



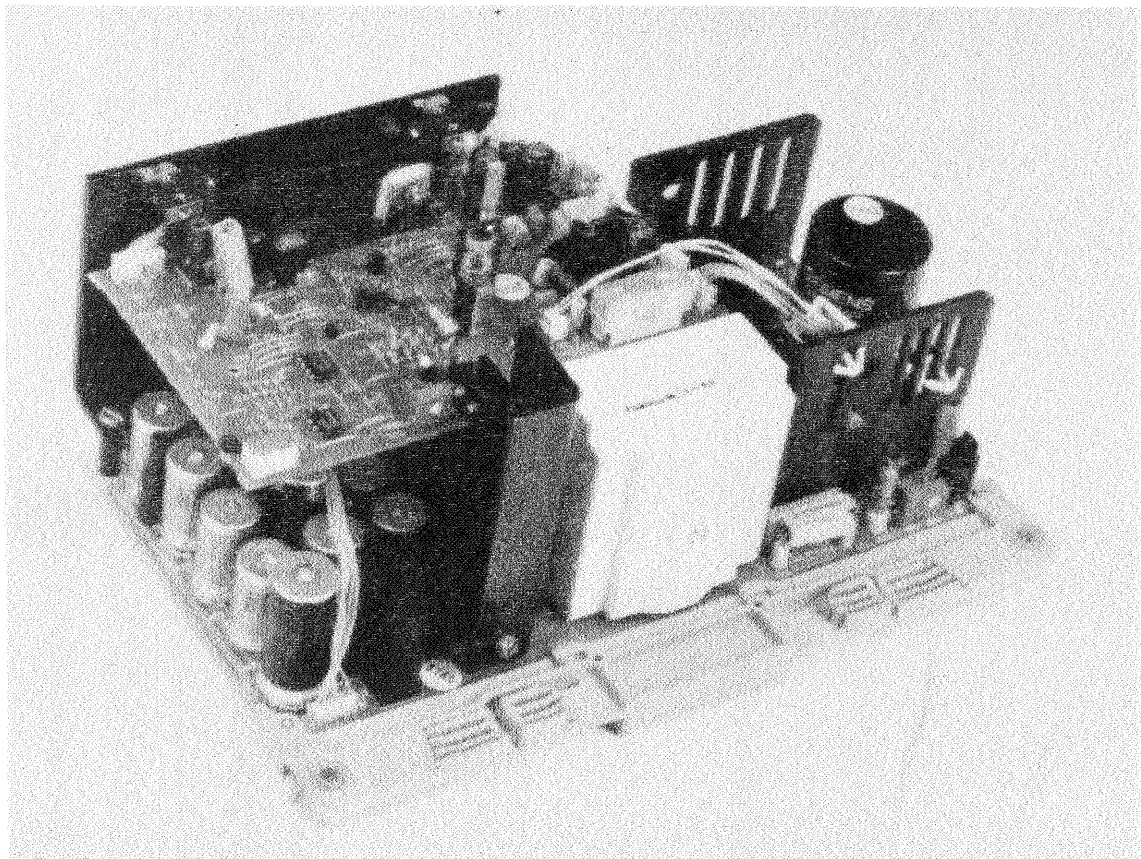
BARCO Projection Systems

SECTION Q

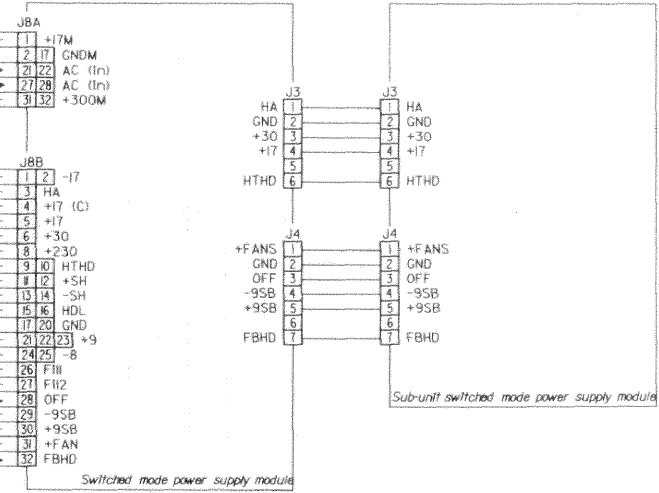
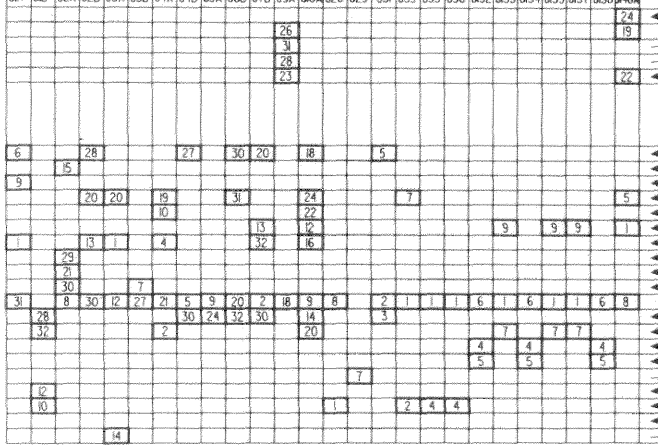
service sheet

WARNING

THIS CIRCUIT BOARD IS HOT TO AC. THIS POWER SUPPLY, LIKE THE HIGH VOLTAGE POWER SUPPLY, DOES NOT USE A LINE ISOLATION TRANSFORMER, MEANING A PORTION OF THE CIRCUITRY IS HOT-TO-LINE AND SHOULD BE TREATED WITH CAUTION.



- Convergence module
- A.S. correction module
- A.S. correction & horizontal shift module
- Horizontal deflection module
- Vertical deflection module
- Vertical deflection & sync module
- RGB-T1 input module
- RGB-T2 input module
- Decoding module
- Main input module
- Focus module
- Controller module
- Controller module
- Remote communication module
- Remote communication PC/DOS
- Remote controls
- CRT module (RED)
- RGB output module (RED)
- CRT module (GREEN)
- RGB output module (GREEN)
- CRT module (BLUE)
- RGB output module (BLUE)
- Ext module

