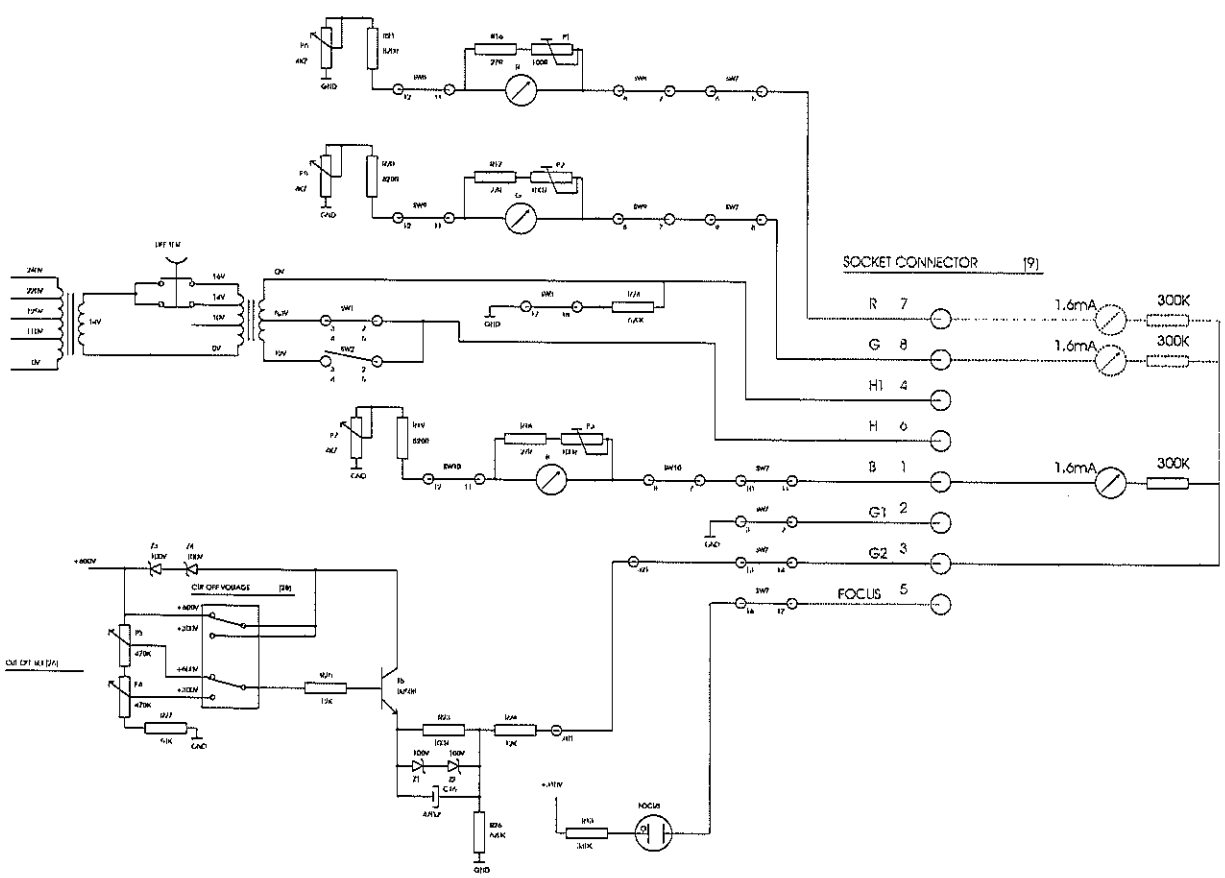
INSTRUCCION 22, 23, 24, 30 PULSAR EMISSION TEST(SW7) [22], HEATER VOLTAGE 6,3V (SW1) [19]



INSTRUCCION 19 PULSAR EMISSION TEST(SW7) [22]



INSTRUCCION 25, 26, 27 PULSAR EMISSION TEST(SW7) [22], HEATER VOLTAGE 6,3V (SW1) [19]



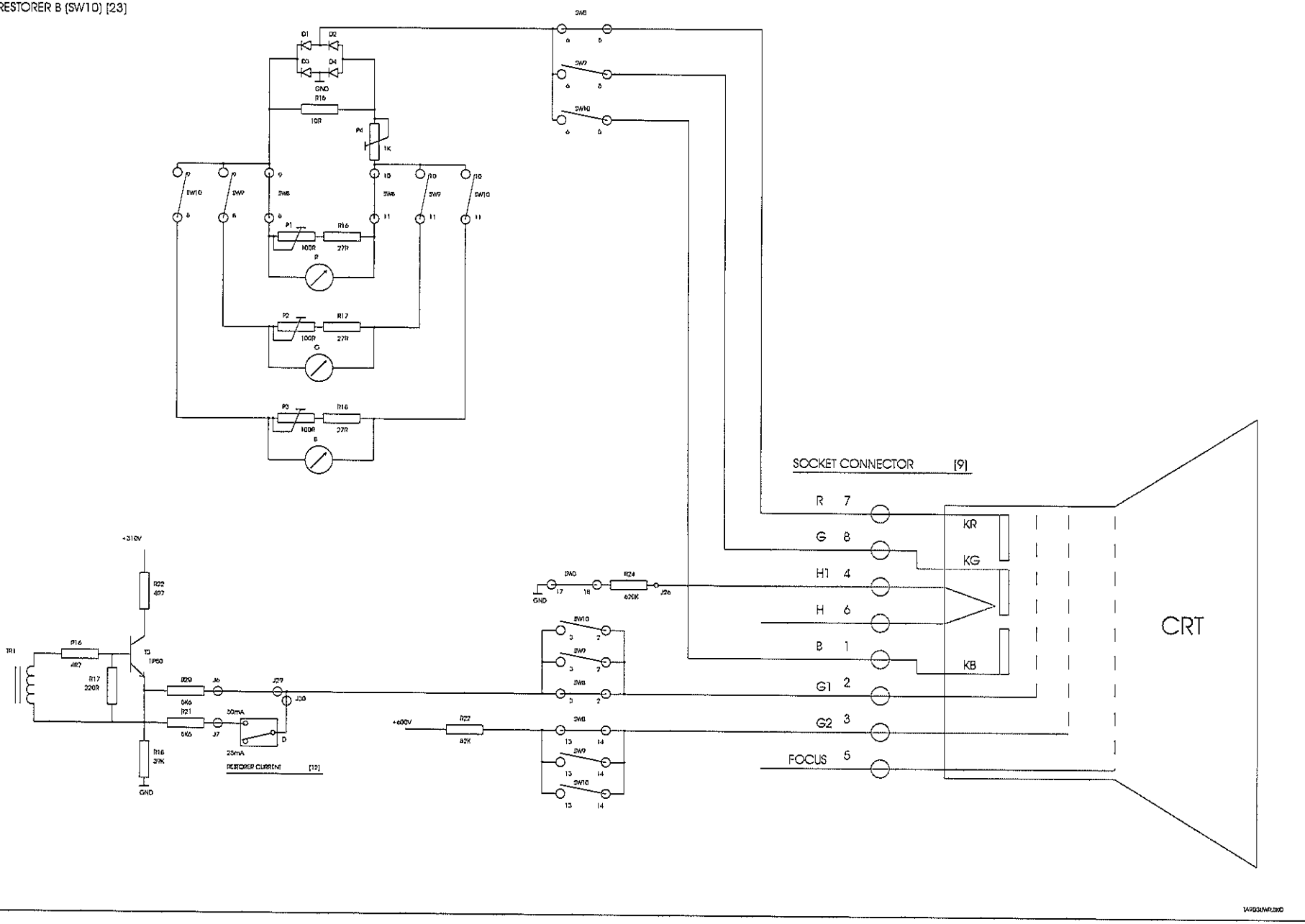
INSTRUCCION 20

Pulsar RESTORER B/W-R (SW8) [23]

Pulsar RESTORER G (SW9) [23]

Pulsar RESTORER B (SW10) [23]

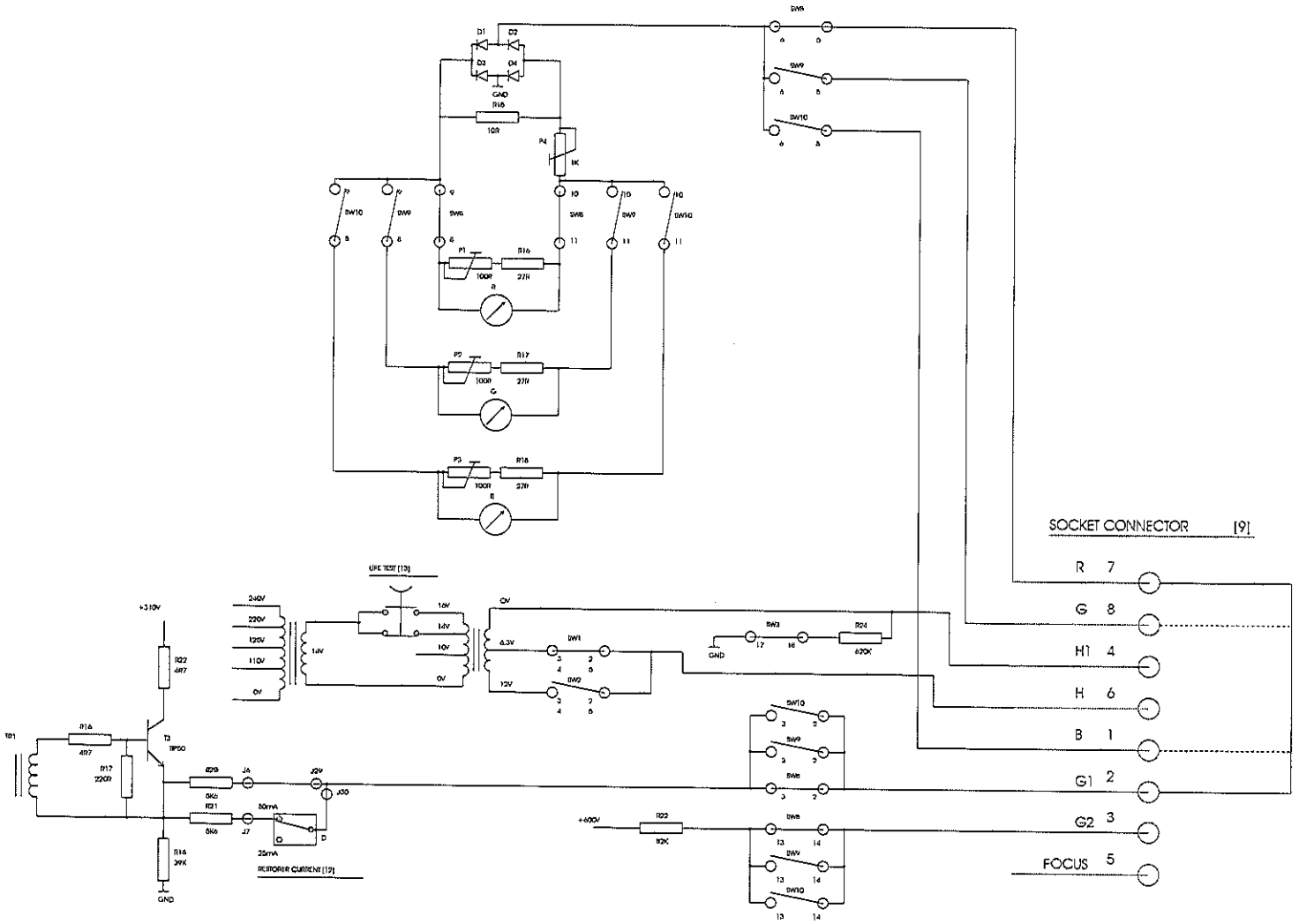
RESTORER CURRENT 25 mA [12]



INSTRUCCION 28 Pulsar RESTORER B/W-R (SW8) [23], HEATER VOLTAGE 6,3V (SW1) [19]
RESTORER CURRENT 50 mA [12] , RESTORER CURRENT 25 mA [12]