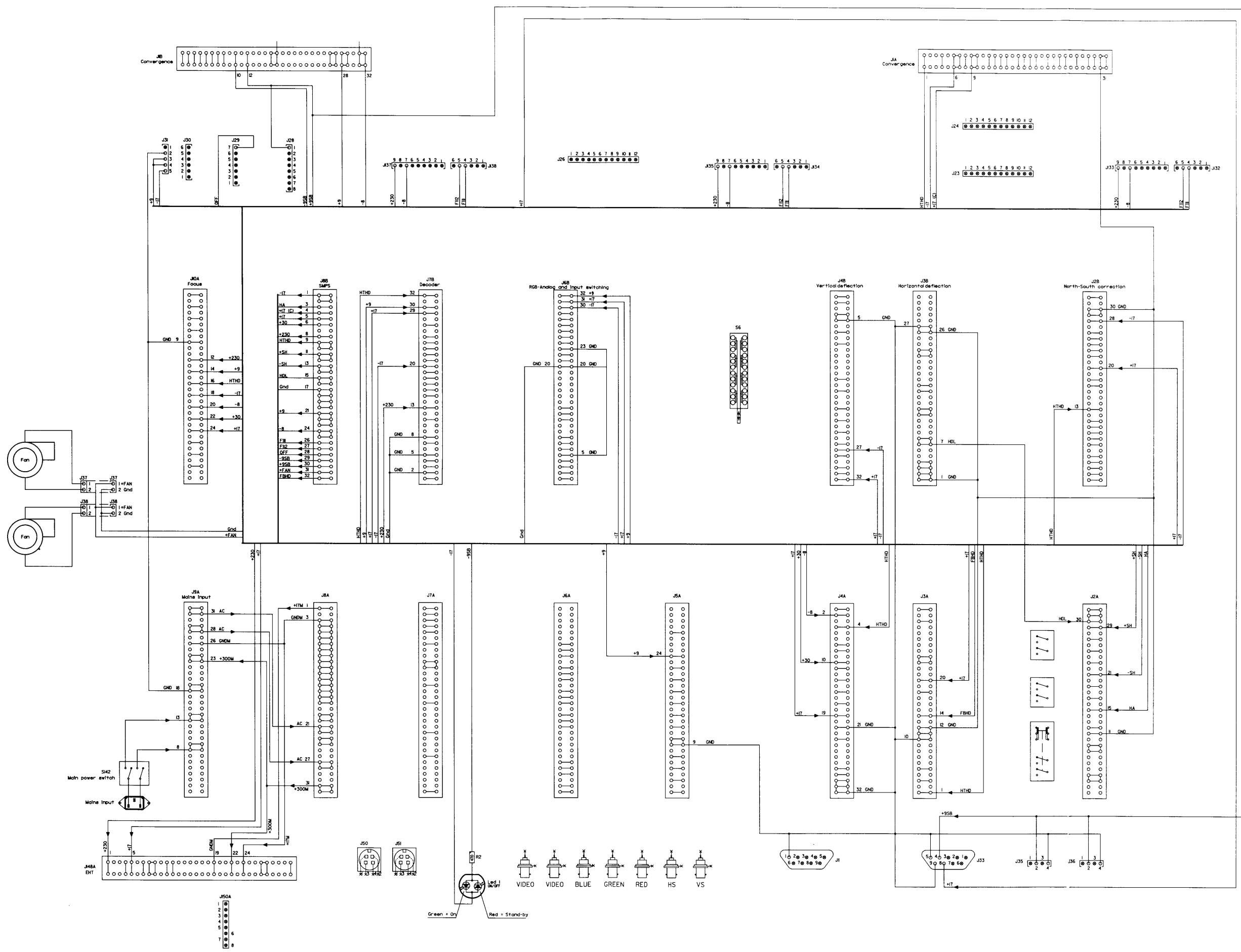


Switched mode power supply module

Modifications reserved

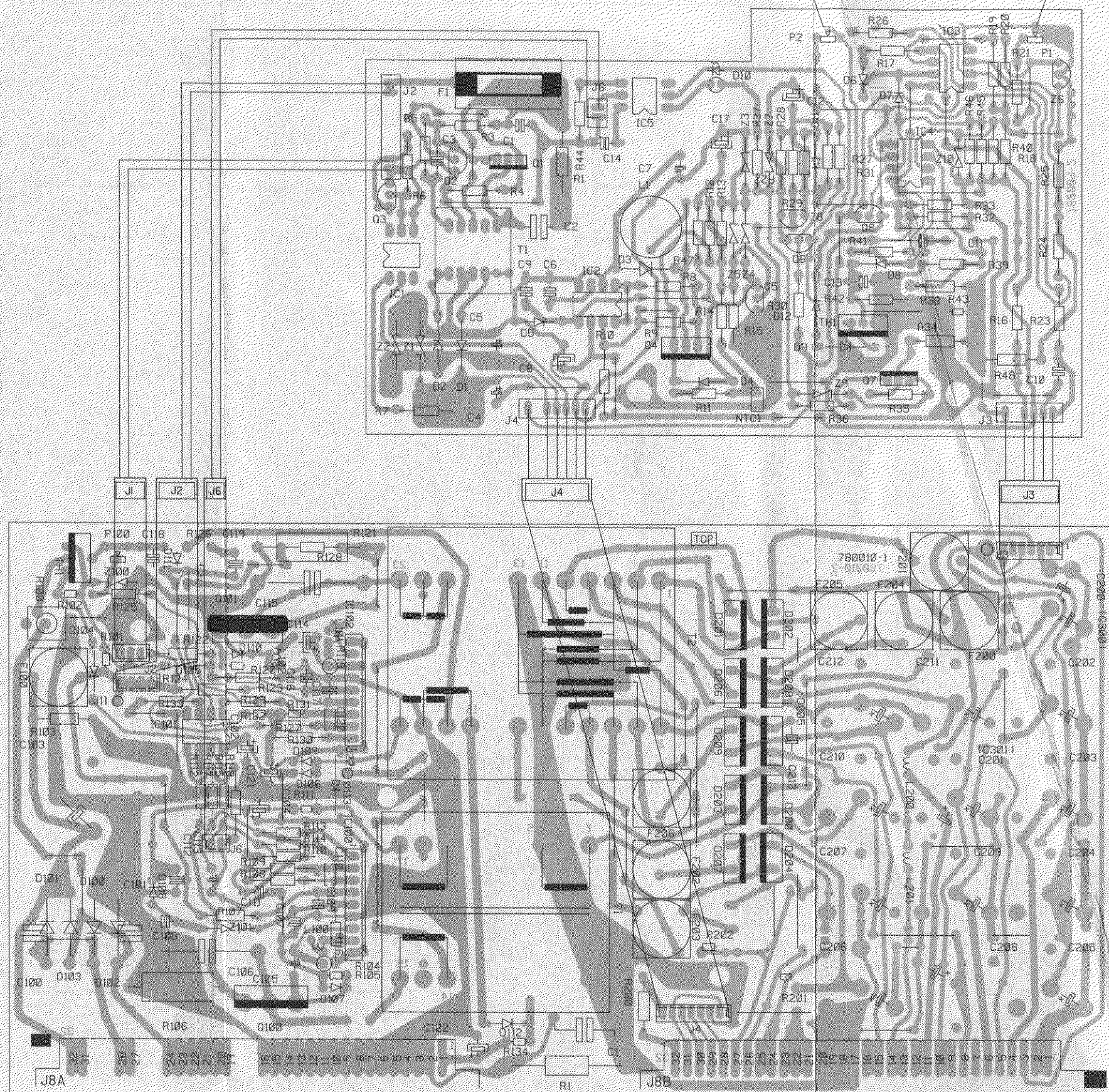
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|---------------------------------|-----------------|-----------|
| Name | Interconnection | Article |
| Switched mode power supply | | 761770-76 |
| Date | Drawn | Checked |
| 15/09/1990 | PG | PGV |
| BARCO PROJECTION SYSTEMS | | |

Main frame Interconnection
Switched Mode Power Supply module



Adjustment MAX AMPLITUDE

Factory preadjusted (see Service manual for further explanation)



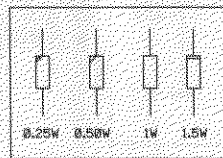
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| C4 | D 3 | P900 | B 3 |
| C5 | D 3 | | |
| C6 | D 2 | R1 | D 2 |
| CT | E 2 | Q2 | D 2 |
| C8 | D 3 | Q3 | D 2 |
| C9 | D 2 | Q4 | E 2 |
| C10 | C 3 | Q5 | E 2 |
| C11 | F 2 | Q6 | E 2 |
| C12 | F 1 | Q7 | F 3 |
| C13 | F 2 | Q8 | F 2 |
| C14 | E 2 | Q900 | C 4 |
| C17 | E 1 | Q901 | C 4 |
| C100 | D 5 | | |
| C101 | B 5 | R1 | D 6 |
| C102 | C 4 | R1 | D 2 |
| C103 | B 4 | R3 | D 2 |
| C104 | C 5 | R4 | D 2 |
| C105 | C 5 | R5 | D 1 |
| C106 | C 5 | R6 | B 4 |
| C107 | C 5 | R8 | E 2 |
| C108 | C 5 | R9 | E 2 |
| C109 | C 5 | R10 | E 3 |
| C110 | C 5 | R11 | E 3 |
| C111 | C 5 | R12 | E 2 |
| C112 | C 5 | R13 | E 2 |
| C113 | C 5 | R14 | E 2 |
| C114 | C 4 | R15 | E 2 |
| C115 | C 4 | R16 | E 2 |
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| C117 | C 4 | R18 | F 2 |
| C118 | B 3 | R19 | F 1 |
| C119 | C 3 | R20 | F 1 |
| C120 | C 4 | R21 | F 1 |
| C121 | C 4 | R22 | E 2 |
| C122 | D 6 | R23 | G 2 |
| C200 | C 4 | R24 | G 2 |
| C201 | F 4 | R25 | F 1 |
| C202 | F 4 | R26 | F 1 |
| C203 | G 4 | R27 | F 2 |
| C204 | D 5 | R28 | E 1 |
| C205 | D 5 | R29 | E 2 |
| C206 | F 5 | R30 | E 2 |
| C207 | F 5 | R31 | F 2 |
| C208 | F 5 | R32 | F 2 |
| C209 | F 4 | R33 | F 2 |
| C210 | F 4 | R34 | F 2 |
| C211 | F 4 | R35 | F 3 |
| C212 | F 4 | R36 | F 3 |
| C213 | E 4 | R37 | E 1 |
| C300 | G 4 | R38 | F 2 |
| C301 | F 4 | R39 | F 2 |
| | | R40 | F 2 |
| D1 | D 3 | R41 | F 2 |
| D2 | D 3 | R42 | F 2 |
| D3 | E 2 | R43 | F 2 |
| D4 | E 2 | R44 | D 2 |
| D5 | D 2 | R45 | F 1 |
| D6 | F 1 | R46 | F 1 |
| D7 | F 1 | R47 | E 2 |
| D8 | F 2 | R48 | F 3 |
| D9 | E 2 | R100 | B 4 |
| D10 | E 1 | R101 | B 4 |
| D11 | F 1 | R102 | B 4 |
| D12 | E 2 | R103 | B 4 |
| D100 | D 5 | R104 | C 5 |
| D101 | B 5 | R105 | C 5 |
| D102 | B 5 | R106 | C 6 |
| D103 | B 5 | R107 | C 5 |
| D104 | B 4 | R108 | C 5 |
| D105 | C 4 | R109 | C 5 |
| D106 | C 5 | R110 | C 5 |
| D107 | C 6 | R111 | C 5 |
| D108 | C 5 | R112 | C 4 |
| D109 | C 4 | R113 | C 5 |
| D110 | C 4 | R114 | C 5 |
| D111 | C 3 | R115 | C 4 |
| D112 | D 6 | R116 | C 5 |
| D113 | C 5 | R117 | C 4 |
| D200 | E 5 | R118 | C 4 |
| D201 | E 4 | R119 | C 4 |
| D202 | E 4 | R120 | C 4 |
| D203 | E 5 | R121 | C 4 |
| D204 | E 5 | R122 | C 4 |
| D205 | E 4 | R123 | C 4 |
| D206 | E 4 | R124 | C 4 |
| D207 | E 5 | R125 | B 4 |
| D208 | E 4 | R126 | C 3 |
| D209 | E 4 | R127 | C 4 |
| F1 | D 1 | R128 | C 3 |
| F100 | D 4 | R129 | C 4 |
| F101 | F 4 | R130 | C 4 |
| F102 | F 3 | R131 | C 4 |
| F103 | F 3 | R132 | C 4 |
| F104 | F 3 | R133 | C 4 |
| F203 | E 5 | R134 | D 6 |
| F204 | F 4 | R200 | E 5 |
| F205 | F 4 | R201 | E 6 |
| F206 | E 5 | R202 | E 5 |
| | | T1 | E 5 |
| IC1 | D 2 | T1 | B 2 |
| IC2 | F 1 | T2 | E 4 |
| IC3 | F 1 | | |
| IC4 | F 1 | TH | B 3 |
| IC5 | E 1 | TH | F 2 |
| IC100 | C 5 | | |
| IC101 | C 4 | | |
| IC102 | C 4 | | |
| | | Z1 | D 2 |
| J1 | B 4 | Z2 | D 2 |
| J2 | B 4 | Z3 | E 2 |
| J3 | D 1 | Z4 | E 2 |
| J4 | F 3 | Z5 | G 1 |
| J5 | F 3 | Z6 | E 1 |
| J6 | E 6 | Z7 | F 2 |
| J8A | D 3 | Z8 | F 3 |
| J8B | C 5 | Z9 | F 2 |
| | E 1 | Z10 | B 4 |
| | B 6 | Z11 | C 5 |
| | B 4 | | |
| | C 6 | | |
| | C 4 | | |
| L1 | E 2 | | |
| L100 | C 5 | | |
| L101 | C 4 | | |
| L102 | C 4 | | |
| L200 | F 5 | | |
| L201 | F 5 | | |

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|--------------------------|-------------|-------------|
| Name | SMPS | Article no. |
| pcb-Interconnection | 75170-16111 | |
| Date | 15/09/1990 | Checked |
| | PG | PGV |
| BARCO PROJECTION SYSTEMS | | |

Modifications reserved

PRODUCT SAFETY NOTICE

COMPONENTS MARKED WITH * OR HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY BEFORE REPLACING ANY OF THESE COMPONENTS, READ CAREFULLY THE SERVICE SAFETY PRECAUTIONS. DO NOT DEGRADE THE SAFETY OF THIS SET THROUGH IMPROPER SERVICING