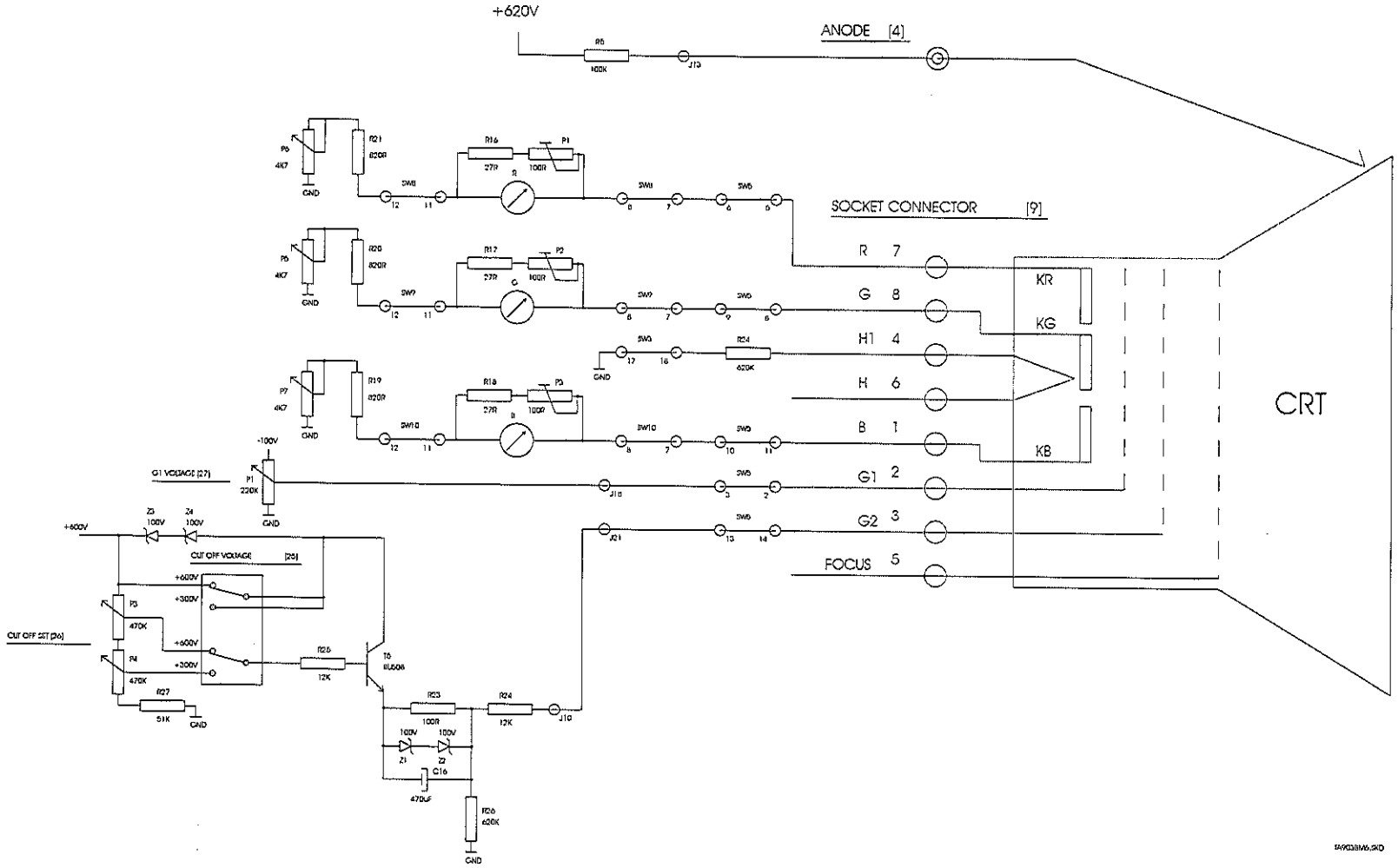
Pulsar RESTORER G (SW9) [23]

Pulsar RESTORER B (SW10) [23]



4.3 f Prueba G1 Variable

PULSAR G1 VARIABLE(SW5) [20]



4.3 d Regeneracion

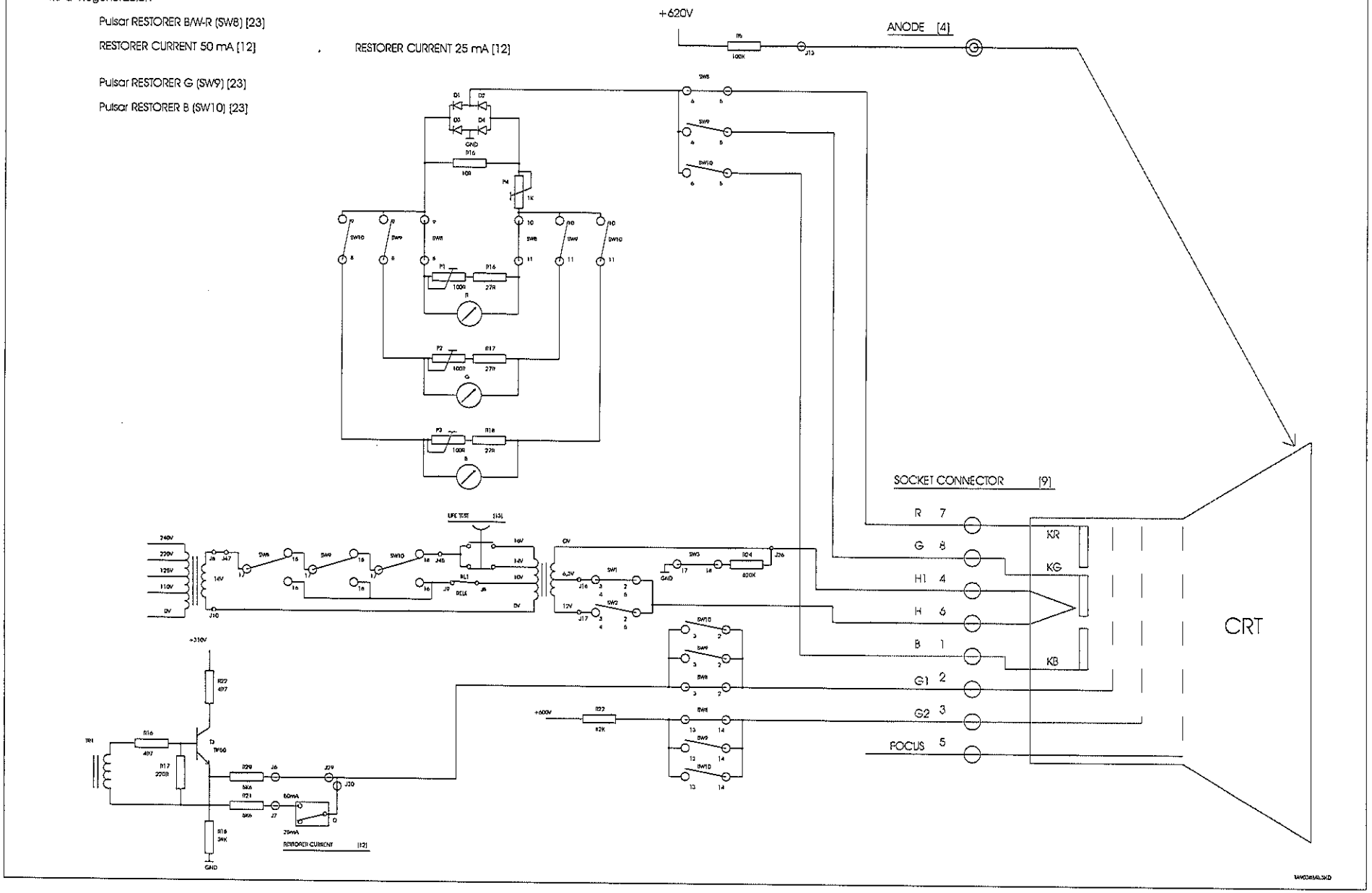
Pulsar RESTORER B/W-R (SW8) [23]

RESTORER CURRENT 50 mA [12]

RESTORER CURRENT 25 mA [12]

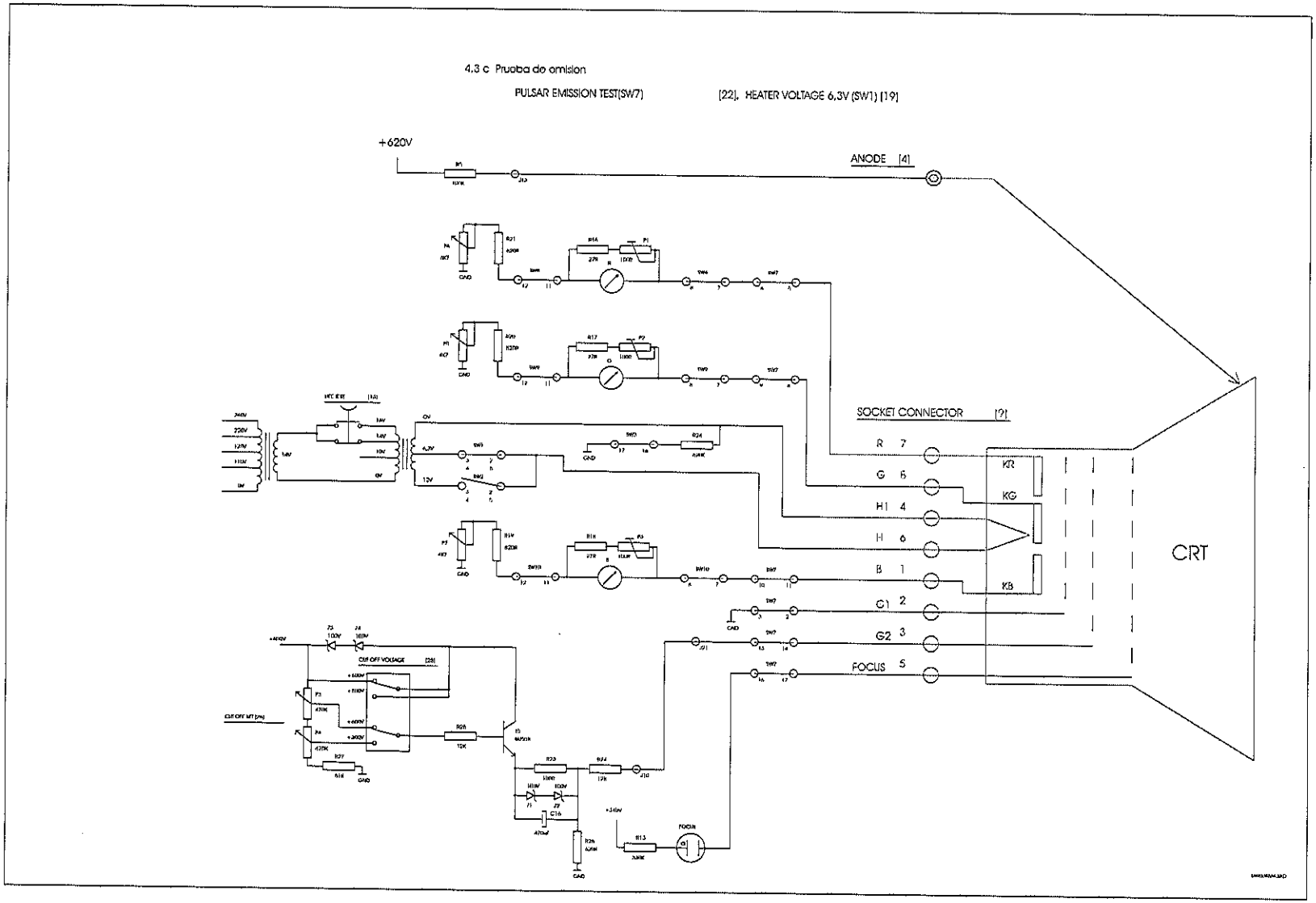
Pulsar RESTORER G (SW9) [23]

Pulsar RESTORER B (SW10) [23]



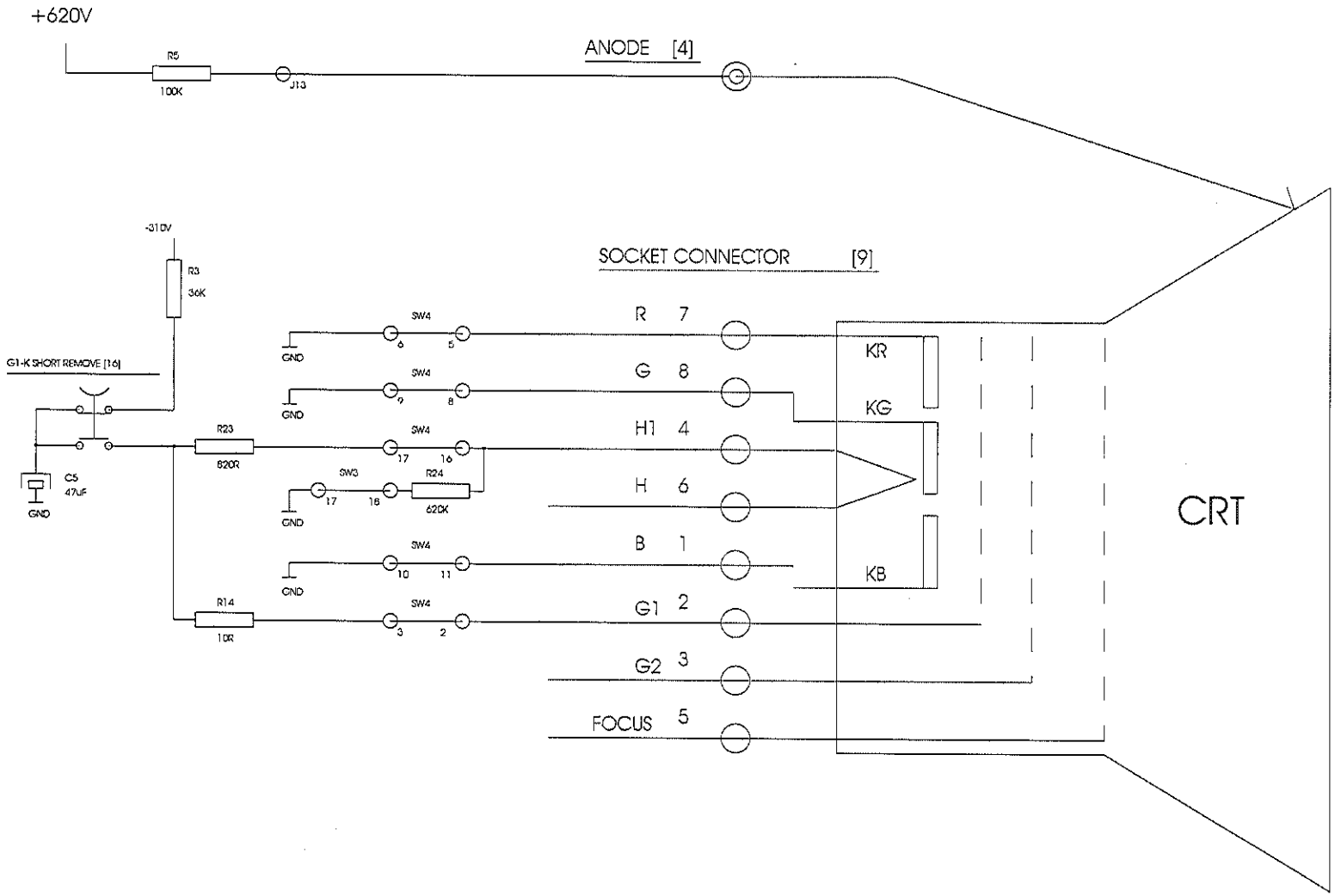
4.3 c Prueba de emision

PULSAR EMISSION TEST(SW7) [22], HEATER VOLTAGE 6,3V (SW1) [19]



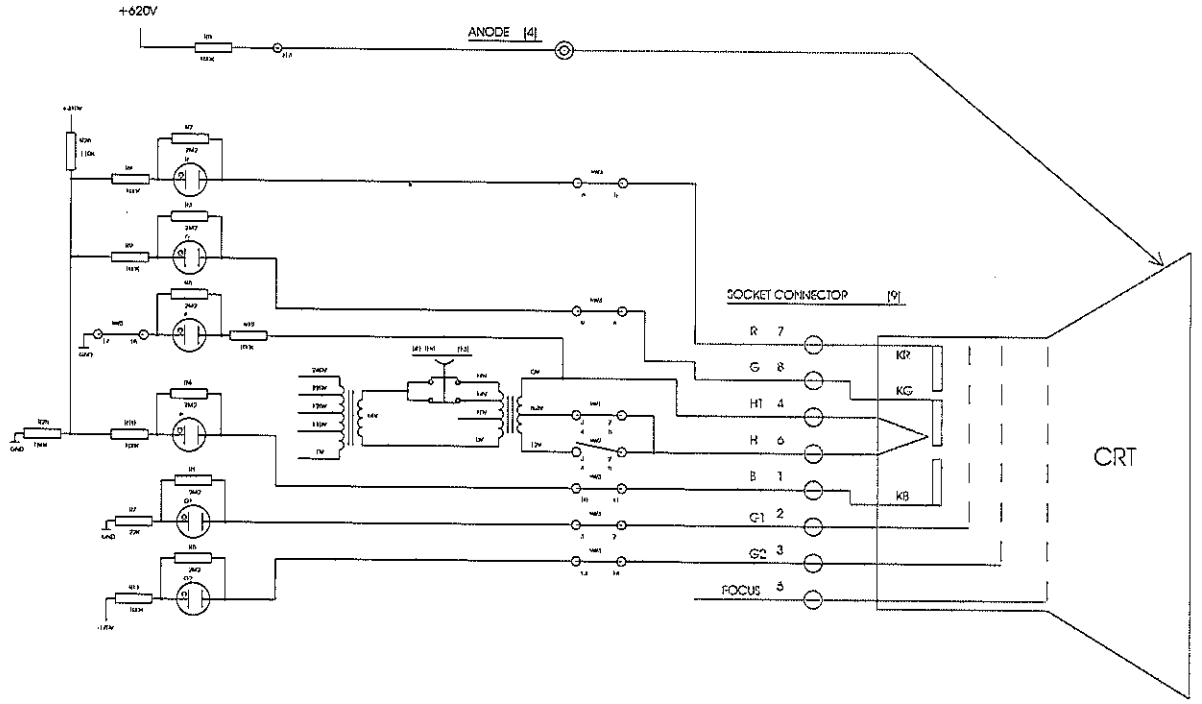
4.3 b Prueba de Fugas

PULSAR REMOVE G1 SHORTS(SW4) [17]



4.3 b Prueba de Fugas

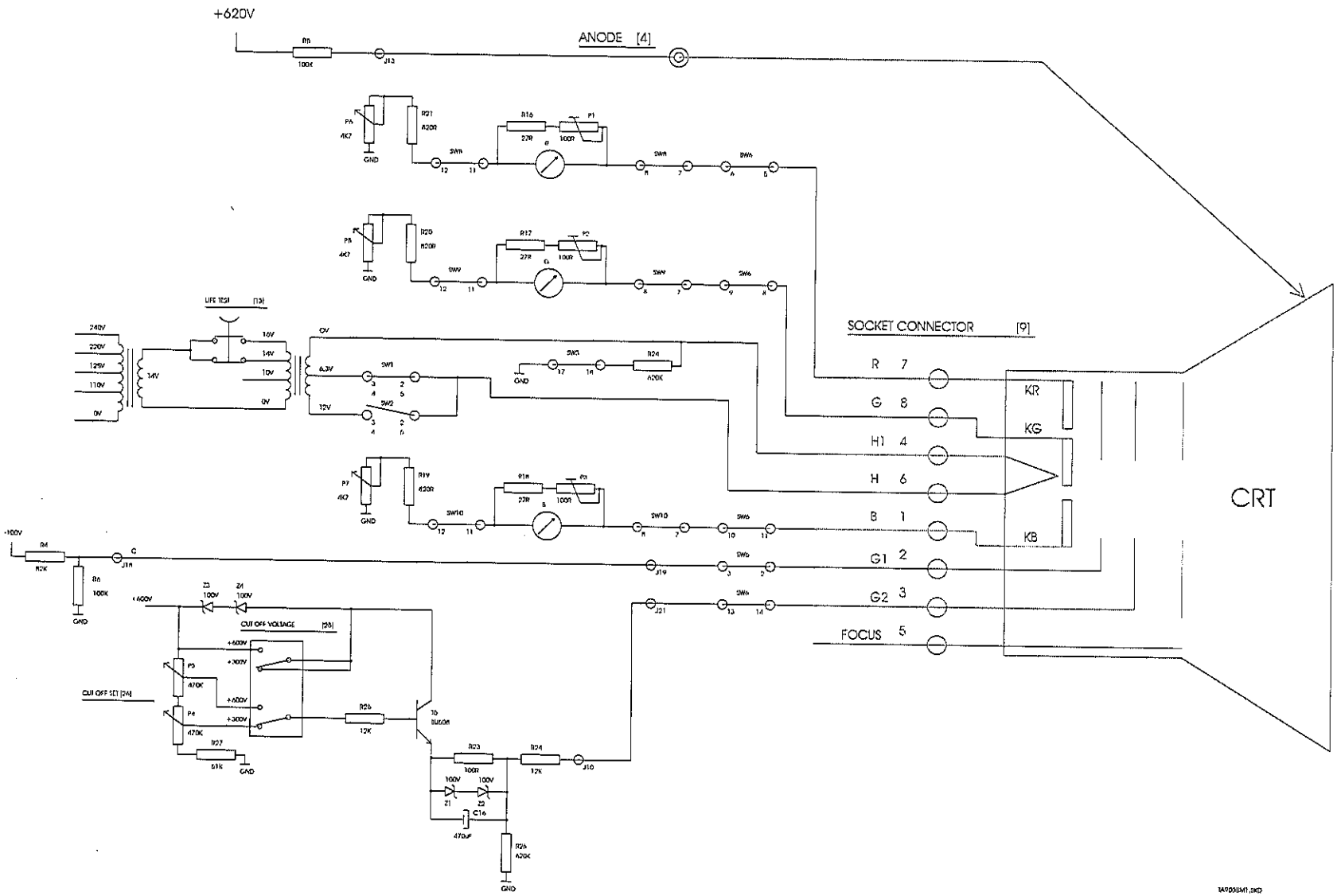
PULSAR SHORTS(SW3) [18] , HEATER VOLTAGE 6,3V (SW1) [19]



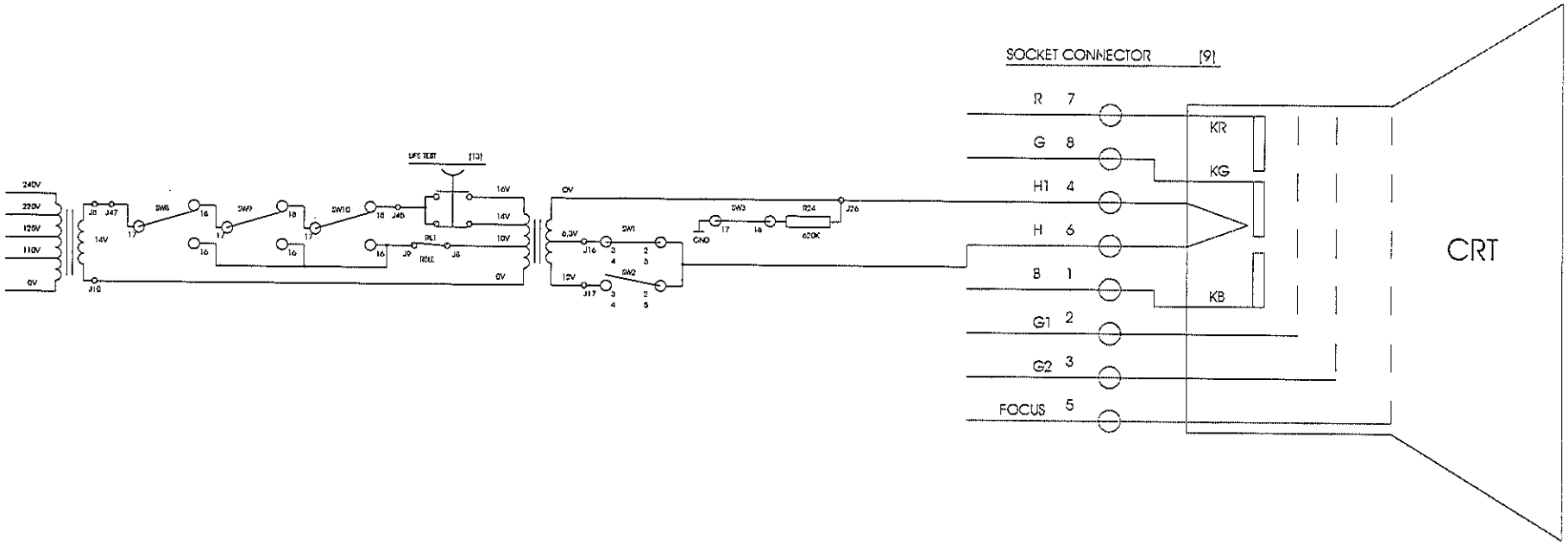
4.3 a Ajuste del CUT-OFF

PULSAR CUT_OFF (SW6) [21]

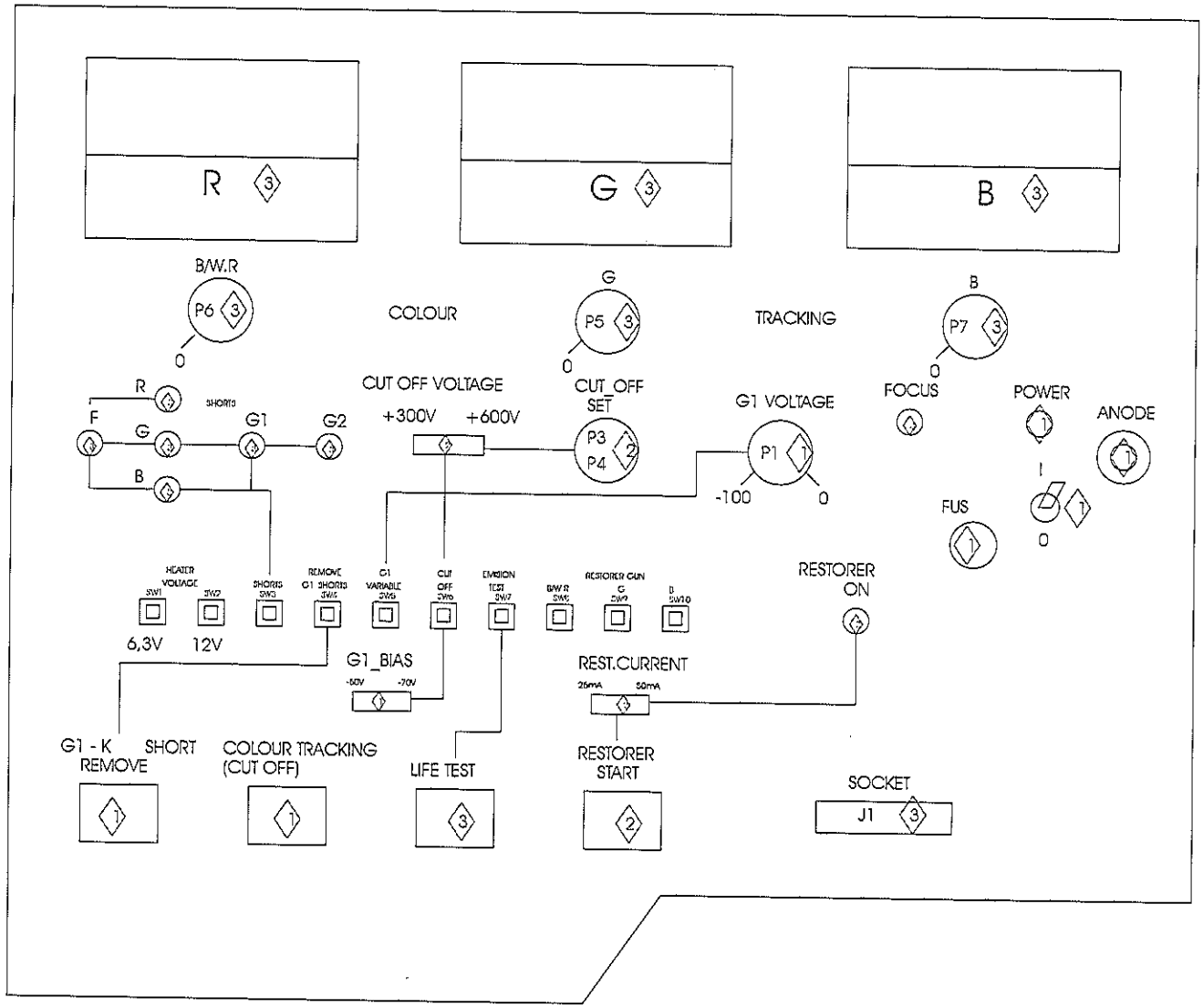
HEATER VOLTAGE (SW1) [19]



CIRCUIT DE FILAMENT TA903B



TA903FIL.DXD

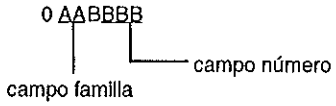

R
G
B
B/W.R
P6
COLOUR
P5
TRACKING
P7
FOCUS
POWER
ANODE
CUT OFF VOLTAGE
+300V
+600V
CUT_OFF SET
P3
P4
G1 VOLTAGE
P1
-100
0
FUS
R
F
G
B
G1
G2
HEATER VOLTAGE
6,3V
12V
SHORTS
REMOVE G1 SHORTS
G1 VARIABLE
CUT OFF
EMISSION TEST
RESTORER GUN
B/W.R
G
B
RESTORER ON
G1_BIAS
REST.CURRENT
25mA
50mA
G1 - K SHORT REMOVE
COLOUR TRACKING (CUT OFF)
LIFE TEST
RESTORER START
SOCKET
J1

TA903B.SKD

1. LISTADO DE COMPONENTES, ESQUEMAS Y PLANOS DE POSICIÓN DE COMPONENTES / PARTS LIST, CIRCUIT DIAGRAMS AND PCB LAYOUTS

1.1 Clave de códigos / *codes key*

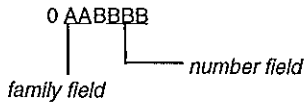
El código (P.N.) de los componentes primarios utilizados por **PROMAX** empieza siempre por 0 y está formado por dos campos:



El campo familia se compone de dos letras que identifican la familia a la que pertenece el elemento. A continuación se listan las diferentes familias y su descripción.