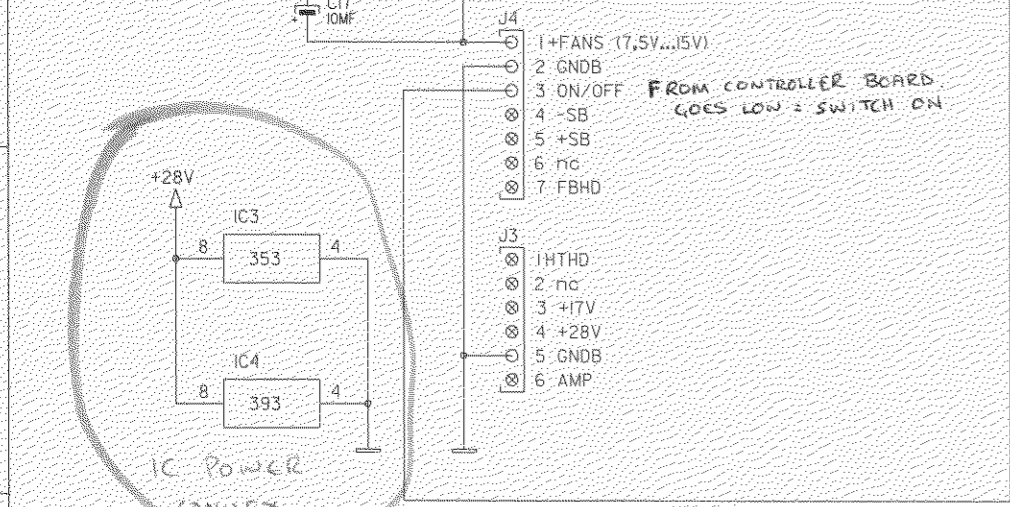
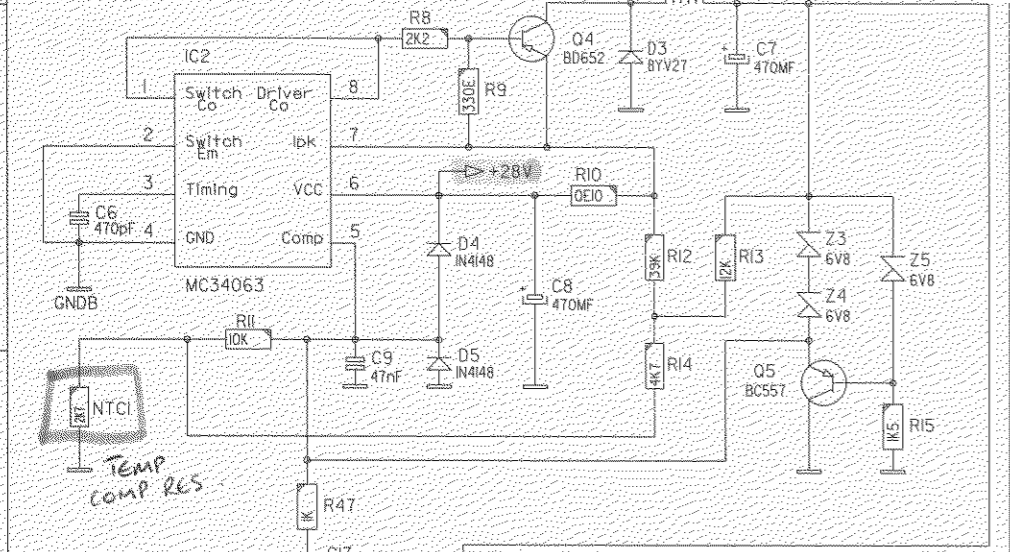
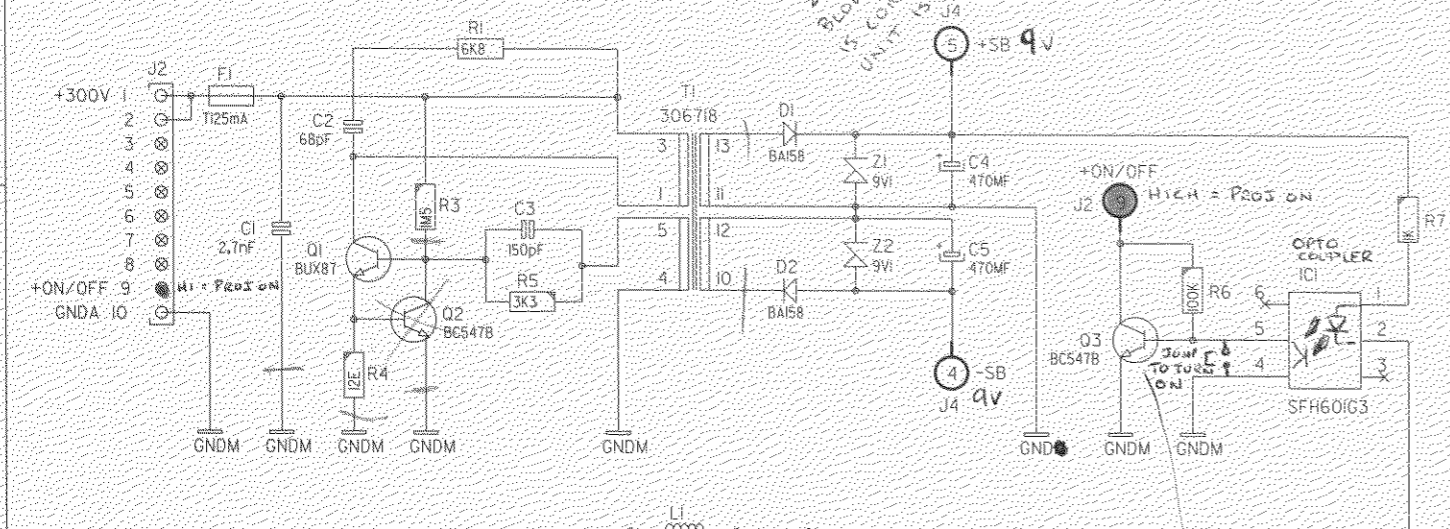


TROUBLE SHOOTING

- ① CHECK STANDBY VOLTS
- ② CHECK IC1DZ PIN 9 FOR 11 V
- ③ CHECK PIN1 REACHES 4.4V
- ④ CHECK PINS 5 & 7

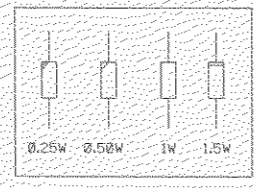
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| CI00 | A 4 | LI01 | C 4 |
| CI01 | A 4 | LI03 | E 5 |
| CI02 | B 4 | LI05 | E 2 |
| CI03 | A 4 | LI06 | D 4 |
| CI04 | C 1 | L200 | F 6 |
| CI05 | D 1 | L201 | F 6 |
| CI06 | E 1 | L202 | G 3 |
| CI07 | C 1 | L203 | G 4 |
| CI08 | D 1 | L204 | G 4 |
| CI09 | D 1 | L205 | G 4 |
| CI10 | D 1 | | |
| CI11 | | PI00 | D 5 |
| CI12 | | QI00 | E 1 |
| CI13 | | QI01 | E 4 |
| CI14 | | | |
| CI15 | | | |
| CI16 | | RI | E 6 |
| CI17 | | RI00 | A 4 |
| CI18 | | RI01 | A 4 |
| CI19 | | RI02 | A 4 |
| CI20 | | RI03 | A 4 |
| CI21 | | RI04 | D 1 |
| CI22 | | RI05 | D 1 |
| CI23 | | RI06 | D 1 |
| CI24 | | RI07 | D 1 |
| CI25 | | RI08 | D 1 |
| CI26 | | RI09 | D 1 |
| CI27 | | RI10 | D 1 |
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| CI31 | | RI14 | C 3 |
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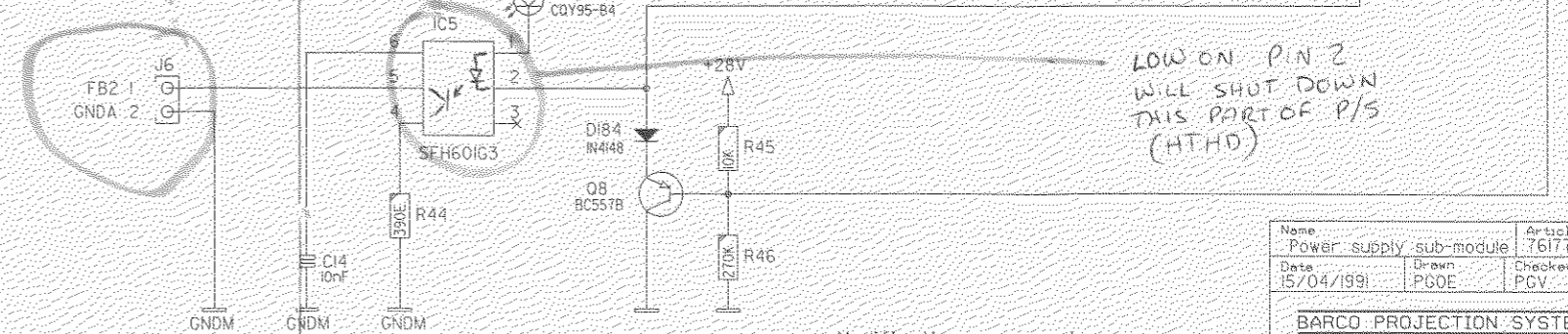
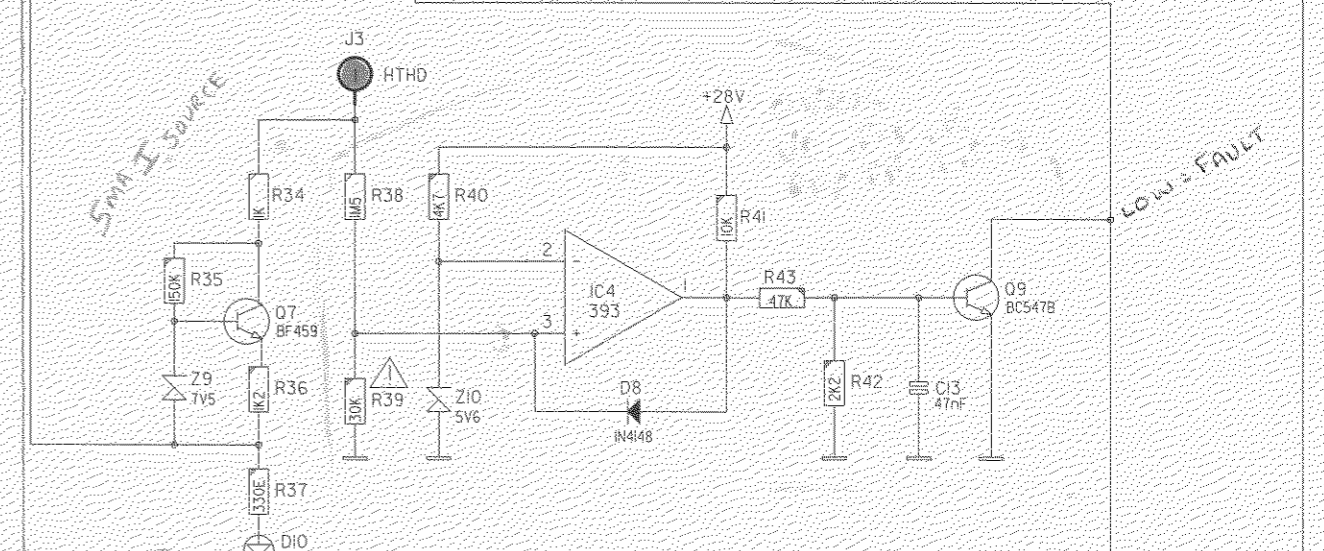
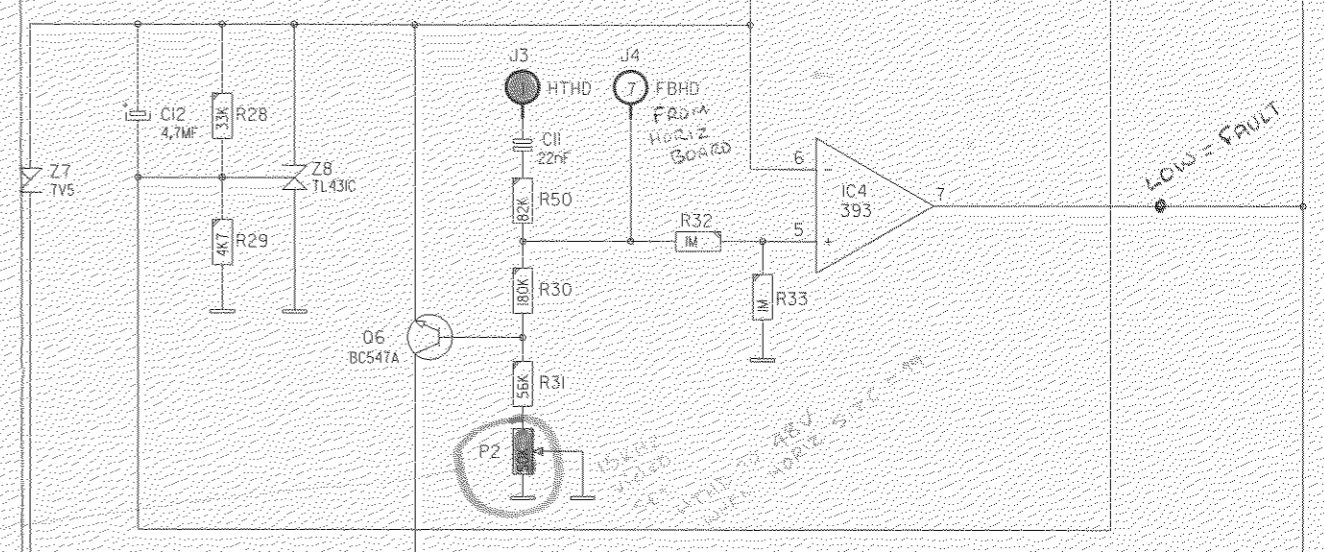
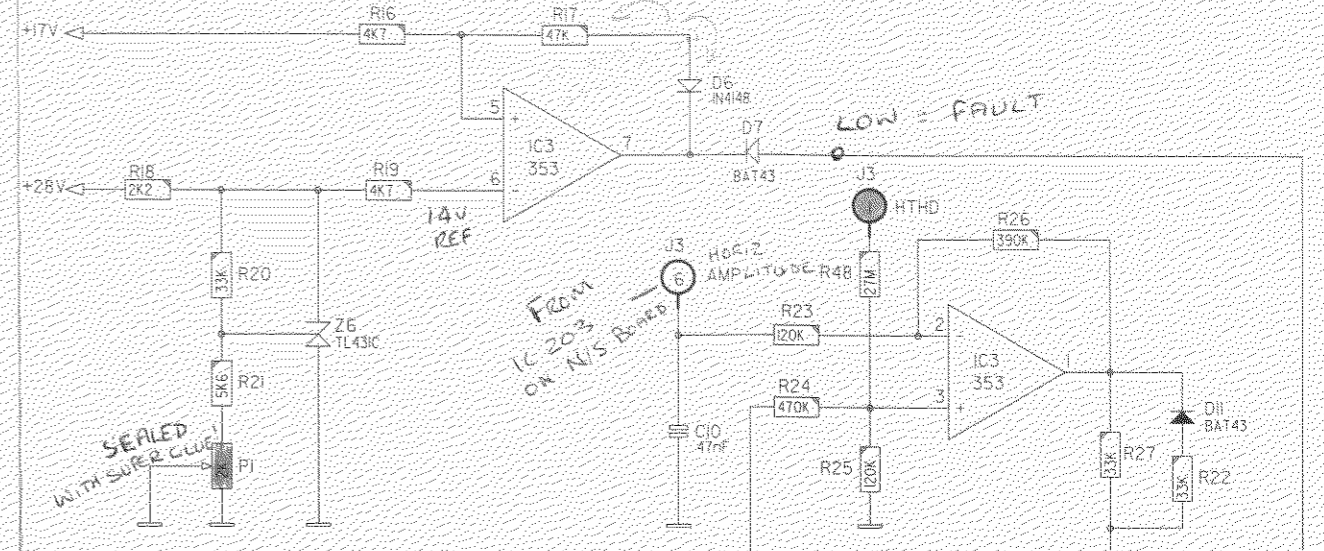
PRODUCT SAFETY NOTICE