El campo número se compone de cuatro cifras que identifican al elemento dentro de la familia a la que pertenece.

PROMAX *primary components part number (P.N.) starts always with 0 and it is composed of two fields:*



The family field, it is composed by two letters that identify the family it belongs to. The following table contains the different families and their description.

The number field, it is composed by four figures which identify the component in the family it belongs to.

CODIGO FAMILIA / FAMILY CODE	DESCRIPCIÓN	*DESCRIPTION*
AA	ANODIZADOS	*ANODIZED*
AC	ACCESORIOS NIVEL M.P	*ACESSORIES. RAW MATERIAL LEVEL*
AN	SINTONIZADORES	*TUNERS*
AN.	ATENUADORES	*ATTENUATORS*
AP	PINTURAS	*PAINTINGS*
AQ	NIQUELADOS	*NICKEL-PLATED*
AR	ARANDELAS	*WASHERS*
AR.	MICAS	*MICA*
AS	SERIGRAFIAS	*PRINTINGS*
AT	AISLANTES ELEC. Y MEC.	*MECH. AND ELEC. INSULATORS*
AT.	PRTTORES ELEC. Y MEC.	*MECH. AND ELEC. PROTECTORS*
AV	CROMADOS/NIQUELADOS	*CHROME/NICKEL PLATED*
AV.	CINCADOS/PLATEADOS	*ZINC PLATED/ SILVER PLATED*
AX	ARENADOS	*SANDED*
BB	BOBINAS	*COILS*
BD	BRIDAS	*CLAMPS*
BD.	GRAPAS	*STAPLES*
BD..	PINZAS	*PINCERS*
BL	BLINDAJES	*SHIELDINGS*
BM	BOTONES	*KNOBS*
BM.	TAPAS BOTONES	*KNOB LIDS*
BM..	FLECHAS BOTONES	*KNOB ARROWS*
BR	BORNES	*CONNECTORS*
BR.	BANANAS	*BANANAS*
BR..	PINZAS	*PINCERS*
BS	BASES DE RED	*MAINS SOCKET*
BT	BOTONERAS	*SWITCH ASSEMBLY*
BZ	BOBINAS SMD	*SMD COILS*
BZ..	FILTROS SMD	*SMD FILTERS*
BZ_	TRANSF.(S/FERR) SMD	*SMD TRANSF. (WITHOUT FERRITE)*
CA	CABLES	*LEADS*
CA.	CINTAS	*TAPES*
CA.	JUEGOS DE CABLES	*LEAD SET*
CA..	HILOS	*WIRES*
CC	PL.CIMP. DE UNA CARA	*ONE SIDE PCB*
CD	PL.CIMP. DE DOS CARAS	*TWO SIDES PCB*
CE	COND. ELECTROLITICOS	*ELECTROLYTIC CAPACITORS*
CEZ	COND. ELECTROLIT. SMD	*SMD ELECTROLYTIC CAPACITORS*
CF	OPTOACOPLADORES	*OPTOCOUPLERS*
CH	CHASIS	*FRAME*

CI	CIRCUITOS INTEGRADOS	*INTEGRATED CIRCUITS*
CJ	CAJAS METALICAS	*METAL BOX*
CL	COND. POLIPROPILENO	*POLYPROPYLENE CAPACITOR*
CM	CONMUTADORES	*SWITCH*
CO	CONECTORES	*CONNECTOR*
CP	COND. POLIESTER	*POLYESTER CAPACITOR*
CR	CRISTALES DE CUARZO	*QUARTZ CRYSTAL*
CR.	FILTROS DE ONDA SUP.	*SURFACE WAVE FILTER*
CR.	FILTROS CERAMICOS	*CERAMIC FILTER*
CR..	RESONADOR CERAMICO	*CERAMIC RESONATOR*
CRZ	FILTRO CERAMICO SMD	*SMD CERAMIC FILTER*
CRZ.	CRISTAL DE CUARZO SMD	*SMD QUARTZ CRYSTAL*
CRZ_	RESONADOR CERAMICO SMD	*SMD CERAMIC RESONATOR*
CS	COND. STYROFLEX	*STYROFLEX CAPACITOR*
CT	COND. TANTALIOS	*TANTALUM CAPACITOR*
CV	COND. VARIABLES	*VARIABLE CAPACITOR*
CV.	TRIMERS	*TRIMMERS*
CV..	TANDEMS	*TANDEMS*
CX	CONEXIONES(CTOR+CABLE)	*CONNECTIONS (CONNECTOR+LED)*
CY	COND. PRECISION	*PRECISION CAPACITORS*
CZ	INTEGRADOS SMD	*SMD INTEGRATED CIRCUITS*
DG	DIAGRAMAS CORRECCION	*CORRECTION CHART*
DI	DIODOS	*DIODES*
DI.	ZENERS	*ZENERS*
DI.	PUENTES RECTIFICADORES	*RECTIFIER BRIDGE*
DI..	FOTOEMISOR / RECEPTOR	*PHOTO EMITTER / RECEIVER*
DK	PROGRAMA PARA GRABAR	*PROGRAM TO RECORD*
DS	PINTURAS / ALCOHOL	*PAINTINGS / ALCOHOL*
DS.	FREON	*FREON*
DT	DISTANCIADORES	*DISTANCE CLIP*
DZ	DIODOS SMD	*SMD DIODES*
DZ.	ZENERS SMD	*SMD ZENERS*
EJ	EJES PROLONGADORES	*KNOB EXTENSION ROD*
EM	EMBALAJES	*PACKAGES*
EM.	SUPLEMENTO CARTON	*CARDBOARD SUPPLEMENT*
EM.	CAJAS CARTON	*CARDBOARD BOX*
EN	ETIQUETAS NUMERACION	*NUMERATION LABEL*
EQ	EQUIVALENTES A:	*EQUIVALENT TO:*
ES	ESCALA INSTR. / DISCO	*INSTRUMENT SCALE*
EV	ETIQUETAS VARIAS	*VARIOUS LABELS*
FD	FUNDAS	*CARRYING BAG*
FD.	ESTUCHES	*CARRYING CASE*
FE	FERRITAS	*FERRITES*
FE.	NUCLEOS BOBINAS	*COIL CORES*
FE.	BALUNS	*BALUNS*
FS	FUSIBLES	*FUSES*
FSZ	FUSIBLES SMD	*SMD FUSES*
GO	GOMAS	*RUBBERS*
GO.	PEGAMENTOS	*GUMS*
GO.	ESPUMAS	*FOAMS*
GO..	SILICONAS	*SILICONES*
GO_	ADHESIVOS	*STICKERS*
GS	SILICONAS	*SILICONES*
HE	HEMBRILLAS	*FEMALES*
IF	ETIQUETAS NUMERACION	*NUMBERING LABEL*
IF.	MANUALES INSTRUCCINES	*INSTRUCTION MANUAL*
IF.	ETIQUETAS ADHESIVAS	*STICKERS*
IG	MANUALES INGLES	*ENGLISH MANUAL*
IG.	MANUALES FRANCES	*FRENCH MANUAL*
IL	LEDS	*LEDS*
IL.	DISPLAYS	*DISPLAYS*
IL..	NEONES	*NEONS*
IN	INSTRUMENTOS	*INSTRUMENTS*
IS	MANUAL SERVICIO	*SERVICE MANUAL*
IS.	MANUAL CALIBRACION	*CALIBRATION MANUAL*
IS.	MANUAL MARKETING	*MARKETING MANUAL*

IT	INTERRUPTORES	*SWITCH*
IT.	PULSADORES	*PUSH BUTTONS*
IZ	INTERRUPTORES	*SMD SWITCHES*
IZ.	PULSADORES SMD	*SMD PUSH BUTTONS*
JML2	C. SMD TAJ B 20% 6.3V	*SMD CAPACITOR TAJ B 20% 6.3V*
JMM2	C. SMD TAJ B 20% 16V	*SMD CAPACITOR TAJ B 20% 16V*
JMO2	C. SMD TAJ B 20% 20V	*SMD CAPACITOR TAJ B 20% 20V*
JMQ2	C. SMD TAJ B 20% 35V	*SMD CAPACITOR TAJ B 20% 35V*
LT	LIMITADOR TENSION	*VOLTAGE LIMITER*
LZ	INDICADOR LUMINOSOS SMD	*SMD LIGHT INDICATOR*
MA	TUBOS MACARRON PLAST.	*PLASTIC PIPE*
MA.	TUBOS TERMORETRCTIL.	*THERMO RETRACTABLE PIPE*
MA..	TUBOS SILICONA	*SILICONE TUB*
ME	MATERIAL ELECTRICO	*ELECTRIC MATERIAL*
ME.	BORNES / FUSIBLES / BASE	*FUSES / SOCKETS*
ME..	BOMBILLAS / ETC.	*BULBS ETC.*
MI	MANUALES INSTRUCCION	*INSTRUCTION MANUAL*
MI.	TEXTO INSTRUCCIONES	*INSTRUCTION TEXT*
MI..	HOJAS ADICIONALES	*ADDITIONAL SHEET*
MO.	MECANIZADOS	*MECHANISED*
MS	MUELLES	*SPRINGS*
OZ	CONECTORES SMD	*SMD CONNECTORS*
PA	POTENCIOMETROS AJUSTE	*ADJUSTMENT POTENTIOMETERS*
PE	PERFILES	*PROFILES*
PF	PANELES FRONTALES	*FRONT PANEL*
PG	PIEZAS GENERALES	*GENERAL PIECES*
PH	POTES. MANDO MECHANIZ.	*CONTROL POTENTMTRS. (MECHANISED)*
PI	PILAS	*BATTERY*
PI.	BATERIAS	*RECHARGEABLE BATTERY*
PM	POTES. MANDO STANDARS	*SATANDARD CONTROL POTENTIOMTRS*
PN	PUNTAS DE PRUEBA	*TEST LEADS*
PP	PIEZAS DE PLASTICO	*PLASTIC PIECES*
PP..	MECANIZADOS PLASTICO	*PLASTIC MECHANIZED*
PP_	VISORES	*VIEWERS*
PS	PIES GOMA/PLAST/ETC	*RUBBER/PLASTIC/ETC FEET*
PT	PORTAFUSIBLES	*FUSE HOLDER*
PT.	CLIPS PILAS Y BATERIA	*BATTERY CLIPS*
PZ	POTES AJUSTE SMD	*SMD ADJUSTMENT POTENTIOMETERS*
RB	RESIST. BOBINADAS	*WIRE-WOUND RESISTORS*
RC	RESISTENCIAS 5% 1/4W	*RESISTOR 5% 1/4W*
RD	RESISTENCIAS 5% 1/2W	*RESISTOR 5% 1/2W*
RE	RELES	*RELAY*
RF	REFRIGERADORES	*HEAT SINK*
RG	RESISTENCIA 5 Y 10% 1W	*RESISTOR 5 Y 10% 1W*
RH	RESISTENCIA 5% 1/8W	*RESISTOR 5% 1/8W*
RH.	RESISTENCIA 5% 1/16W	*RESISTOR 5% 1/16W*
RH.	RESISTENCIA 0.5% 1/2W	*RESISTOR 0.5% 1/2W*
RM	REMACHES	*RIVET*
RN	RESISTENCIA 0.5 / 0.8 / 0.2 W	*RESISTOR 0.5 / 0.8 / 0.2 W*
RN.	RESISTENCIA 0.5% 2W	*RESISTOR 0.5% 2W*
RP	RESISTENCIA PRECISION	*PRECISION RESISTOR*
RQ	RESISTENCIA 1% 1/4W	*RESISTENCIA 1% 1/4W*
RR	CIRCUITOS MONTADOS	*ASSEMBLED CIRCUITS*
RR.	MODULOS / ETC.	*MODULE / ETC.*
RY	RESISTENCIA SMD 0603 5%	*SMD RESISTOR 0603 5%*
RZ	RESISTENCIA SMD 1206 5%	*SMD RESISTOR 1206 5%*
RZA	RESISTENCIA SMD 0603 5%	*SMD RESISTOR 0603 5%*
SP	PANELES POSTERIORES	*REAR PANEL*
SP.	SUBPANELES	*SUB-PANEL*
SR	SOPORTES	*SUPPORTS*
SY	RESISTENCIA SMD 0603 1%	*SMD RESISTOR 0603 1%*
SZ	RESISTENCIA SMD 1206 1%	*SMD RESISTOR 1206 1%*
SZA	RESISTENCIA SMD 0603 1%	*SMD RESISTOR 0603 1%*
TC	TUERCAS	*NUTS*
TE	TERMINALES	*TERMINALS*
TF	TRANSFORMADORES	*TRANSFORMER*

TF.	BOBINADOS DE TRANSF.	*TRANSFORMER WINDINGS*
TM	TERMISTANCIAS	*THERMISTORS*
TM.	VARISTORES	*VARISTORS*
TM..	PTC/NTC	*PTC/NTC*
TO	TORNILLOS	*SCREWS*
TP	TAPAS	*LIDS*
TR	TRANSISTORES	*TRANSISTORS*
TZ	TRANSISTORES SMD	*SMD TRANSISTORS*
VA	TUBOS TELE.	*CRT*
VA.	VALVULAS	*VALVES*
ZA	COND. CER 16V GFO...	*CERAMIC CAPACITOR 16 V GFO...*
ZC	COND. CERAMICS 1 NF63V	*CERAMIC CAPACITOR 1 NF63V*
ZE	COND. CER. PL.63V T	*CERAMIC CAPACITOR PL.63V T*
ZF	COND. CERAMICS 63V 5%	*CERAMIC CAPACITOR 63V 5%*
ZN	COND. CERAMICS VAC	*VAC CERAMIC CAPACITOR*
ZO	ZOCALOS	*SOCKETS*
ZOZ	ZOCALOS SMD	*SMD SOCKETS*
ZP	COND. CERAMICOS 3KV	*CERAMIC CAPACITOR 3KV*
ZR	COND. BOTON (LENTEJA)	*BUTTON CAPACITOR*
ZS	COND. PASAMUROS	*FEEDTHROUGT CAPACITOR*
ZT	TRIMERS SMD	*SMD TRIMMER*
ZV	COND. CER. MULTICAPA	*MULTILAYER CERAMIC CAPACITOR*
ZX	COND. CERAMICS	*CERAMIC CAPACITOR*
ZY	COND. CERAMICS	*CERAMIC CAPACITOR*

1.2 Notas/Remarks

Abreviación	Significado	*Abbreviation*	*Meaning*
Pos. Id.	Identificador de posición	Pos. Id.	*Position Identifier*
P. N.	Código	P. N.	*Part Number*
M. M.	Montaje Mecánico	M. A.	*Mechanical Assembly*
M.E.	Montaje Eléctrico	E. A.	*Electrical Assembly*
C. I.	Circuito Impreso	PCB	*Printed Circuit Board*
SMD	Dispositvo de Montaje Superficial	SMD	*Surface Mounting Device*

Nota: Los códigos de los circuitos impresos aparecen en negrita para facilitar su identificación. Este código aparece impreso sobre el circuito impreso.

Remark: Printed circuit boards part numbers appear in bold letters in order to make easy its identification. This part number is printed on the printed circuit board.

1.3 TA-903B MONTAJE DEL CONJUNTO / ENSEMBLE ASSEMBLY

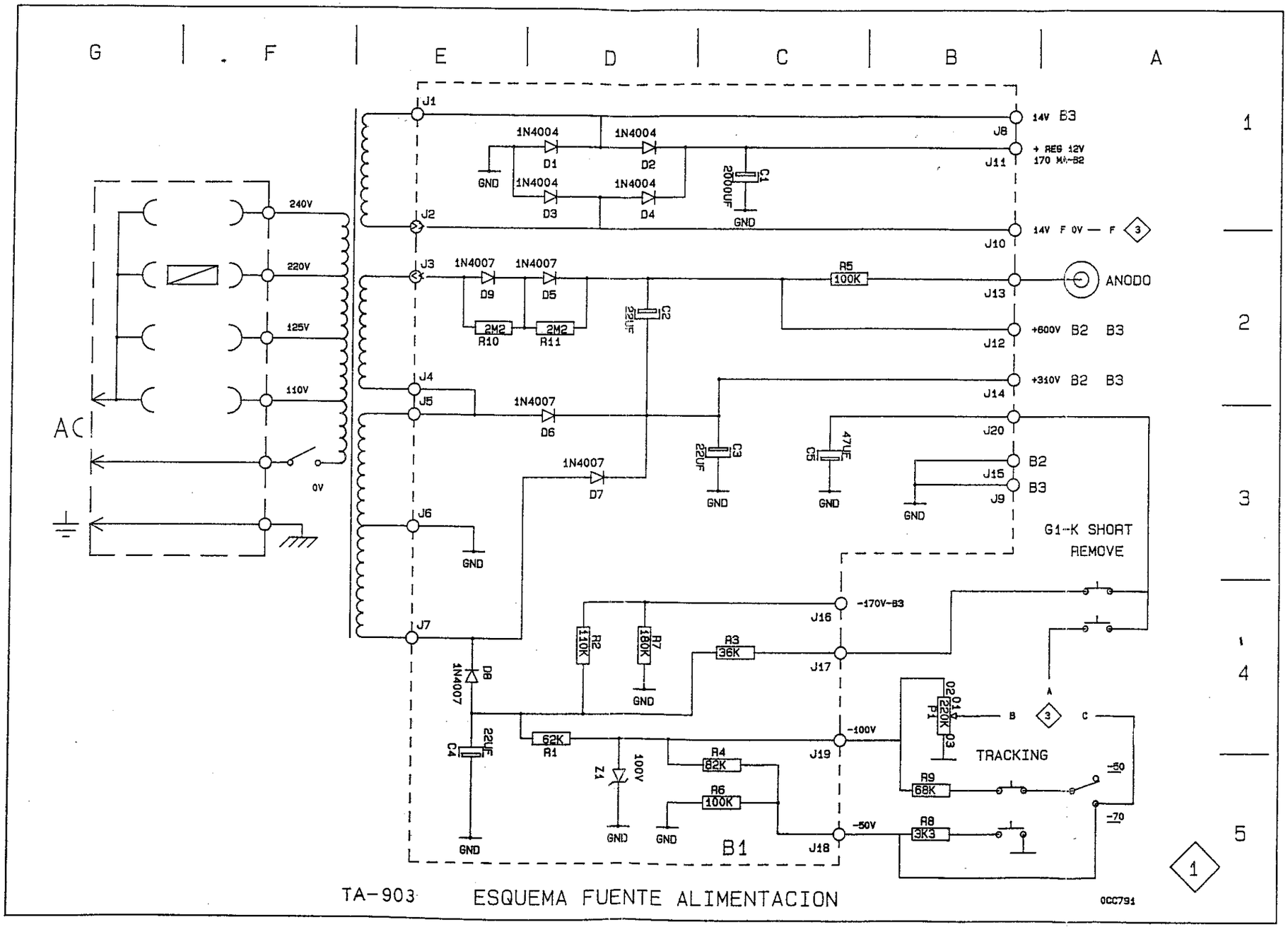
MODULE	POS. ID.	P.N.	DESCRIPTION
TA903B		**TA903BES01**	**TA-903B ANALIZAD.REGENERADOR / ANALYSER - REGENERATOR**
TA903BES01		0 IF7330	MANUAL INSTRUC.TA-903 / TA-903 INSTRUCTION MANUAL
TA903BES01		AZ004	A-4 ADAPTADOR ZOCALO TUBO / A-4 TUBE SOCKET ADAPTER
AZ004		0 CA5530	JUEGO CABLES POR ZOCALO RT-501 / RT-501 SOCKET CABLE SET
AZ004		0 CC3090	PL.CIMP.ADAPTADOR A4 RT-501 / RT-501 A4 ADAPTER PCB
AZ004		0 PP0900	CAJA ADAPTADOR ZOCALOS RT-501 / RT-501 SOCKET ADAPTER BOX
AZ004		0 TC0610	TUERC / NUT .HEXAG.M2 LA ZIN DIN 934
AZ004		0 TO1910	TORN / SCREW DIN-7981 2.9X 6.5 FE ZIN
AZ004		0 TO2980	TORN / SCREW DIN-965 M2X10 FE ZIN
AZ004		0 ZO0080	ZOCALO TRC HEMBRA / FEMALE CRT SOCKET 18-21 DH
AZ004		0 ZO0150	ZOCALO TV MACHO / MALE TV SOCKET 8P 18.20
TA903BES01		AZ005	A-5 ADAPTADOR ZOCALO TUBO / A-5 TUBE SOCKET ADAPTER
AZ005		0 CA5530	JUEGO CABLES POR ZOCALO RT-501 / RT-501 SOCKET CABLE SET
AZ005		0 CC3100	PL.CIMP ADAPTADOR A5 RT501 / RT-501 A5 ADAPTER PCB
AZ005		0 PP0900	CAJA ADAPTADOR ZOCALOS RT-501 / RT-501 SOCKET ADAPTER BOX
AZ005		0 TC0610	TUERC. / NUT HEXAG.M2 LA ZIN DIN 934
AZ005		0 TO1910	TORN / SCREW DIN-7981 2.9X 6.5 FE ZIN
AZ005		0 TO2980	TORN / SCREW DIN-965 M2X10 FE ZIN
AZ005		0 ZO0080	ZOCALO TRC HEMBRA / FEMALE CRT SOCKET 18-21 DH
AZ005		0 ZO0150	ZOCALO TV MACHO / MALE TV SOCKET 8P 18.20
TA903BES01		AZ006	A-6 ADAPTADOR ZOCALO TUBO / A-6 TUBE SOCKET ADAPTER
AZ006		0 CA5530	JUEGO CABLES POR ZOCALO RT-501 / RT-501 SOCKET CABLE SET
AZ006		0 CC3110	PL.CIMP ADAPTADOR A6 RT501 / RT-501 A6 ADAPTER PCB
AZ006		0 PP0900	CAJA ADAPTADOR ZOCALOS RT-501 / RT-501 SOCKET ADAPTER BOX
AZ006		0 TC0610	TUERC./ NUT HEXAG.M2 LA ZIN DIN 934
AZ006		0 TO1910	TORN / SCREW DIN-7981 2.9X 6.5 FE ZIN
AZ006		0 TO2980	TORN / SCREW DIN-965 M2X10 FE ZIN
AZ006		0 ZO0150	ZOCALO TV MACHO / MALE TV SOCKET 8P 18.20
AZ006		0 ZO0190	ZOCALO TRC HEMBRA / FEMALE CRT SOCKET 14P 18.22
TA903BES01		AZ007	A-7 ADAPTADOR ZOCALO TUBO / A-7 TUBE SOCKET ADAPTER
AZ007		0 CA5530	JUEGO CABLES POR ZOCALO RT-501/ RT-501 SOCKET CABLE SET
AZ007		0 CC3610	PL.CIMP ADAPTADOR A7 RT501/ RT-501 A7 ADAPTER PCB
AZ007		0 PP0900	CAJA ADAPTADOR ZOCALOS RT-501/ RT-501 SOCKET ADAPTER BOX
AZ007		0 TC0610	TUERC. / NUT HEXAG.M2 LA ZIN DIN 934
AZ007		0 TO1910	TORN / SCREW DIN-7981 2.9X 6.5 FE ZIN
AZ007		0 TO2980	TORN / SCREW DIN-965 M2X10 FE ZIN
AZ007		0 ZO0150	ZOCALO TV MACHO / MALE TV SOCKET 8P 18.20
AZ007		0 ZO0190	ZOCALO TRC HEMBRA / FEMALE CRT SOCKET 14P 18.22
TA903BES01		AZ008	A-8 ADAPTADOR ZOCALO TUBO / A-8 TUBE SOCKET ADAPTER
AZ008		0 CA6100	JGO.CABLES ZOCALO TUBO A8-A9 / A8-A9 SOCKET CABLE SET
AZ008		0 CC3430	PL.CIMP ADAPTADOR A8 RT501 / RT501 A8 PCB ADAPATER