COMPONENTS MARKED WITH * OR HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY BEFORE REPLACING ANY OF THESE COMPONENTS, READ CAREFULLY THE SERVICE SAFETY PRECAUTIONS. DO NOT DEGRADE THE SAFETY OF THIS SET THROUGH IMPROPER SERVICING



Q3 IS TURNED OFF TO START

When set incorrectly picture is too wide red light on Horiz board



| | | | |
|------|-------------------------|-------------|----------|
| Name | Power supply sub-module | Article nr. | 76171 00 |
| Date | 15/04/1991 | Drawn | PGOE |
| | | Checked | PGV |

Modifications reserved

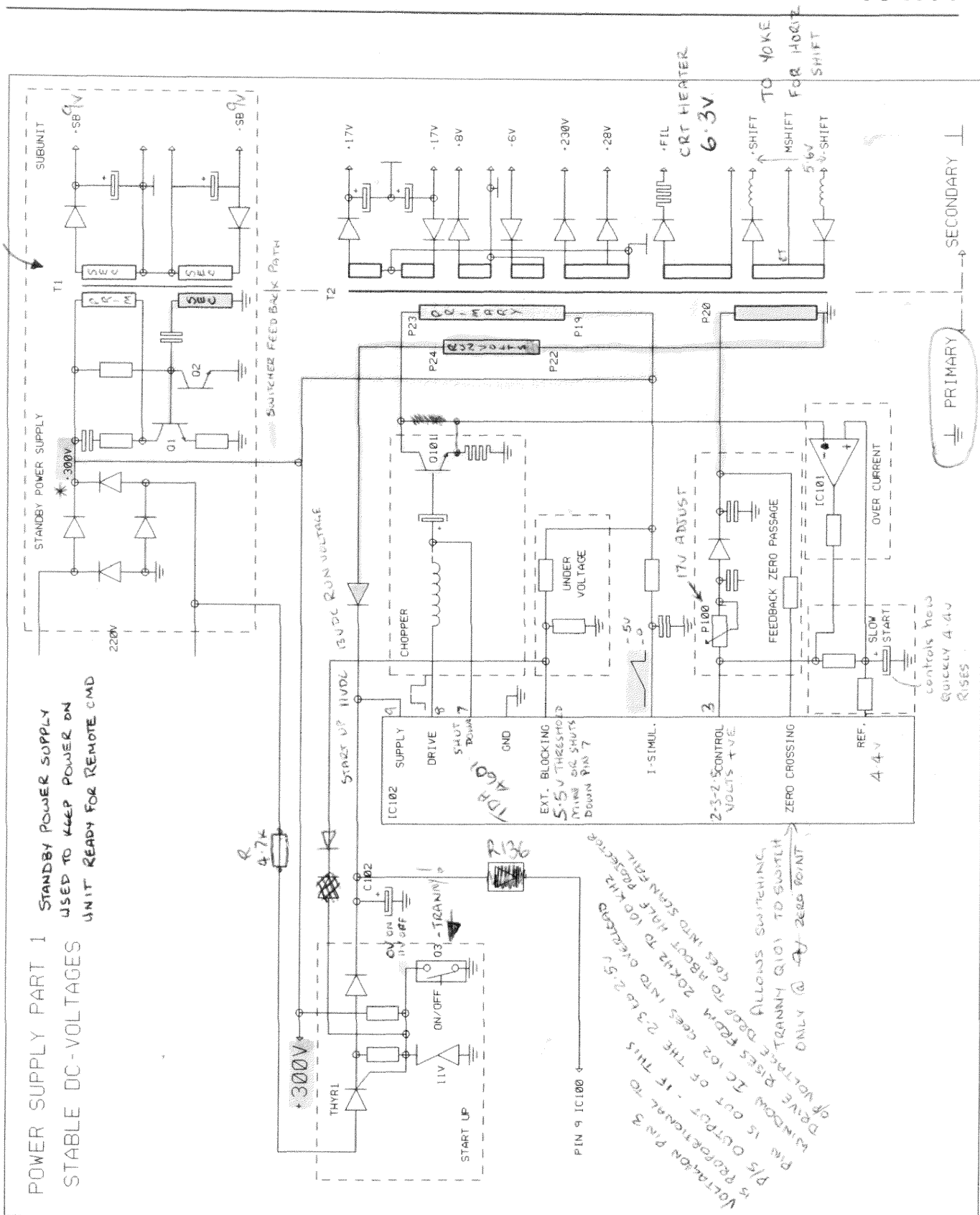
BARCO PROJECTION SYSTEMS

SM POWER SUPPLY MODULE

SUB-MODULE SM POWER SUPPLY

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* HEAT SINK IS HOT GROUND MEASURE +300VDC WRT HERE



POWER SUPPLY PART 1
STANDBY POWER SUPPLY
USED TO KEEP POWER ON
UNIT READY FOR REMOTE CMD
STABLE DC-VOLTAGES

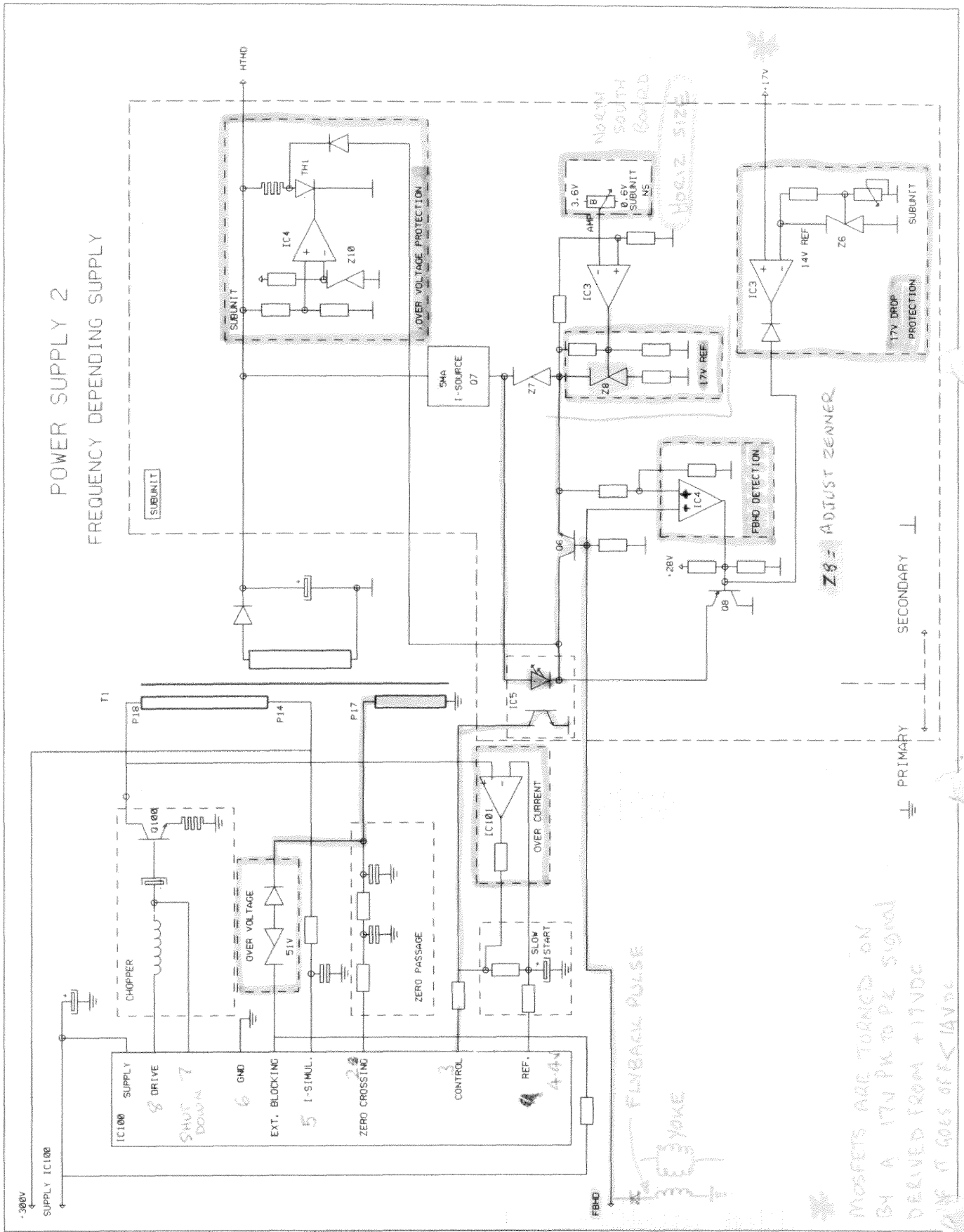
VOLTAGE PIN 3 IS PROPORTIONAL TO P/S OUTPUT - IF THIS RISES FROM 20KHZ TO 100KHZ DRIVE RISES FROM 20KHZ TO 100KHZ WINDOW IC 102 GOES INTO SWITH ONLY @ ZERO POINT OF WAVEFORM GOES INTO SWITH

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IMPORTANT

The SM POWER SUPPLY has to be adjusted when the projector displays a picture of the internal generated test pattern or of an input signal at standard line- and frame frequency.

PREPARATION

Select the internal generated test pattern or an input source at standard frequency (refer to owner's and installation manual).

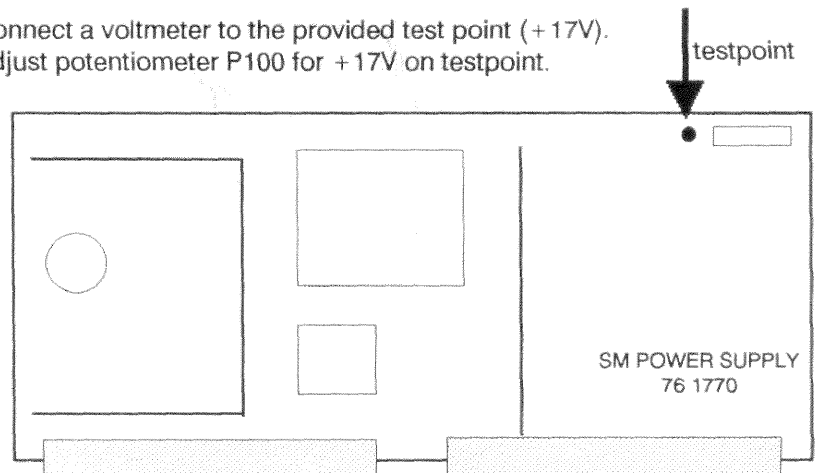
Put the BRIGHTNESS and CONTRAST level in mid-position (refer to owner's manual).

ADJUSTMENTS

Adjustment on main board

a) Adjusting Vout P100

Connect a voltmeter to the provided test point (+17V).
Adjust potentiometer P100 for +17V on testpoint.



Adjustments on sub-board

b) Adjusting +14V P1

Important: P1 is factory pre-adjusted. A readjustment is only necessary after a replacement of a defective component in the +17V drop circuit.

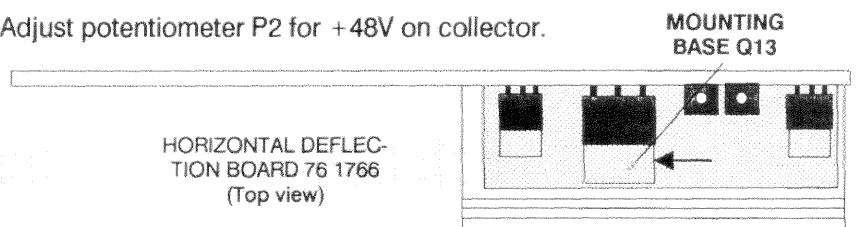
Connect a voltmeter to the node R19/Z6
Adjust potentiometer P1 for +14V on that node.

c) Adjusting MAX HOR AMPL P2

Adjust the Horizontal Amplitude of the displayed picture by means of the RCU800 on its maximum (bar scale on screen indicates 99). (Refer to the owner's manual to select the corresponding menu).

Connect a voltmeter to the collector (Collector connected to mounting base) of transistor Q13 (BDV65C) on the Hor. Defl. board.

Adjust potentiometer P2 for +48V on collector.



TECHNICAL DESCRIPTION SWITCHED MODE POWER SUPPLY

Introduction.

The switched mode Power Supply derives all the necessary DC-voltages and isolates them from the incoming main voltage.

On the main board of this module we find the generation of all stable voltages which are independent on the line frequency, and the variable +HTHD voltage (referred to as the second SMPS).

This second SMPS is linked via the subunit with the horizontal deflection board as the +HTHD voltage (horizontal scan voltage) is linearly proportional with the line frequency.

Because the 'second' SMPS utilises the rectified voltage from the winding 22-24, this SMPS depends on the 'first' one', on other terms, if the first SMPS is down, the second one 'follows' equally.

The ON/OFF voltage delivered by the controller board can stop or start up these Switched Mode Power Supplies.

The subunit comprises the DC-fan control, the regulation circuit for the +HTHD, its Under- and Overvoltage protection circuits, the +17volts drop protection and the stand-by power supply.

Generation of the line frequency independent voltages.

When the on/off signal (J4 pin 3 of the subunit) comes low, the LED of the opto-coupler IC1 will light up and Q3 will be cut off the base is pulled to ground. This will allow the gate of the thyristor THYR 1 to go positive and turn on the thyristor.

The main voltage is rectified by the bridge D100-D103 and the +300 volts is the supply voltage for the power switches Q100 and Q101 on the main board. The connector J2 brings this voltage to the subunit where it is used for the production of the standby voltages -/+SB.

D4 / C102 act as a half-wave rectifier and an increasing voltage is presented at pin 9 of IC102. From the threshold level of 11 volts onwards, the IC starts up, and switches Q101 on and off..

The diode D104 stops conducting as its becomes reversed biased. The thyristor gets blocked as well, because its cathode equals the gate voltage.

In the meantime the voltage at pin 9 receives its supply voltage now from the winding 24-22 of the T2 transformer via D109.

The push-pull outputs, pins 7 and 8, drive the Q101 power switch and during the off time of the latter the accumulated energy in the primary winding is transferred to the secondary capacitors through the rectifying diodes (flyback principle).

The feedback winding 20-22 provides two informations for the control IC :

Firstly, the waveform is sent to pin 2 where the **zero passages** are detected, useful to drive the power switch on at the exact moment.

The base drive is delayed until the energy in the transformer has been completely transferred to the secondary side. By this measure, the current through the power switch is reduced to a minimum.

Secondly, the negative amplitude is rectified by D111 and compared with the reference 4 volts that is available at pin 1.

The error voltage is now sent to pin 3 and serves as a control voltage to adjust and duty cycle and frequency.

The current through the power switch is at all times checked and if too high (in case of a short on the secondary side or a too low main voltage) the comparator 393 (IC101) output drops the error voltage in order to adapt the duty cycle of the switcher.

Note that a "special" winding is provided, delivering **+17M**, or, a voltage related to the **Main** ground and not the chassis ground. This voltage is utilised on the EHT board, because the drive circuit for the power switcher has a "hot" ground and not Chassis ground. (see description EHT board). Another special winding supplies the convergence board with +17(conv) in order not to load too much the normal +17 line.

Generation of the +HTHD voltage (scan voltage).

This voltage is linked with the horizontal deflection board as it has to be adapted to the scanning frequency. A feedback voltage (FBHD) is for that reason arriving on the subunit.

This feedback voltage, at contact J4(7) of the subunit, is sent to the base of the error amplifier Q6. The potentiometer P2 allows an adjustment of this feedback, on other terms, the horizontal width can be adjusted with P2.

The emitter is set at a reference zener voltage, adjustable with the voltage at the regulating pin of Z8. This voltage is the result of the output of the DC-amplifier- buffer 353, combined with the +HTHD voltage.

By this measure, we reduce the range of the horizontal width at high scanning frequencies. Indeed, at standard video frequency we need more range than on the higher frequencies.

Feedback control of HTHD.

The feedback loop consists of a 5 mA current source (Q7) and a controlled reference voltage (Z8, R28, R29, output pin 1 of IC3).

The current source supplies Z8 with the required current to achieve a HTHD independent reference voltage.

FBHD (Feedback Horizontal Deflection) J4 pin 7 subunit) is a rectified positive DC voltage proportional to the current flowing in the three deflection coils. This voltage modulates the current through Q6.

The collector current of this regulating transistor Q6 flows into the opto-coupler IC5 and the (photo)transistor of this insulating optocoupler is now regulating the DC voltage at pin 3 of IC100, in order to stabilise the +HTHD voltage for one typical line frequency and amplitude setting.

Overvoltage protection.

Pin 2 of the 393 (IC4) is set at 5.6 volts with Z10 and, the other input, pin 3 is the scan voltage divided across resistors R38 and R39. When the +HTHD voltage becomes too high, the output of IC5(pin 1) will go high, and Q9 saturates pulling pin 2 of IC5 at ground level. The HTHD goes to approximately 12 volts on this shutdown condition.

The unit has to be powered off, to reset the circuit.

Undervoltage protection.

The problem with an open loop feedback is that the control voltage is lost and the IC may think that the output voltage is too low and try to increase it, when in fact the output is too high.

When the HTHD voltage is not connected to IC4, pin 5, across R32 and R33, the output pin 7 goes low. This low voltage forward biases Q8 and pulls it's emitter to ground. Through D12 pin 2 is pulled low and the HTHD voltage is dropped (as in the overvoltage protection mode).

Protection against undervoltage of the +17 volts.

To prevent damage to the Power -Mosfets of the Horizontal Deflection circuit, the +17 volt supply may not drop below the 14 volts.

The Mosfets are driven by circuitry supplied by the +17V supply. If the 17 volt is too low, the Mosfets are not fully turned on, due to insufficient drive, and the internal resistance will be too high, causing them to overheat. When this happens, the HTHD must be switched off immediately.

The +17 v supply is compared with a reference voltage in IC3. Pin 6 is preadjusted, ex factory, at 14 volts with P1. When the +17v supply goes below 14 volts, pin 7 of IC3 goes low and turns on Q8 through D7, like for the other protection modes.

The 30V DC line is used for the reference voltage, since it would have to drop very low, to make the reference voltage inaccurate for circuit operation.

Stand-by / ON-OFF switching.

An oscillator is built around Q1/Q2 and the transformer T1. The secondary windings provide the + and -SB stand-by voltages, limited to 9.1 volts with Z1 and Z2. Q1 receives its base current via R3. It's collector current flows in the winding 1-3 and induces a voltage in the winding 5-4 increasing the base current (positive feedback). The speed-up in the base lead contributes to a fast increase of this base current. The emitter voltage follows this increase.

As soon the emitter voltage of Q1 can drive the Q2 and saturate it, this transistor clamps the base of Q1 at ground level and cuts off Q1. The cycle starts all over again.

Two opposite polarity SB voltages (+/- 9 volts) are available at the secondary side.

a) Stand-by mode (OFF).

The voltage at contact 3 of the J4 connector ('OFF') is in this case 'high' and this means for the optocoupler IC1 that the phototransistor is not conducting.

Q3 is then saturating via R6. The collector of Q3 is 'low (= ground level)' and the gate of the thyristor THYR1 on the main board is also at ground level.