AZ008		0 PP0900	CAJA ADAPTADOR ZOCALOS RT-501 / RT-501 SOCKET ADAPTER BOX
AZ008		0 TC0610	TUERC. / NUT HEXAG.M2 LA ZIN DIN 934
AZ008		0 TO1910	TORN / SCREW DIN-7981 2.9X 6.5 FE ZIN
AZ008		0 TO2980	TORN / SCREW DIN-965 M2X10 FE ZIN
AZ008		0 ZO0150	ZOCALO TV MACHO / MALE TV SOCKET 8P 18.20
AZ008		0 ZO0210	ZOCALO TRC / CRT SOCKET S.811/12
TA903BES01		AZ009	A-9 ADAPTADOR ZOCALO TUBO / A-9 TUBE SOCKET ADAPTER
AZ009		0 CA6100	JGO.CABLES ZOCALO TUBO A8-A9 / A8-A9 SOCKET CABLE SET
AZ009		0 CC3440	PL.CIMP ADAPTADOR A9 RT501 / RT501 A9 ADAPTER PCB
AZ009		0 PP0900	CAJA ADAPTADOR ZOCALOS RT-501 / RT-501 SOCKET ADAPTER BOX
AZ009		0 TC0610	TUERC.HEXAG. / NUT M2 LA ZIN DIN 934
AZ009		0 TO1910	TORN / SCREW DIN-7981 2.9X 6.5 FE ZIN
AZ009		0 TO2980	TORN / SCREW DIN-965 M2X10 FE ZIN
AZ009		0 ZO0150	ZOCALO TV MACHO / MALE TV SOCKET 8P 18.20
AZ009		0 ZO0220	ZOCALO TRC / CRT SOCKET S.800.14
TA903BES01		0 AC0040	BOLSA MINIGRIP / MINIGRIP PLASTIC BAG 180 X 250
TA903BES01		0 AC0530	BOLSA / BAG POLITENO 236X335 GAL.200
TA903BES01		0 EM2040	SUPLEMENTO EMBALAJE TA-903 / TA-903 PACKING SUPPLEMENT
TA903BES01		0 EM2320	EMBALAJE EXT. TA-903 C/SERIGR. / TA-903 EXTERNAL PACKING
TA903BES01		0 EM2330	SUPLEMENTO EMBAL.TA-903 / TA-903 PACKING SUPPLEMENT
TA903BES01		0 FS0040	FU.5X20 500MA F 250V IEC127
TA903BES01		0 IF0920	TARJETA GARANTIA PROMAX / PROMAX GUARANTEE CARD
TA903BES01		0 IF9590	LIST.ADAPT.(REGENERA.TRC)LA-33 / LA-33 ADAPTER (REGEN.) LIST
TA903BES01		0 MI0218	HOJA ADICIONAL TA-903B / TA-903b ADDITIONAL SHEET
TA903BES01		CC011	CC-11 CABLE ADAPTADORS RT-501 / RT-501 ADAPTER CABLE CC-11
CC011		0 CA0940	MTS.MANGUERA 8X0.25 D.5-6MM GR
CC011		0 CO0950	CTOR."D" 9VIAS MACHO / MALE SOLD.
CC011		0 CO0960	CTOR SAP CAPERUZA CE9+FB
CC011		0 PC0140	P/ESTOPAS NORMANYL PG-7 RT-501
CC011		0 PP2210	PROTECTOR ADAPT.ZOCALO TRC / CRT SOCKET ADAPT. PROTECTOR
CC011		0 TC0830	CONTRATUERCA POLIMIDA N.7
CC011		0 TO3170	TORN / SCREW DIN-7982 2.2X 8 FE ZIN
CC011		0 ZO0160	ZOCALO TRC HEMBRA / FEMALE CRT SOCKET 8P 18.18
TA903BES01		CC026	CC-26 CABLE ANODO / ANODE CABLE CC-26 TA-903
CC026		0 CA0390	MTS. CABLE 1 MM ROJO PT. PRUEB
CC026		0 GO0250	VENTOSA MAT
CC026		0 PG2410	PINZA VENTOSA DH 18.30 0GO025
CC026		0 PN0420	BANANA ROJA / RED BANANKT425 SL-1(PROTEC)
CC026		0 PN0430	PUNTA BANANA ROJA / RED BAN. END LS425 SL-1
MODULE	**POS. ID.**	**P.N.**	**DESCRIPTION**
TA903BES01		**TA903B6000000**	**M.M. Y M.E CONJUNTO / ENSEMBLE E. & M. ASSEMBLY**
TA903B6000000		TA903B7APG3360	MALETACON REMACHES TA-903B/TA-903B CARRYING BAG WITH RIVET
TA903B6000000		0 AR0310	ARAND. / WAHSER BAQUELITA 3.25X8.5X1
TA903B6000000		0 AR0620	ARAND.PLANA / FLAT WASHER 3.2X7X0.5 FE ZIN
TA903B6000000		0 AR0620	ARAND.PLANA / FLAT WASHER 3.2X7X0.5 FE ZIN
TA903B6000000		0 AR0710	ARAND.DENT / SERRATED WASHER 3.2J DIN 6797
TA903B6000000		0 AR0710	ARAND.DENT / SERRATED WASHER 3.2J DIN 6797
TA903B6000000		0 AR0760	ARAND.GROVER / LOCK WAHSER M3
TA903B6000000		0 AT0800	PLACA AISLANTE TR-851/TA-903B / TR-851/TA-903B INSULTOR BOARD
TA903B6000000		0 BD0130	BRIDA / CLAMP UNEX 222.1
TA903B6000000		0 BM1070	FLECHA BOTON AZUL / BLUE BUTTON ARROW 14 DI
TA903B6000000		0 BM1080	FLECHA BOTON GRIS / GREY BUTTON ARROW 14 DI
TA903B6000000		0 BM1090	FLECHA BOTON ROJO / RED BUTTON ARROW 14 DI
TA903B6000000		0 BM1240	BOTON GRIS MATE / DULL GREY BUTTON 14 DI E4
TA903B6000000		0 BM1450	TAPA BOTON MATE AZUL / DULL BLUE BUTTON LID 14DI
TA903B6000000		0 BM1460	TAPA BOTON MATE GRIS / DULL GREY BUTTON LID 14DI
TA903B6000000		0 BM1470	TAPA BOTON MATE ROJO / DULL RED BUTTON LID 14DI
TA903B6000000		0 BM1890	FLECHA BOTON VERDE / GREEN BUTTON ARROW 14 DI

TA903B6000000		0 BM1900	TAPA BOTON MATE VERDE / DULL GREEN BUTTON LID 014
TA903B6000000		0 BT2180	BOT.TONELUCK PULSADORES / TONELUCK PUSH BUTTON TA903B
TA903B6000000		0 CA6600	JUEGO CABLES TA-903B / TA-903B CABLE SET
TA903B6000000		0 CM0590	CONMUT.DESLIZ. / SLIDEBLE SWITCH 17135 DH
TA903B6000000		0 CO0940	CTOR."D" 9VIAS HEMBRA SOLD.
TA903B6000000		0 DI1040	DI ZENER 100V-1W3-6%-5mA
TA903B6000000		0 DT0180	HEXAG E/C 6 L15 RM3
TA903B6000000		0 DT0310	DIST.CILIND PLASTICO / PLASTIC ROUND SPACER D4XD6XL6
TA903B6000000		0 DT0330	HEXAG E/C 6 L11 RM3
TA903B6000000		0 DT1350	DIST.CILIND. / ROU ND SPACER D7.5X12X2 FE ZC
TA903B6000000		0 DT1860	HEXAG E/C6L50RM3C/ESP.RM3L1=15
TA903B6000000		0 EQ3131	UVAS CONECT"D"VIENEN C/0CO0940
TA903B6000000		0 EV0063	ETIQ.ADHESIVA / ADHESIVE LABEL 249X119 TA-903B
TA903B6000000		0 EV0200	ETIQ.TERMICA PARA COD.BARRAS / CODE BAR LABEL
TA903B6000000		0 FS0040	FU.5X20 500MA F 250V IEC127
TA903B6000000		0 GO0330	GOMA ESPUMA PROTECTORA TR-850 / TR850 PROTECTOR FOAM RUB.
TA903B6000000		0 HE0200	HEMBRILLA R.MC.SLB4R-233010-1
TA903B6000000		0 IL0020	LED ROJO DIFUSO / DIFFUSED RED LED 5MM
TA903B6000000		0 IL0930	PILOTO NEON / NEON PILOT S/RES. 65V Ref.111
TA903B6000000		0 IL0940	PILOTO NEON / NEON PILOT R. 220V Ref.111
TA903B6000000		0 IT0020	INTERRUP. MINIATURA / MINISWITCH
TA903B6000000		0 PC0080	PASA HILOS R5
TA903B6000000		0 PH0550	POTEN 21E4 S/I 5K LIN L6.5
TA903B6000000		0 PH1610	POT. T21 - - X 220K 01 A
TA903B6000000		0 PH1620	POT. T21 T - - X 470+470K 01 A
TA903B6000000		0 PP1160	CAPUCHON PROTECTOR INTERRUPTOR / SWITCH PROTECTOR
TA903B6000000		0 PP2770	MARCO CENTR.TECLA / KEY CENTRAL FRAME 2MM 9.8X9.8
TA903B6000000		0 PP3500	TECLA CUADRADA ROJA / RED SQUARE KEY 14.7X14.7
TA903B6000000		0 PP3510	TECLA CUADRADA VERDE / GREEN SQUARE KEY 14.7X14.7
TA903B6000000		0 PP3520	TECLA CUADRADA AMAR. / YELLOW SQUARE KEY 14.7X14.7
TA903B6000000		0 PT0130	PORTAFUS. 031.1081 SCHURTER
TA903B6000000		0 RC3320	RESIST 5% 1/4W 3K3 OHM
TA903B6000000		0 RC5130	RESIST 5% 1/4W 51K OHM
TA903B6000000		0 RC6830	RESIST 5% 1/4W 68K OHM
TA903B6000000		0 RM0210	REMACHE ALUMINIO / ALUMINIUM RIVET 4PO-175
TA903B6000000		0 RN0620	RESIST 2W 5% 82K OHM
TA903B6000000		0 SR0230	SOPORTE DIODO LED / LED DIODE SUPPORT
TA903B6000000		0 SR1390	STE.CINTA ELASTICA TR-850
TA903B6000000		0 TC0620	TUERC. / NUT HEXAG.M3 FE ZIN DIN 934
TA903B6000000		0 TC0620	TUERC. / NUT HEXAG.M3 FE ZIN DIN 934
TA903B6000000		0 TC0910	TUERCA RAPIDA SEGUR"U" / NUT DIN7970
TA903B6000000		0 TE0090	TERMINAL 3.2X6X12.5
TA903B6000000		0 TE0760	TERMINAL FASTON HEMBRA / FEMALE FASTON TERMINAL 6.3X0.8
TA903B6000000		0 TF2910	TRANSF.FILAMENTOS TR-850
TA903B6000000		0 TF3590	TRANSF.ALIM.TA-903/TR-850 / TA-903/TR/850 POWER SUPPLY TRANF.
TA903B6000000		0 TO1960	TORN / SCREW DIN-7985 M3X 6 FE ZIN
TA903B6000000		0 TO1960	TORN / SCREW DIN-7985 M3X 6 FE ZIN
TA903B6000000		0 TO1980	TORN / SCREW DIN-7985 M3X 8 FE NIQ
TA903B6000000		0 TO2030	TORN / SCREW DIN-7985 M3X12 FE ZIN
TA903B6000000		0 TO2510	TORN / SCREW DIN-7985 M4X10 FE ZIN
TA903B6000000		0 TO2820	TORN / SCREW DIN-7985 M3X 6 FE NIQ
TA903B6000000		0 TO3380	TORN / SCREW DIN-913 M3X 6 PRISIONERO
TA903B6000000		0 TO3710	TORN / SCREW DIN-7981 2.9X 9.5 FE NIQ
TA903B6000000		CA005	CA-05 CABLE RED CEE7 / CEE7 MAINS CORD CA-05
TA903B6000000		TA903B3000000	MM. ESCALA INSTRUMENTO / INSTRUMENT SCALE M. A.
TA903B6000000		TA903B3CH0100	SERIG. CHASIS / CHASSIS PRINTING

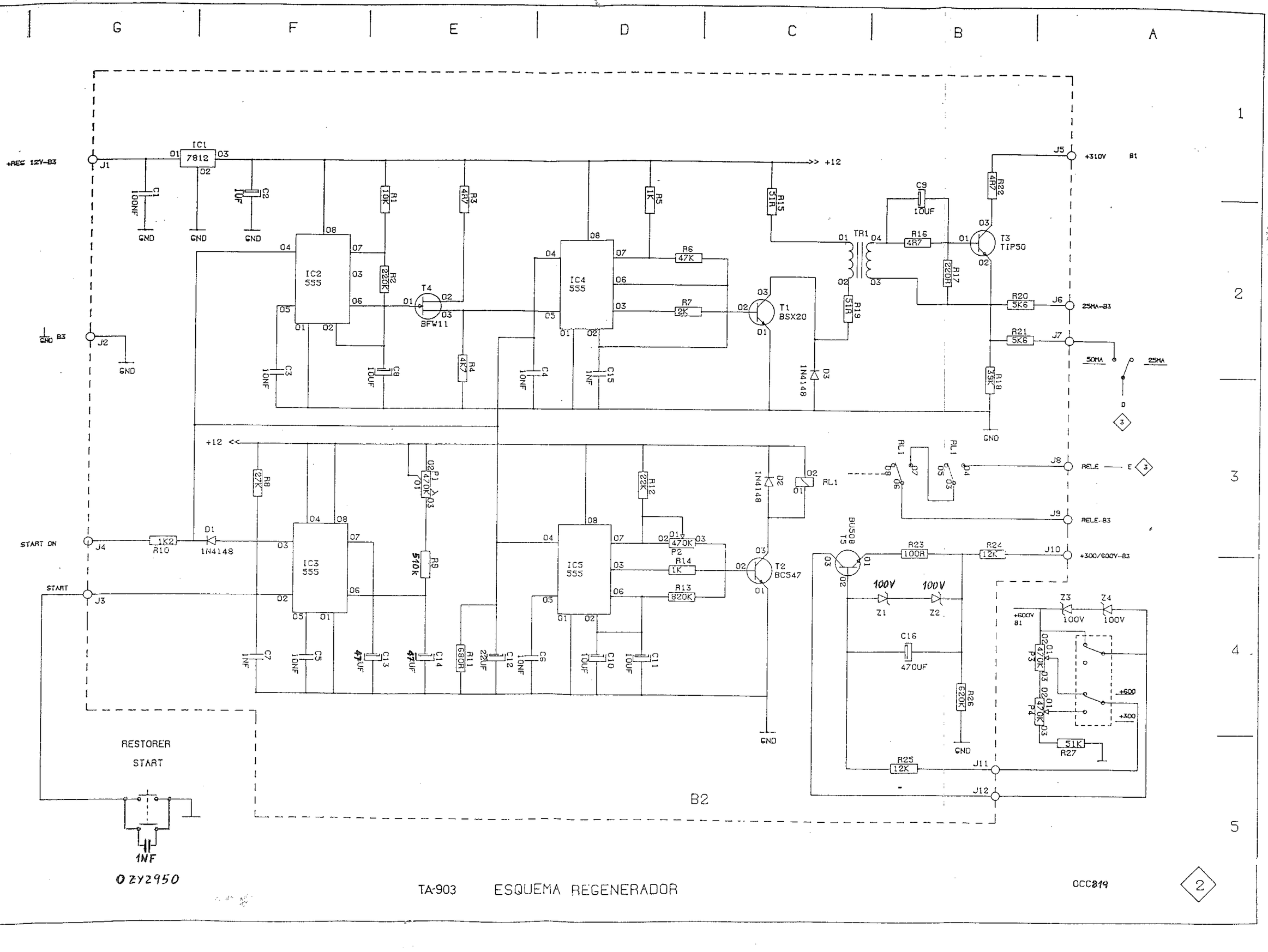
1.4 BOTONERA / SWITCH ASSEMBLY

MODULE	POS. ID.	P.N.	DESCRIPTION
TA903B6000000		**TA903B2000100**	**ME.CI. BOTONERA / SWITCH ASSEMBLY PCB E. A.**
TA903B2000100		0 CD0084	PL.CIMP.BOTONERA TA-903 / TA-903 SWITCH ASSEMBLY PCB
TA903B2000100		0 AT0120	SEPARADOR / SPACER ESTEATITA 4X4X1.2
TA903B2000100		0 BT2170	BOT. / BUTTON TONELUCK TA-903
TA903B2000100		0 PP2080	TECLA CUADRADA GRIS / GREY SQUARE KEY 7X7 ABS
TA903B2000100		0 PP2270	TECLA CUADRADA ROJA / RED SQUARE KEY 7X7 ABS
TA903B2000100		0 PP2280	TECLA CUADRADA AZUL / BLUE SQUARE KEY 7X7 ABS
TA903B2000100		0 PP2290	TECLA CUADRADA VERDE / GREEN SQUARE KEY 7X7 ABS
TA903B2000100		0 PP2300	TECLA CUADRADA GRIS OSCUR / DULL GREY SQUARE KEY 7X7
TA903B2000100	D001	0 DI0180	DI 1N4148 SIG 100MA-75V-4NS
TA903B2000100	D002	0 DI0180	DI 1N4148 SIG 100MA-75V-4NS
TA903B2000100	D003	0 DI0180	DI 1N4148 SIG 100MA-75V-4NS
TA903B2000100	D004	0 DI0180	DI 1N4148 SIG 100MA-75V-4NS
TA903B2000100	P001	0 PA1990	POT.CARB.PT-10LV 100 OHM
TA903B2000100	P002	0 PA1990	POT.CARB.PT-10LV 100 OHM
TA903B2000100	P003	0 PA1990	POT.CARB.PT-10LV 100 OHM
TA903B2000100	P004	0 PA2010	POT.CARB.PT-10LV 1K OHM
TA903B2000100	R001	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000100	R002	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000100	R003	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000100	R004	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000100	R005	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000100	R006	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000100	R007	0 RC2230	RESIST 5% 1/4W 22K OHM
TA903B2000100	R008	0 RC1040	RESIST 5% 1/4W 100K OHM
TA903B2000100	R009	0 RC1040	RESIST 5% 1/4W 100K OHM
TA903B2000100	R010	0 RC1040	RESIST 5% 1/4W 100K OHM
TA903B2000100	R011	0 RC1040	RESIST 5% 1/4W 100K OHM
TA903B2000100	R012	0 RC1040	RESIST 5% 1/4W 100K OHM
TA903B2000100	R013	0 RC3340	RESIST 5% 1/4W 330K OHM
TA903B2000100	R014	0 RB0640	RESIT.BOBIN BC4-10 OHM DAVILA
TA903B2000100	R015	0 RC1000	RESIST 5% 1/4W 10 OHM
TA903B2000100	R016	0 RC2700	RESIST 5% 1/4W 27 OHM
TA903B2000100	R017	0 RC2700	RESIST 5% 1/4W 27 OHM
TA903B2000100	R018	0 RC2700	RESIST 5% 1/4W 27 OHM
TA903B2000100	R019	0 RC8210	RESIST 5% 1/4W 820 OHM
TA903B2000100	R020	0 RC8210	RESIST 5% 1/4W 820 OHM
TA903B2000100	R021	0 RC8210	RESIST 5% 1/4W 820 OHM
TA903B2000100	R023	0 RC8210	RESIST 5% 1/4W 820 OHM
TA903B2000100	R024	0 RC6240	RESIST 5% 1/4W 620K OHM
TA903B2000100	R025	0 RC1840	RESIST 5% 1/4W 180K OHM
TA903B2000100	R026	0 RC1140	RESIST 5% 1/4W 110K OHM



TA-903 ESQUEMA FUENTE ALIMENTACION

0CC791


+REG 12V-B3
J1
IC1
7812
C1
100NF
C2
1UF
GND
+12
J5
+310V B1
R22
4R7
C9
10UF
TR1
R16
4R7
T3
TIP50
R17
220R1
R20
5K6
J6
25MA-B3
R21
5K6
J7
R18
33K
50MA
25MA
D
3
R15
51R
R19
51R
T1
BSX20
D3
1N4148
IC2
555
R1
10K
R2
220K
R3
4R7
R4
4R7
T4
BFW11
C3
10NF
C8
10UF
IC4
555
R5
1K
R6
47K
R7
2K
C4
10NF
C15
1NF
GND B3
J2
GND
+12
R8
27K
P1
470K
R12
22K
D2
1N4148
RL1
J8
RELE — E
J9
RELE-B3
START ON
J4
1K2
R10
D1
1N4148
IC3
555
R9
510K
IC5
555
P2
470K
R14
1K
R13
820K
T2
BC547
BU508
J10
+300/600V-B3
R23
100R
R24
12K
START
J3
C7
1NF
C5
10NF
C13
47UF
C14
47UF
R11
680R
C12
22UF
C6
10NF
C10
10UF
C11
10UF
100V
Z1
Z2
Z3
Z4
+600V
B1
C16
470UF
P3
470K
P4
470K
+600
+300
R26
620K
51K
R27
R25
12K
J11
J12
GND
RESTORER
START
1NF
B2
OZY2950
TA-903 ESQUEMA REGENERADOR
OCC819

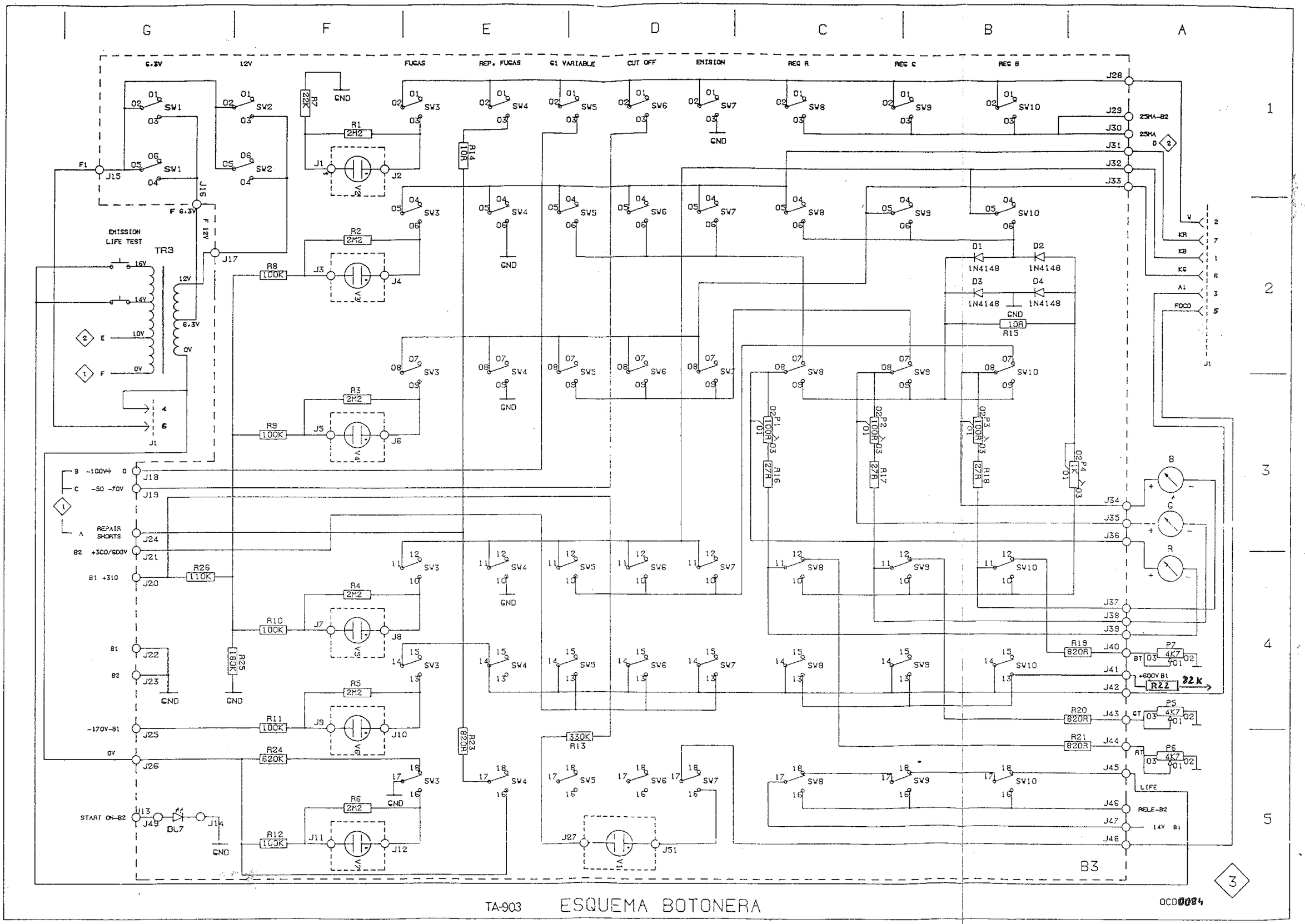
1.5 PLACA BAE / BASE PCB

MODULE	POS. ID.	P.N.	DESCRIPTION
TA903B6000000		**TA903B2000000**	**ME.CI. BASE / BASE PCB E .A.**
TA903B2000000		**0 CC8190**	PL.CIMP.BASE TA-903 / TA-903 BASE PCB
TA903B2000000		0 AR0920	ARAND.PLANA / FLAT WASHER 3.2X10X1 FE ZN
TA903B2000000		0 AR0760	ARAND.GROVER / LOCK WASHER M3
TA903B2000000		0 AT0120	SEPARADOR / SPACER ESTEATITA 4X4X1.2
TA903B2000000		0 BD0130	BRIDA / CLAMP UNEX 222.1
TA903B2000000		0 CA1800	PUENTE CONEXION (EN BANDA) / CONNECTION BRIDGE
TA903B2000000		0 RF0130	REFRI. REF 6043PB THML
TA903B2000000		0 TC0620	TUERC. / NUT HEXAG.M3 FE ZIN DIN 934
TA903B2000000		0 TE0040	TERMINALES PLANOS ESPADA
TA903B2000000		0 TE0120	TERMINAL IB-311
TA903B2000000		0 TO2030	TORN / SCREW DIN-7985 M3X12 FE ZIN
TA903B2000000		0 ZO0010	ZOCALO CI / SOCKET 8 PINS (W7.62)
TA903B2000000	C001	0 ZV1040	COND.CER MULTICAPA / MULTILAYER CERAMIC CAPAC. 100N 50V R5
TA903B2000000	C002	0 CT0540	COND. / CAPAC. TANTALIO 25V 1UF
TA903B2000000	C003	0 ZX1900	C.CER. 10NF-S 100V K12000
TA903B2000000	C004	0 ZX1900	C.CER. 10NF-S 100V K12000
TA903B2000000	C005	0 ZX1900	C.CER. 10NF-S 100V K12000
TA903B2000000	C006	0 ZX1900	C.CER. 10NF-S 100V K12000
TA903B2000000	C007	0 ZY2950	COND.CER / CERAMIC CAPAC. 1N -K 500V K2000
TA903B2000000	C008	0 CT1340	COND. / CAPAC. TANTALIO 16V 10UF20% AVX
TA903B2000000	C009	0 CE5210	COND. / CAPAC. ELCO.RAD 16/63V 10UF
TA903B2000000	C010	0 CT1340	COND. / CAPAC. TANTALIO 16V 10UF20% AVX
TA903B2000000	C011	0 CT1340	COND. / CAPAC. TANTALIO 16V 10UF20% AVX
TA903B2000000	C012	0 CE5220	COND. / CAPAC. ELCO.RAD 16 V 22UF R-2
TA903B2000000	C013	0 CT1350	COND. / CAPAC. TANTALIO 16V 47UF20% AVX
TA903B2000000	C014	0 CT1350	COND. / CAPAC. TANTALIO 16V 47UF20% AVX
TA903B2000000	C015	0 CL0460	COND. / CAPAC. POLIPRO 1N 5% 160V
TA903B2000000	C016	0 CE0430	COND. / CAPAC. ELCO.AXL 10V 470UF
TA903B2000000	D001	0 DI0180	DI 1N4148 SIG 100MA-75V-4NS
TA903B2000000	D002	0 DI0180	DI 1N4148 SIG 100MA-75V-4NS
TA903B2000000	D003	0 DI0180	DI 1N4148 SIG 100MA-75V-4NS
TA903B2000000	IC001	0 CI0510	CI 7812/TO220 L-REG +12V-1A
TA903B2000000	IC002	0 CI5150	CI 555P/TEXAS L-VAR
TA903B2000000	IC003	0 CI5150	CI 555P/TEXAS L-VAR
TA903B2000000	IC004	0 CI5150	CI 555P/TEXAS L-VAR
TA903B2000000	IC005	0 CI5150	CI 555P/TEXAS L-VAR
TA903B2000000	P001	0 PA2070	POT.CARB.PT-10LV 470K OHM
TA903B2000000	P002	0 PA2070	POT.CARB.PT-10LV 470K OHM
TA903B2000000	R001	0 RC1030	RESIST 5% 1/4W 10K OHM
TA903B2000000	R002	0 RC2240	RESIST 5% 1/4W 220K OHM
TA903B2000000	R003	0 RC0470	RESIST 5% 1/4W 4.7 OHM
TA903B2000000	R004	0 RC4720	RESIST 5% 1/4W 4K7 OHM
TA903B2000000	R005	0 RC1020	RESIST 5% 1/4W 1K OHM
TA903B2000000	R006	0 RQ4640	RES MF 1/4W 1% 100PPM 46K4 OHM
TA903B2000000	R007	0 RC2020	RESIST 5% 1/4W 2K OHM
TA903B2000000	R008	0 RC2730	RESIST 5% 1/4W 27K OHM
TA903B2000000	R009	0 RC5140	RESIST 5% 1/4W 510K OHM
TA903B2000000	R010	0 RC1220	RESIST 5% 1/4W 1K2 OHM
TA903B2000000	R011	0 RC6810	RESIST 5% 1/4W 680 OHM
TA903B2000000	R012	0 RC2230	RESIST 5% 1/4W 22K OHM
TA903B2000000	R013	0 RC8240	RESIST 5% 1/4W 820K OHM
TA903B2000000	R014	0 RC1020	RESIST 5% 1/4W 1K OHM
TA903B2000000	R015	0 RD5100	RESIST 5% 1/2W 51 OHM
TA903B2000000	R016	0 RC0470	RESIST 5% 1/4W 4.7 OHM
TA903B2000000	R017	0 RC2210	RESIST 5% 1/4W 220 OHM