Via the diode D105, pin 5 of IC102 is pulled below its active level and the push-pull stage output pins 7-8 are clamped at ground by internal circuits in the IC. The SMPS is stopped or, cannot start up.

As a conclusion, only the standby voltages (+/- 9 SB) are available in the stand-by mode.

b) Operational mode (ON).

A transistor on the the controller board pulls now contact 3 of J4 at a low level and the LED in the opto-coupler IC1 is illuminated

The phototransistor of the opto-coupler is saturated and clamps the base of Q3 at ground level to cut off the latter.

The zener Z100 on the main board can now install +11 volts at the gate of the thyristor allowing the charge of the capacitor C102 and to start up the SMPS.

Speed control of the fans.

The speed of the fans is regulated by means of a sensor (NTC resistor) mounted close to the heatsink of the SMPS board.

IC2 is an integrated circuit regulating the speed of the fans by adapting the duty cycle of the output drive for the power transistor Q4. L1 and C7 filters the output voltage.

The feedback is applied to pin 5 which is protected against arcing with D4/D5.

The MC34063 is a switching regulator. An oscillator trimmed with C6 is applied together with DC voltage to an RS-flipflop via an AND gate.

That DC voltage now is the result of a comparator output receiving an internal reference of 1.25 volts and the feedback voltage at pin 5 (comp). Consequently, the duty cycle of the DC voltage that is built up is as follows :

- it is determined by the output voltage via $R13 / R14 / R11$ in order to stabilise the well-determined value of the NTC resistor.
- it is equally influenced by any change of the NTC resistor itself, sensing the heatsink of the SMPS board.

The minimum voltage is set by Z5 at approximately 7.5 volts and the maximum speed of the fans at 15 volts.

The maximum current output is limited by R10, and an RC feedback straight from the pin 5 guarantees a regular speed.

SM POWER SUPPLY MODULE

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Power Supply for the EHT generator.

The EHT generator is supplied directly from the rectified mains voltage. The +300M volts is leaving the board at the contacts 31/32 of the J8A connector for the EHT board (see description of that board)

By using a voltage directly from the main voltage, we eliminate the influence of the EHT load on the other supply lines of the power supply circuit, and a higher maximum current of the EHT generator is increased.

SM POWER SUPPLY MODULE

SUB-MODULE SM POWER SUPPLY

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Parts listing MAIN MODULE 76 1770

| ITEM NO. | SIT. | DESCRIPTION | ITEM NO. | SIT. | DESCRIPTION |
|----------|------|-------------------------|----------|------|-----------------------------|
| 76 1771 | | UN SMP PJ 49 GR800 SUB | 13 1927 | D208 | D BY229-600 FSR TO220 |
| 11 47009 | C..1 | C CE DI 4N7M400E5 Y WKP | 13 1927 | D209 | D BY229-600 FSR TO220 |
| 11 2837 | C100 | C CE DI 10N S400E3 | 13 1954 | D210 | D BYW29-200 UFR TO220 |
| 11 2837 | C101 | C CE DI 10N S400E3 | 13 1646 | D211 | D 1N4007 R DO41 |
| 11 1477 | C102 | C EL RA 100M Z 25E2 | 31 4147 | F100 | FUSE 3A150 5X20 FAST |
| 11 1655 | C103 | C EL RA 400M T385S | 31 41041 | F200 | FUSE 4A 5X20 SLOW |
| 11 1477 | C104 | C EL RA 100M Z 25E2 | 31 4104 | F201 | FUSE 5A 5X20 SLOW |
| 11 1477 | C105 | C EL RA 100M Z 25E2 | 31 4104 | F202 | FUSE 5A 5X20 SLOW |
| 11 50051 | C106 | C PPMERA 2N2J152 FKP1 | 31 4104 | F203 | FUSE 5A 5X20 SLOW |
| 11 3724 | C107 | C POMERA 100N K 63E2 | 31 4116 | F204 | FUSE 2A 5X20 SLOW |
| 11 4090 | C108 | C POMERA 1M M 63E2 | 31 41041 | F205 | FUSE 4A 5X20 SLOW |
| 11 5932 | C109 | C PP RA 4N7J 63E2 | 31 41041 | F206 | FUSE 4A 5X20 SLOW |
| 11 2740 | C110 | C CE MI 1N2K 63E2 | 31 4516 | H100 | FUSE HOLDER 5X20 V FASTENER |
| 11 2743 | C110 | C CE MI 2N2K 63E2 | 31 4516 | H200 | FUSE HOLDER 5X20 V FASTENER |
| 11 2238 | C111 | C NPO MI 47P G 63E2 | 31 4516 | H201 | FUSE HOLDER 5X20 V FASTENER |
| 11 5932 | C112 | C PP RA 4N7J 63E2 | 31 4516 | H202 | FUSE HOLDER 5X20 V FASTENER |
| 11 1453 | C113 | C EL RA1000M Z 6E2 | 31 4516 | H203 | FUSE HOLDER 5X20 V FASTENER |
| 11 1477 | C114 | C EL RA 100M Z 25E2 | 31 4516 | H204 | FUSE HOLDER 5X20 V FASTENER |
| 11 50051 | C115 | C PPMERA 2N2J152 FKP1 | 31 4516 | H205 | FUSE HOLDER 5X20 V FASTENER |
| 11 3724 | C116 | C POMERA 100N K 63E2 | 31 4516 | H206 | FUSE HOLDER 5X20 V FASTENER |
| 11 5936 | C117 | C PP RA 6N8J 63E2 | 13 2787 | I100 | U 4601 TDA SIP9 PSMP |
| 11 4090 | C118 | C POMERA 1M M 63E2 | 13 4114 | I101 | U 393 DIP8 PV COM |
| 11 5934 | C119 | C PP RA 5N6J 63E2 | 13 2787 | I102 | U 4601 TDA SIP9 PSMP |
| 11 2741 | C120 | C CE MI 1N5K 63E2 | 31 3525 | J10. | J EURO MBS P 64 |
| 11 1477 | C121 | C EL RA 100M Z 25E2 | 31 3525 | J20. | J EURO MBS P 64 |
| 11 1477 | C122 | C EL RA 100M Z 25E2 | 30 2108 | L100 | CORE TUBE 1,3/ 3,5 X 3 |
| 11 1649 | C200 | C EL RA 47M T350 | 30 2108 | L101 | CORE TUBE 1,3/ 3,5 X 3 |
| 11 1649 | C201 | C EL RA 47M T350 | 30 2102 | L102 | CORE TUBE 1,3/ 4,95X40,5 |
| 11 1626 | C202 | C EL RA1000M T 40S | 30 61322 | L103 | CHOKE AX NS 10 UH |
| 11 1626 | C203 | C EL RA1000M T 40S | 30 61322 | L105 | CHOKE AX NS 10 UH |
| 11 1626 | C204 | C EL RA1000M T 40S | 77 4154 | L200 | COIL CHOKE HOR DATA HR45 |
| 11 1626 | C205 | C EL RA1000M T 40S | 77 4154 | L201 | COIL CHOKE HOR DATA HR45 |
| 11 1616 | C206 | C EL RA2200M T 16S | 77 4154 | L202 | COIL CHOKE HOR DATA HR45 |
| 11 1616 | C207 | C EL RA2200M T 16S | 77 4154 | L203 | COIL CHOKE HOR DATA HR45 |
| 11 1649 | C208 | C EL RA 47M T350 | 77 4154 | L204 | COIL CHOKE HOR DATA HR45 |
| 11 1626 | C209 | C EL RA1000M T 40S | 77 4154 | L205 | COIL CHOKE HOR DATA HR45 |
| 11 1626 | C210 | C EL RA1000M T 40S | 10 6829 | P100 | RTCE V 10K K 0W5 S10SS3386H |
| 11 1616 | C211 | C EL RA2200M T 16S | 78 0010 | PC.. | PCB PJ 49 SMP *800 761737 |
| 11 1616 | C212 | C EL RA2200M T 16S | 13 2913 | Q100 | Q BUP101 N P TO218 10215 |
| 11 1716 | C213 | C CE MI 680P M202 | 13 2913 | Q101 | Q BUP101 N P TO218 10215 |
| 11 2762 | C214 | C CE MI 4N7U 63E2 | 10 1127 | R.. | R CF H180E J 0W25 |
| 13 19025 | D100 | D BY255,BYM561 R SOD18 | 10 11917 | R.. | R CFFH E22J 0W4 |
| 13 19025 | D101 | D BY255,BYM561 R SOD18 | 10 46781 | R.1 | R HV H 10M J 1W 10000 |
| 13 19025 | D102 | D BY255,BYM561 R SOD18 | 10 41808 | R100 | R WWFV 4K7 K 3W |
| 13 19025 | D103 | D BY255,BYM561 R SOD18 | 10 1267 | R101 | R CF H390K J 0W5 |
| 13 1646 | D104 | D 1N4007 R DO41 | 10 1144 | R102 | R CF H 4K7 J 0W25 |
| 13 1621 | D105 | D 1N4148 SW DO35 | 10 1266 | R103 | R CF H330K J 0W5 |
| 13 1637 | D106 | D BA158 SW | 10 2499 | R104 | R MF H 0E33J 0W25 |
| 13 1646 | D107 | D 1N4007 R DO41 | 10 1217 | R105 | R CF H 27E J 0W5 |
| 13 1637 | D108 | D BA158 SW | 10 3600 | R106 | R WW H 0E10K 4W 206-8 |
| 13 1637 | D109 | D BA158 SW | 10 1265 | R107 | R CF H270K J 0W5 |
| 13 1646 | D110 | D 1N4007 R DO41 | 10 1136 | R108 | R CF H 1K J 0W25 |
| 13 1637 | D111 | D BA158 SW | 10 1145 | R109 | R CF H 5K6 J 0W25 |
| 13 1637 | D112 | D BA158 SW | 10 1145 | R110 | R CF H 5K6 J 0W25 |
| 13 1637 | D113 | D BA158 SW | 10 3226 | R111 | R MO H150E J 1W5 |
| 13 1913 | D200 | D BY229-1000 FSR TO220 | 10 1136 | R112 | R CF H 1K J 0W25 |
| 13 1954 | D201 | D BYW29-200 UFR TO220 | | | |
| 13 1954 | D202 | D BYW29-200 UFR TO220 | | | |
| 13 1914 | D203 | D BYV19-45 SCH | | | |
| 13 1927 | D204 | D BY229-600 FSR TO220 | | | |
| 13 1913 | D205 | D BY229-1000 FSR TO220 | | | |
| 13 1927 | D206 | D BY229-600 FSR TO220 | | | |
| 13 1927 | D207 | D BY229-600 FSR TO220 | | | |

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| ITEM NO. | SIT. | DESCRIPTION | ITEM NO. | SIT. | DESCRIPTION |
|----------|------|-------------------|----------|------|--------------------------------|
| 10 1128 | R113 | R CF H220E J 0W25 | 10 1137 | R131 | R CF H 1K2 J 0W25 |
| 10 1129 | R114 | R CF H270E J 0W25 | 10 1145 | R132 | R CF H 5K6 J 0W25 |
| 10 1136 | R115 | R CF H 1K J 0W25 | 10 1139 | R133 | R CF H 1K8 J 0W25 |
| 10 1160 | R116 | R CF H100K J 0W25 | 10 11907 | R134 | R CFFH E10J 0W4 |
| 10 1135 | R117 | R CF H820E J 0W25 | 10 1127 | R135 | R CF H180E J 0W25 |
| 10 1120 | R118 | R CF H 47E J 0W25 | 10 1126 | R136 | R CF H150E J 0W25 |
| 10 2499 | R119 | R MF H 0E33J 0W25 | 10 4656 | R200 | R HV H 1M2 J 0W5 3500 |
| 10 1217 | R120 | R CF H 27E J 0W5 | 10 11939 | R202 | R CFFH E33J 0W4 |
| 10 3600 | R121 | R WW H 0E10K 4W | 77 4319 | T..1 | TRANSF PJ 49 SMP VAR GR800 MK2 |
| 10 1265 | R122 | R CF H270K J 0W5 | 77 43037 | T..2 | TRANSF PJ 49 SMP FIX D/GR800 |
| 10 1143 | R123 | R CF H 3K9 J 0W25 | 13 22101 | TH.1 | Q TIC106D TH TO220 |
| 10 1266 | R124 | R CF H330K J 0W5 | 13 1740 | Z100 | D ZEN 12V 0W5 C DO34 |
| 10 1149 | R125 | R CF H 12K J 0W25 | 13 1787 | Z101 | D ZEN 51V 0W5 C DO35 |
| 10 3226 | R126 | R MO H150E J 1W5 | | | |
| 10 1146 | R127 | R CF H 6K8 J 0W25 | | | |
| 10 1136 | R128 | R CF H 1K J 0W25 | | | |
| 10 1136 | R129 | R CF H 1K J 0W25 | | | |
| 10 1128 | R130 | R CF H220E J 0W25 | | | |

206-8

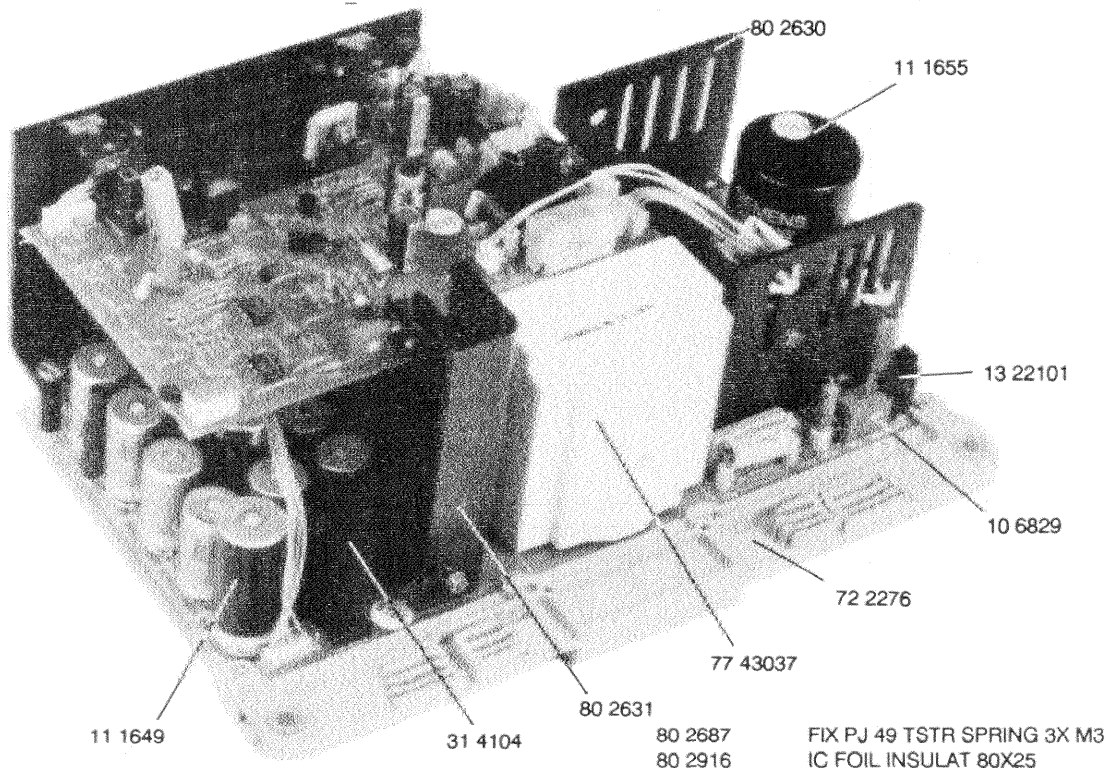
SM POWER SUPPLY MODULE

SUB-MODULE SM POWER SUPPLY

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Spare parts MAIN MODULE 76 1770

| ART.NO. | DESCRIPTION | QUANTITY | ART.NO. | DESCRIPTION | QUANTITY |
|----------|-----------------------------|----------|----------|--------------------------------|----------|
| 10 11907 | R CFFH E10J 0W4 | 1 | 30 2102 | CORE TUBE 1,3/ 4,95X40,5 | 2 |
| 10 11917 | R CFFH E22J 0W4 | 1 | 30 2108 | CORE TUBE 1,3/ 3,5 X 3 | 2 |
| 10 11939 | R CFFH E33J 0W4 | 1 | 30 61322 | CHOKE AX NS 10 UH | 2 |
| 10 3226 | R MO H150E J 1W5 | 2 | | | |
| 10 3600 | R WW H 0E10K 4W 206-8 | 2 | 31 3525 | J EURO MBS P 64 | 2 |
| 10 41808 | R WWFV 4K7 K 3W | 1 | 31 4104 | FUSE 5A 5X20 SLOW | *3 |
| 10 4656 | R HV H 1M2 J 0W5 3500 | 1 | 31 41041 | FUSE 4A 5X20 SLOW | 3 |
| 10 46781 | R HV H 10M J 1W 10000 | 1 | 31 4116 | FUSE 2A 5X20 SLOW | 1 |
| 10 6829 | RTCE V 10K K 0W5 S10SS3386H | *1 | 31 4147 | FUSE 3A150 5X20 FAST | 1 |
| | | | 31 4516 | FUSE HOLDER 5X20 V FASTENER | 8 |
| 11 1649 | C EL RA 47M T350 | *3 | 31 5302 | J PIN MBT D 1,3L5,5+3 | 1 |
| 11 1655 | C EL RA 400M T385S | *1 | | | |
| 11 1716 | C CE MI 680P M202 | 1 | 34 7968 | FASTENER WIRE SADDLE LWS-A-201 | 2 |
| 11 2837 | C CE DI 10N S400E3 | 2 | 34 8020 | WIRE TIE L110 | 1 |
| 11 4090 | C POMERA 1M M 63E2 | 2 | 34 8024 | FASTENER WIRE SADDLE LWS-2R-A | 2 |
| 11 47009 | C CE DI 4N7M400E5 Y WKP | 1 | 34 8086 | FASTENER WIRE SLCSE DIA 8,9 | 2 |
| 11 50051 | C PPMERA 2N2J152 FKP1 | 2 | | | |
| | | | 36 19125 | SCREW DIN965 M 3 X 6 MC+ | 1 |
| 13 1621 | D 1N4148 SW DO35 | 1 | 36 20216 | SCREW DIN84 M 3 X 6 MP- | 13 |
| 13 1637 | D BA158 SW | 6 | 36 21229 | SCREW DIN7985 M 3 X 8 TWOLOK | 5 |
| 13 1646 | D 1N4007 R DO41 | 4 | 36 26696 | SCREW DIN921 M 3 X 8 MP- | 1 |
| 13 1740 | D ZEN 12V 0W5 C DO34 | 1 | 36 7502 | WASHER DIN6798 A 3,2 | 13 |
| 13 1787 | D ZEN 51V 0W5 C DO35 | 1 | 36 7600 | FIX BLOC UNIVERSAL M3 | 5 |
| 13 19025 | D BY255, BYM561 R SOD18 | 4 | 36 7699 | RIVET CHOBERT D2,38 L6,35 | 1 |
| 13 1913 | D BY229-1000 FSR TO220 | 2 | | | |
| 13 1914 | D BYV19-45 SCH | 1 | 77 4154 | COIL CHOKE HOR DATA HR45 | 6 |
| 13 1927 | D BY229-600 FSR TO220 | 5 | 77 43037 | TRANSF PJ 49 SMP FIX D/GR800 | *1 |
| 13 1954 | D BYW29-200 UFR TO220 | 3 | 77 4319 | TRANSF PJ 49 SMP VAR GR800 MK2 | 1 |
| 13 22101 | Q TIC106D TH TO220 | *1 | | | |
| 13 2787 | U 4601 TDA SIP9 PSMP | 2 | 80 2630 | HEATSINK PJ 49 SMP PART 1 04 | 1 |
| 13 2913 | Q BUP101 N P TO218 10215 | 2 | 80 2631 | HEATSINK PJ 49 SMP PART 2 | 1 |
| 13 3039 | SPACER L 8 D 4 D1,2 CER | 4 | 80 2633 | FIX PJ 49 TSTR SPRING SMP | 2 |
| 13 30391 | SPACER L 8 D 4 D1,5 CER | 8 | 80 2657 | IC FOIL INSULAT 70X25 SMP/TDA | 1 |
| 13 3063 | Q ACC INSUL MICA SOT93 | 1 | 80 2666 | SPACER RIV L17 D 6 M3 MS | 1 |
| 13 4114 | U 393 DIP8 PV_COM | 1 | 80 2686 | FIX PJ 49 TSTR SPRING 1X M3 | 2 |



SM POWER SUPPLY MODULE

SUB-MODULE SM POWER SUPPLY

76 1770
76 1771

Parts listing SUB MODULE 76 1771

| ITEM NO. | SIT. | DESCRIPTION | ITEM NO. | SIT. | DESCRIPTION |
|----------|------|-------------------------------|----------|------|-----------------------|
| 11 2830 | C..1 | C CE DI 2N7S400E3 | 10 1346 | R..1 | R CF H 6K8 J 1W |
| 11 28111 | C..2 | C CE DI 68P M102E3 | 10 4656 | R..3 | R HV H 1M2 J 0W5 3500 |
| 11 2815 | C..3 | C CE DI 150P M400E3 | 10 11134 | R..4 | R MF H 12E J 0W25 156 |
| 11 1468 | C..4 | C EL RA 470M Z 16E2 | 10 1142 | R..5 | R CF H 3K3 J 0W25 |
| 11 1468 | C..5 | C EL RA 470M Z 16E2 | 10 1160 | R..6 | R CF H100K J 0W25 |
| 11 59081 | C..6 | C PP RA 470P J100E2 1830 | 10 1136 | R..7 | R CF H 1K J 0W25 |
| 11 1479 | C..7 | C EL RA 470M Z 25E2 | 10 1140 | R..8 | R CF H 2K2 J 0W25 |
| 11 1489 | C..8 | C EL RA 470M T 40E2 | 10 1130 | R..9 | R CF H330E J 0W25 |
| 11 3720 | C..9 | C POMERA 47N K 63E2 | 10 11907 | R.10 | R CFFH E10J 0W4 |
| 11 3720 | C.10 | C POMERA 47N K 63E2 | 10 1148 | R.11 | R CF H 10K J 0W25 |
| 11 4154 | C.11 | C POMERA 22N K400E2 | 10 1155 | R.12 | R CF H 39K J 0W25 |
| 11 1550 | C.12 | C EL RA 4M7M 50E2 | 10 1149 | R.13 | R CF H 12K J 0W25 |
| 11 3720 | C.13 | C POMERA 47N K 63E2 | 10 1144 | R.14 | R CF H 4K7 J 0W25 |
| 11 37121 | C.14 | C POMERA 10N K100E2 365 | 10 1138 | R.15 | R CF H 1K5 J 0W25 |
| 11 1531 | C.17 | C EL RA 10M M 35E2 | 10 1144 | R.16 | R CF H 4K7 J 0W25 |
| 13 1637 | D..1 | D BA158 SW | 10 1156 | R.17 | R CF H 47K J 0W25 |
| 13 1637 | D..2 | D BA158 SW | 10 1140 | R.18 | R CF H 2K2 J 0W25 |
| 13 1950 | D..3 | D BYV27/150 R SOD57 | 10 1144 | R.19 | R CF H 4K7 J 0W25 |
| 13 1621 | D..4 | D 1N4148 SW DO35 | 10 1154 | R.20 | R CF H 33K J 0W25 |
| 13 1621 | D..5 | D 1N4148 SW DO35 | 10 1145 | R.21 | R CF H 5K6 J 0W25 |
| 13 1621 | D..6 | D 1N4148 SW DO35 | 10 1154 | R.22 | R CF H 33K J 0W25 |
| 13 16361 | D..7 | D BAT85 SCH DO35 | 10 1161 | R.23 | R CF H120K J 0W25 |
| 13 1621 | D..8 | D 1N4148 SW DO35 | 10 1168 | R.24 | R CF H470K J 0W25 |
| 13 1667 | D.10 | D LED D3 T GRE | 10 1161 | R.25 | R CF H120K J 0W25 |
| 13 16361 | D.11 | D BAT85 SCH DO35 | 10 1167 | R.26 | R CF H390K J 0W25 |
| 13 1621 | D.12 | D 1N4148 SW DO35 | 10 1154 | R.27 | R CF H 33K J 0W25 |
| 31 4142 | F..1 | FUSE 0A125 5X20 SLOW | 10 1154 | R.28 | R CF H 33K J 0W25 |
| 31 4514 | H..1 | FUSE HOLDER 5X20 CAP+HOLDER | 10 1144 | R.29 | R CF H 4K7 J 0W25 |
| 13 1691 | I..1 | U 601G-3 SFH DIP6 POPTOC | 10 1163 | R.30 | R CF H180K J 0W25 |
| 13 7625 | I..2 | U 34063 DIP8 PDC DC | 10 1157 | R.31 | R CF H 56K J 0W25 |
| 13 4116 | I..3 | U 353 DIP8 POPAMP | 10 1172 | R.32 | R CF H 1M J 0W25 |
| 13 4114 | I..4 | U 393 DIP8 PV_COM | 10 1172 | R.33 | R CF H 1M J 0W25 |
| 13 1691 | I..5 | U 601G-3 SFH DIP6_POPTOC | 10 1236 | R.34 | R CF H 1K J 0W5 |
| 31 3923 | J2A. | J CT-MT MBT P 3 R2 | 10 1162 | R.35 | R CF H150K J 0W25 |
| 31 3924 | J2B. | J CT-MT MBT P 4 R2 | 10 1137 | R.36 | R CF H 1K2 J 0W25 |
| 31 3926 | J3.. | J CT-MT MBT P 6 R2 | 10 1130 | R.37 | R CF H330E J 0W25 |
| 31 3927 | J4.. | J CT-MT MBT P 7 R2 | 10 4658 | R.38 | R HV H 1M5 J 0W5 3500 |
| 31 3922 | J6.. | J CT-MT MBT P 2 R2 | 10 25541 | R.39 | R MF H 30K G 0W25 154 |
| 77 4223 | L..1 | COIL CHOKE PJ 49 SMP FAN CTRL | 10 1144 | R.40 | R CF H 4K7 J 0W25 |
| 10 5016 | NTC1 | R NTC 2K7 0W25 640 | 10 1148 | R.41 | R CF H 10K J 0W25 |
| 10 6827 | P..1 | RTCE V 2K K 0W5 S10SS3386H | 10 1140 | R.42 | R CF H 2K2 J 0W25 |
| 10 6832 | P..2 | RTCE V 50K K 0W5 S10SS3386H | 10 1156 | R.43 | R CF H 47K J 0W25 |
| 78 0009 | PC.. | PCB PJ 49 SMP *800 SUB 761737 | 10 1131 | R.44 | R CF H390E J 0W25 |
| 13 2935 | Q..1 | Q BUX87 N SS TO126 450A5 | 10 1148 | R.45 | R CF H 10K J 0W25 |
| 13 14071 | Q..2 | Q BC547B,237B N SS TO92 045A1 | 10 1165 | R.46 | R CF H270K J 0W25 |
| 13 14071 | Q..3 | Q BC547B,237B N SS TO92 045A1 | 10 1136 | R.47 | R CF H 1K J 0W25 |
| 13 2909 | Q..4 | Q BD652 P P TO220 12008 | 10 4688 | R.48 | R HV H 27M J 0W5 3500 |
| 13 1413 | Q..5 | Q BC557 ,307 P SS TO92 045A1 | 10 1159 | R.50 | R CF H 82K J 0W25 |
| 13 14072 | Q..6 | Q BC547A,237A N SS TO92 045A1 | 30 6718 | T..1 | T PJ 49 SMP STAND-BY |
| 13 2948 | Q..7 | Q BF459 N SS TO126 300A1 | 13 1706 | Z.1 | D ZEN 9V1 0W5 C DO41 |
| 13 14131 | Q..8 | Q BC557B,307B P SS TO92 045A1 | 13 1706 | Z.2 | D ZEN 9V1 0W5 C DO41 |
| 13 14071 | Q..9 | Q BC547B,237B N SS TO92 045A1 | 13 1767 | Z.3 | D ZEN 6V8 0W5 B DO35 |
| | | | 13 1767 | Z.4 | D ZEN 6V8 0W5 B DO35 |
| | | | 13 1742 | Z.5 | D ZEN 6V8 0W5 C DO35 |
| | | | 13 4031 | Z.6 | U 431C TO92 PSTAB |
| | | | 13 1756 | Z.7 | D ZEN 7V5 0W5 C DO35 |
| | | | 13 4031 | Z.8 | U 431C TO92 PSTAB |
| | | | 13 1756 | Z.9 | D ZEN 7V5 0W5 C DO35 |
| | | | 13 1734 | Z.10 | D ZEN 5V6 0W5 B DO35 |

SM POWER SUPPLY MODULE

SUB-MODULE SM POWER SUPPLY

76 1770

76 1771

Spare parts SUB MODULE 76 1771

| ART.NO. | DESCRIPTION | QUANTITY | ART.NO. | DESCRIPTION | QUANTITY |
|----------|-------------------------------|----------|----------|-------------------------------|----------|
| 10 11907 | R CFFH E10J 0W4 | 1 | 13 3063 | Q ACC INSUL MICA SOT93 | 1 |
| 10 4656 | R HV H 1M2 J 0W5 3500 | 1 | 13 4031 | U 431C TO92 PSTAB | 2 |
| 10 4658 | R HV H 1M5 J 0W5 3500 | 1 | 13 4114 | U 393 DIP8 PV_COM | 1 |
| 10 4688 | R HV H 27M J 0W5 3500 | 1 | 13 4116 | U 353 DIP8 POPAMP | 1 |
| 10 5016 | R NTC 2K7 0W25 640 | 1 | 13 7625 | U 34063 DIP8 PDC_DC | 1 |
| 10 6827 | RTCE V 2K K 0W5 S10SS3386H | *1 | | | |
| 10 6832 | RTCE V 50K K 0W5 S10SS3386H | *1 | 30 6718 | T PJ 49 SMP STAND-BY | 1 |
| 11 28111 | C CE DI 68P M102E3 | 1 | 31 3922 | J CT-MT MBT P 2 R2 | 1 |
| 11 2815 | C CE DI 150P M400E3 | 1 | 31 3923 | J CT-MT MBT P 3 R2 | 1 |
| 11 2830 | C CE DI 2N7S400E3 | 1 | 31 3924 | J CT-MT MBT P 4 R2 | 1 |
| 11 4154 | C POMERA 22N K400E2 | 1 | 31 3926 | J CT-MT MBT P 6 R2 | 1 |
| | | | 31 3927 | J CT-MT MBT P 7 R2 | 1 |
| 13 14071 | Q BC547B,237B N SS TO92 045A1 | 3 | 31 4142 | FUSE 0A125 5X20 SLOW | 1 |
| 13 14072 | Q BC547A,237A N SS TO92 045A1 | 1 | 31 4514 | FUSE HOLDER 5X20 CAP+ HOLDER | 1 |
| 13 1413 | Q BC557,307 P SS TO92 045A1 | 1 | | | |
| 13 14131 | Q BC557B,307B P SS TO92 045A1 | 1 | 36 20216 | SCREW DIN84 M 3 X 6 MP- | 1 |
| 13 1621 | D 1N4148 SW DO35 | 5 | 36 20226 | SCREW DIN84 M 3 X 8 MP- | 8 |
| 13 16361 | D BAT85 SCH DO35 | 2 | 36 20236 | SCREW DIN84 M 3 X10 MP- | 1 |
| 13 1637 | D BA158 SW | 2 | 36 26696 | SCREW DIN921 M 3 X 8 MP- | 1 |
| 13 1667 | D LED D3 T GRE | 1 | 36 6102 | NUT DIN934 M 3 HEXAGON | 1 |
| 13 1691 | U 601G-3 SFH DIP6 POPTOC | 2 | 36 7434 | RIVET P AL AL AD32ABS D2,4 | 2 |
| 13 1706 | D ZEN 9V1 0W5 C DO41 | 2 | 36 7502 | WASHER DIN6798 A 3,2 | 7 |
| 13 1734 | D ZEN 5V6 0W5 B DO35 | 1 | 36 7600 | FIX BLOC UNIVERSAL M3 | 4 |
| 13 1742 | D ZEN 6V8 0W5 C DO35 | 1 | | | |
| 13 1756 | D ZEN 7V5 0W5 C DO35 | 2 | 72 1632 | SMCDIOSPACER LED5 | 1 |
| 13 1767 | D ZEN 6V8 0W5 B DO35 | 2 | 72 1850 | CLIPS PROTECTION TRIMPOT CEMH | 1 |
| 13 1950 | D BYV27/150 R SOD57 | 1 | | | |
| 13 2909 | Q BD652 P P TO220 12008 | 1 | 77 4223 | COIL CHOKE PJ 49 SMP FAN CTRL | *1 |
| 13 2935 | Q BUX87 N SS TO126 450A5 | *1 | | | |
| 13 2948 | Q BF459 N SS TO126 300A1 | 1 | 80 2632 | HEATSINK PJ 49 SMP SUB | 1 |
| 13 30291 | Q ACC INSUL MICA TO220 | 1 | 80 2640 | HEATSINK PJ 49 SMP SUB WASHER | 2 |
| 13 30292 | Q ACC INSUL BUSH TO220 | 1 | 80 2646 | FIX PJ 49 SMP SUB | 1 |
| 13 3039 | SPACER L 8 D 4 D1,2 CER | 6 | 80 2686 | FIX PJ 49 TSTR SPRING 1X M3 | 1 |
| 13 3052 | Q ACC HEATSINK TO126 | 1 | | | |