TA903B2000000	R018	0 RN0340	RESIST 2W 5% 39K OHM
TA903B2000000	R019	0 RD5100	RESIST 5% 1/2W 51 OHM
TA903B2000000	R020	0 RB0420	RESIST BOBI 5K6 OHM 8W 10%
TA903B2000000	R021	0 RB0420	RESIST BOBI 5K6 OHM 8W 10%
TA903B2000000	R022	0 RC0470	RESIST 5% 1/4W 4.7 OHM
TA903B2000000	R023	0 RC1010	RESIST 5% 1/4W 100 OHM
TA903B2000000	R024	0 RC1230	RESIST 5% 1/4W 12K OHM
TA903B2000000	R025	0 RC1230	RESIST 5% 1/4W 12K OHM
TA903B2000000	R026	0 RC6240	RESIST 5% 1/4W 620K OHM
TA903B2000000	RL001	0 RE0380	RELE / RELAY LYNNKS UYD110P12VDC
TA903B2000000	T001	0 TR0280	TR 2N2369 N TO18 15V-0.5A-0.36
TA903B2000000	T002	0 TR0110	TR BC548 N LPW-30V-0.1A-300M
TA903B2000000	T003	0 TR0900	TR TIP50 N SPW-400V-1A-40W
TA903B2000000	T004	9999991TR0600	SELEC.FET BF-245A/1-1.3 A 3MA
TA903B2000000	T005	0 TR1530	TR BU508AW/PHILIPS SOT429
TA903B2000000	TR001	0 TF1100	TRANSF.IMPULSOS / IMPULSE TRANF. RT501B/TA903
TA903B2000000	Z001	0 DI1040	DI ZENER 100V-1W3-6%-5mA
TA903B2000000	Z002	0 DI1040	DI ZENER 100V-1W3-6%-5mA

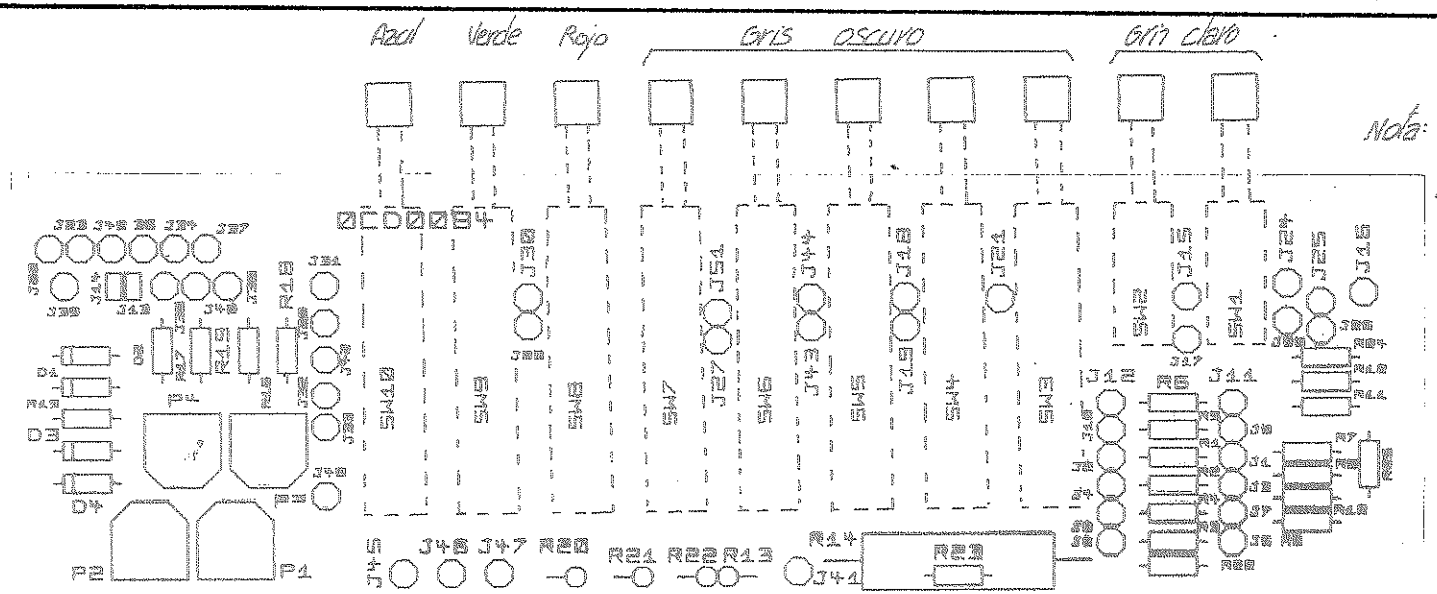
1.6 FUENTE DE ALIMENTACIÓN / POWER SUPPLY

MODULE	POS. ID.	P.N.	DESCRIPTION
TA903B6000000		**TA903B2000200**	**ME.CI. FTE. ALIMENTACION / POWER SUPPLY PCB E. A.**
TA903B2000200		**0 CC7910**	PL.CIMP.ALIMENTACION TA-903 / TA-903 POWER SUPPLY PCB
TA903B2000200		0 CA1800	PUENTE CONEXION (EN BANDA) / CONNECTION BRIDGE
TA903B2000200	C001	0 CE5460	COND. / CAPAC. ELCO.RAD 25V 2200UF
TA903B2000200	C002	0 CE6140	COND. / CAPAC. ELCO.RAD 350V 22UF
TA903B2000200	C003	0 CE6140	COND. / CAPAC. ELCO.RAD 350V 22UF
TA903B2000200	C004	0 CE6140	COND. / CAPAC. ELCO.RAD 350V 22UF
TA903B2000200	C005	0 CE2000	COND. / CAPAC. ELCO.AXL 350V 47UF
TA903B2000200	D001	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D002	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D003	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D004	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D005	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D006	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D007	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D008	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	D009	0 DI0130	DI 1N4007 RTF 1A-1000V
TA903B2000200	R001	0 RD6230	RESIST 5% 1/2W 62K OHM
TA903B2000200	R002	0 RC1140	RESIST 5% 1/4W 110K OHM
TA903B2000200	R003	0 RC3630	RESIST 5% 1/4W 36K OHM
TA903B2000200	R004	0 RC8230	RESIST 5% 1/4W 82K OHM
TA903B2000200	R005	0 RC1040	RESIST 5% 1/4W 100K OHM
TA903B2000200	R006	0 RC1040	RESIST 5% 1/4W 100K OHM
TA903B2000200	R007	0 RC1840	RESIST 5% 1/4W 180K OHM
TA903B2000200	R010	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000200	R011	0 RC2250	RESIST 5% 1/4W 2M2 OHM
TA903B2000200	Z001	0 DI1040	DI ZENER 100V-1W3-6%-5mA

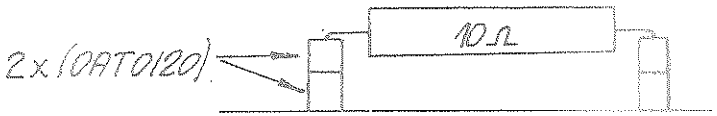


TA-903 ESQUEMA BOTONERA

OCD0084

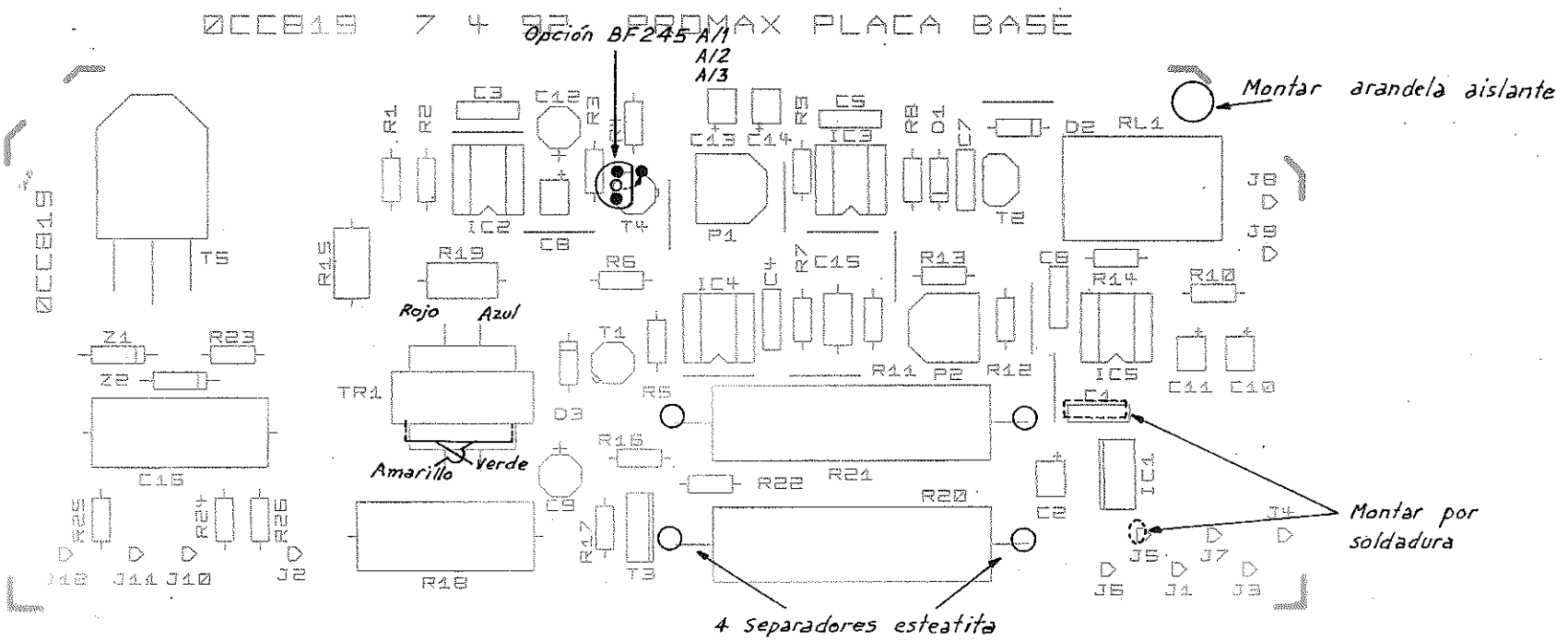


Montaje Eléctrico de la R14



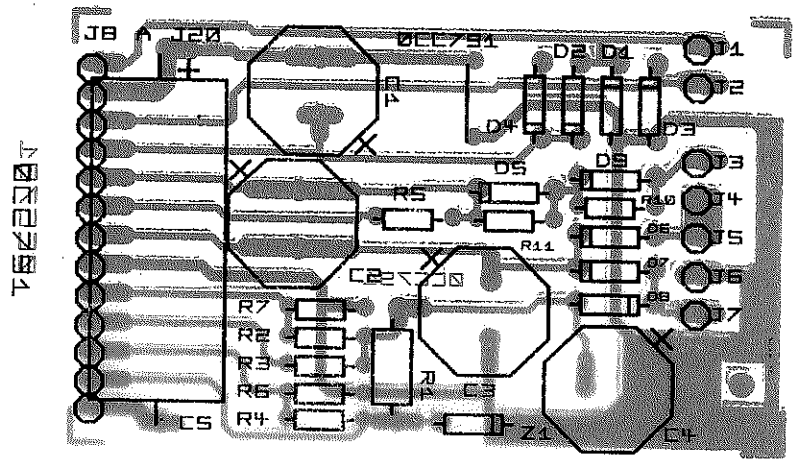
Actualizado 2-6-92

PROMAX BARCELONA	LADO COMPONENTES	O Hilo soldado	Val. en Ω, F y H.
INSTRUCCIONES MANUALES DE SERVICIO	P. CI. Botonera / COD. 9c0pp84	◎ Term. RTM 1.3/5/8.002 △ Term. IB 311	R. ⊣□⊢ 1%
	MOD. TA 903 / Fecha 13-5-92	O Term. espada C. I. ▮ Con. CIS	Comp. a punto:



PROMAX BARCELONA INSTRUCCIONES MANUALES DE SERVICIO	LADO COMPONENTES P.CI. BASE — COD. ØCC819 MOD. TA-903 — Fecha 5-10-92	○ Hilo soldado ◎ Term. RTM 1.3/5/8.002 △ Term. IB 311 ○ Term. espada C.I. ▯ Con. CIS	Val. en Ω, F y H. R. —▭— 1% Comp. a punto:

O.T



PROMAX BARCELONA INSTRUCCIONES MANUALES DE SERVICIO	LADO COMPONENTES P. CI. *Fuente de alimentación* COD. *OCC 791* MOD. *TA-903* Fecha *24-5-91*	○ Hilo soldado ◎ Term. RTM 1.3/5/8.002 △ Term. IB 311 ○ Term. espada C.I. ▮ Con. CIS	Val. en Ω, F y H. R. 1% Comp. a punto: