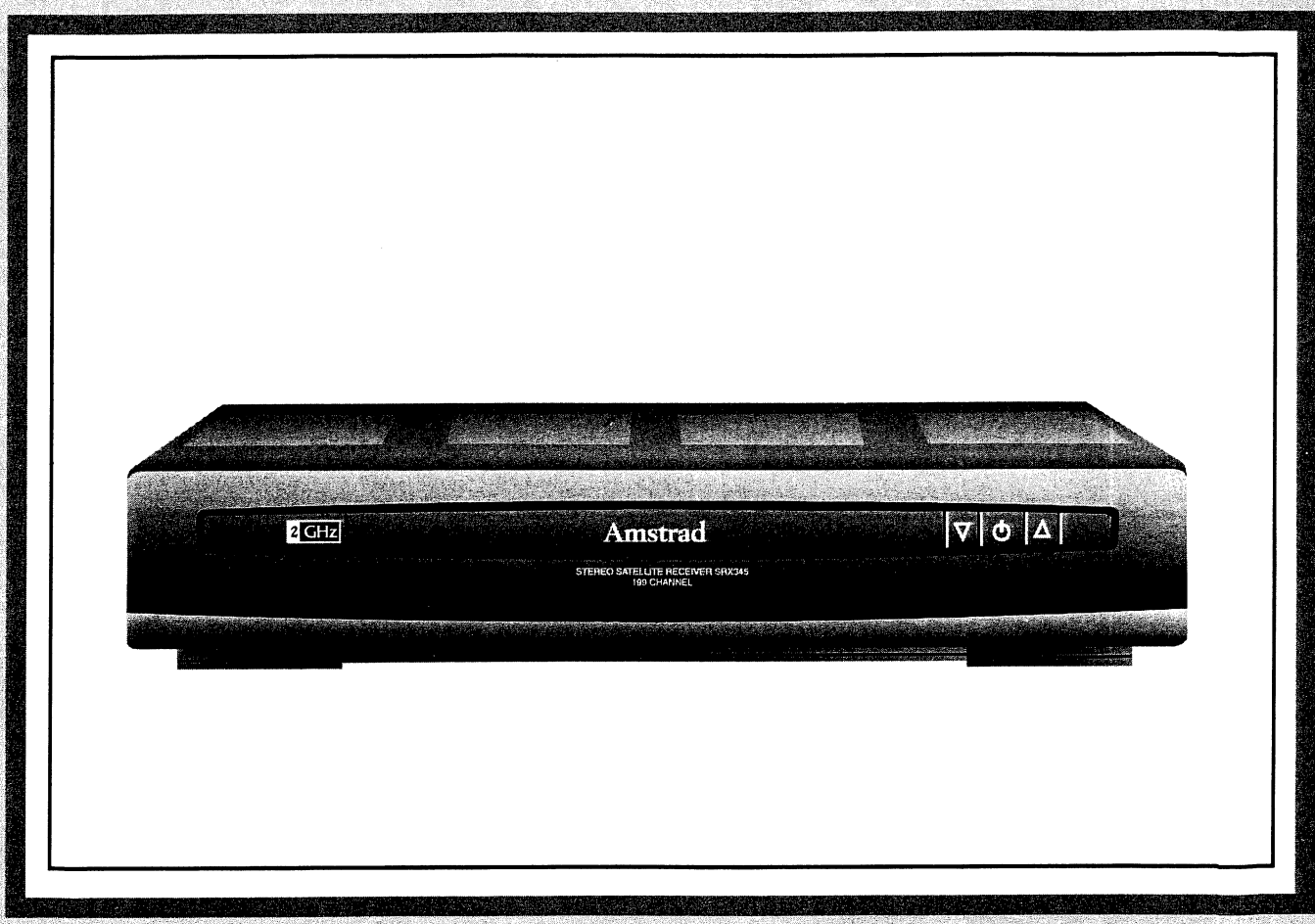


Amstrad



SRX345

SATELLITE RECEIVER

SERVICE MANUAL

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Page SPECIFICATION

RECEIVER

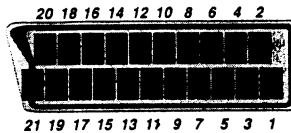
| | |
|---------------------------------------|--|
| Dimensions, weight: | 335 x 250 x 62mm, 1.9kg |
| Mains supply: | 220-230V ac 50Hz |
| Tuning range: | 700-2050MHz |
| Channel bandwidth: | 27MHz |
| Local oscillator range: | 0 and 9.3-12GHz |
| Fine tuning range: | ±10MHz |
| Dynamic range: | -20 to -60dBm |
| AM co-channel interference threshold: | -15dBc typical |
| Threshold: | 8dB C/N (with threshold extension) |
| RF output: | Channel 38 (adjustable 30-40) |
| Audio subcarrier: | 5.5-8.5MHz |
| Audio output level: | 2V pk-pk at 50kHz input deviation |
| Audio response: | 40Hz-15kHz |
| Input/output connectors: | LNB 75 ohms F-type AUDIO OUT RCA phono (x2) SCART/PERITEL 21-way DECODER 21-way |

SLB3 LNB

| | |
|-------------------------|---------------------|
| Input frequency range: | 10.70-11.80GHz |
| Output frequency range: | 950-2050MHz |
| Local oscillator: | 9.75GHz |
| Gain: | 55dB |
| Noise figure: | 1dB typical |
| Polarisation switching: | Electrical (13/17V) |
| Output connector: | 75 ohms F-type |

Date of First Publication April 1994.
Information published was latest available at the time of print.
Amstrad reserves the right to supply selective components.

BACK PANEL SOCKETS



TV SCART/PERITEL

| | |
|------------------------------|-------------------------------|
| 1 Audio out R | 12 Serial interface (clock) † |
| 2 Audio in R | 13 Red ground |
| 3 Audio out L | 14 Serial interface ground † |
| 4 Audio ground | 15 Red* |
| 5 Blue ground | 16 Blanking* |
| 6 Audio in L | 17 Video ground |
| 7 Blue* | 18 Blanking ground |
| 8 External switching | 19 Video out |
| 9 Green ground | 20 Video in |
| 10 Serial interface (data) † | 21 Shield/ground |
| 11 Green* | |

DECODER

| | |
|--|--|
| 1 Audio out R | 11 Green |
| 2 Audio in R | 12 MAC baseband out |
| 3 Audio out L | 13 Ground |
| 4 Audio ground | 14 (not used) |
| 5 Ground | 15 (not used) |
| 6 Audio in L | 16 (not used) |
| 7 (not used) | 17 Video ground |
| 8 Audio/video INT/EXT | 18 (not used) |
| 9 Ground | 19 PAL baseband out (filtered/clamped) |
| 10 PAL baseband out (unfiltered/unclamped) | 20 Video in * (not implemented) |
| | 21 Shield/ground † (dealer use only) |

SAFETY TEST

Please note: when any work is carried out on a set, the following safety must be carried out to ensure continued electrical safety.

1) Flash Test:

Test at 4kV between the live and neutral of the mains lead joined together and ALL accessible metal points on the exterior of the set.

2) Insulation Resistance Test:


Test between the live and neutral of the mains lead joined together and ALL accessible metal points on the exterior of the set to show resistance of at least 4M ohm.

In keeping with our policy of continually improving our service and the technical quality of our products, we reserve the right to change components, manufacturers, sources of supply or technical specifications at any time.

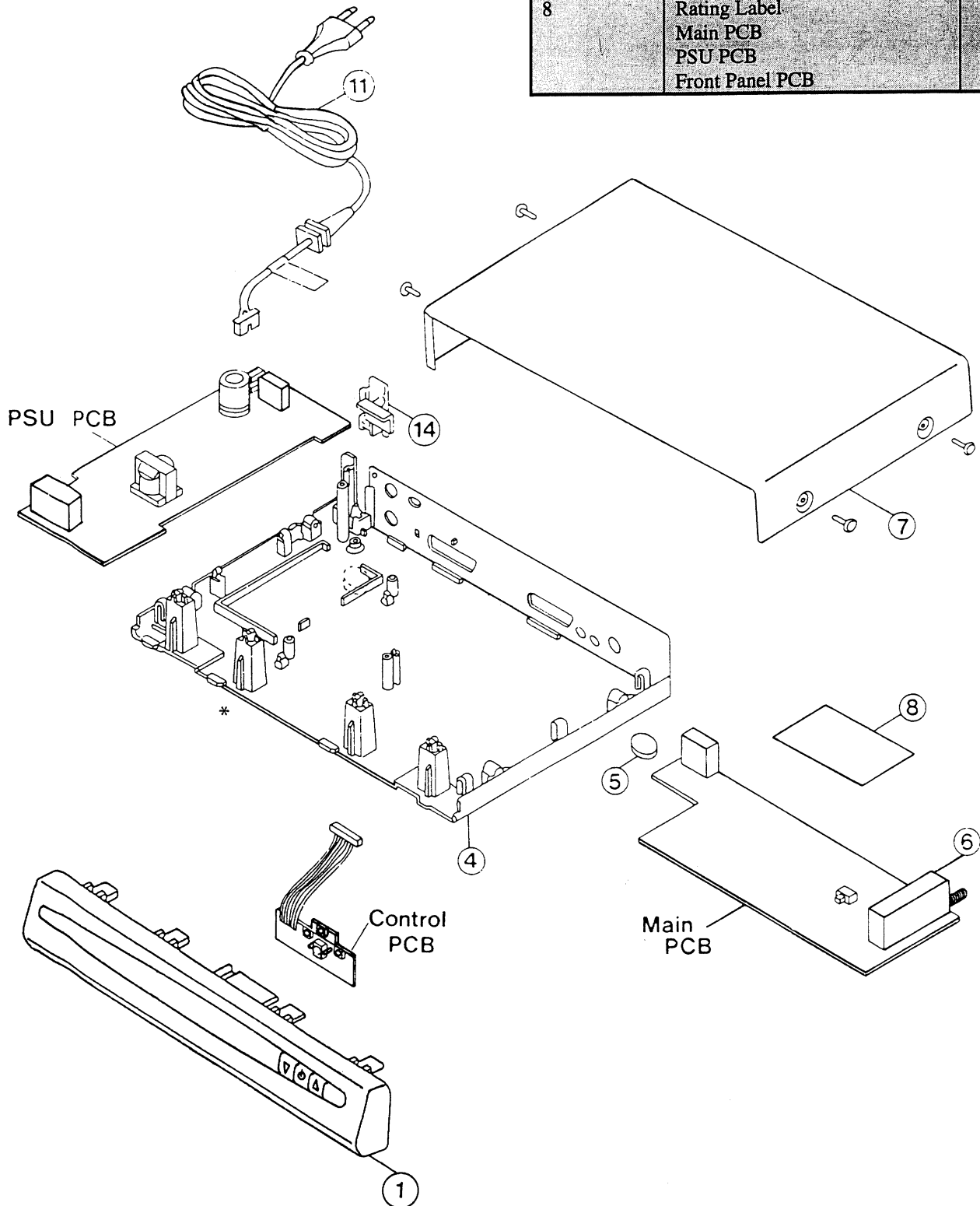
Amstrad Plc.

BRENTWOOD HOUSE, 169 KINGS ROAD. BRENTWOOD ESSEX CM14 4EF

SRX345 Cabinet Parts List

| Ref. No | Description | Pt.No |
|--|-------------------|--------|
| 7 | Top Cabinet | 242155 |
| 1 | Front Panel Assy | 242308 |
| 4 | Bottom Cabinet | 241566 |
| 5 | Foot Rubber Rear | 241545 |
| | Foot Rubber Front | |
| 14 | Rear Insert | 240741 |
| 11  | Mains Cord | 240861 |
| 8 | Rating Label | |
| | Main PCB | |
| | PSU PCB | |
| | Front Panel PCB | |

CABINET EXPLODED VIEW



* NOTE: Remove screw at the time of disassembly

Electrical Parts List

| Ref No. | Description | Pt.No |
|--|------------------------------------|--------|
| | ICs | |
| IC1,10 | IC MC14053BCP | 152353 |
| IC2 | IC TDA61602X | 241395 |
| IC3 | IC LM1894N | 241393 |
| IC4 | IC 24C16 EEPROM | 242222 |
| IC5 | IC 68HC05D24 CPU V3.10 | 242315 |
| IC6 | IC 78L05AC Regulator | 250009 |
| IC8 | IC UPD6450CX-002 | 241531 |
| IC300 | IC LM392 | 241544 |
| IC500 | IC 1S1U60L Ir Sensor | 241529 |
| IC600 | IC CS3842A | 241537 |
| IC601 | IC CNY17F-3X PC111L Opto C'pler | 241539 |
| IC602 | IC TL431CLP Shunt Regulator | 241538 |
| | Transistors | |
| TR43 | Tr DTC124ES | 152050 |
| TR2,4,7,8,10 11,14,15,17 19-22,26,29 31,32,34,37 38,40-42 300,302 | Tr 2SC1740S 2SC945X | 50016 |
| TR44 | Tr DTA114E | 273263 |
| TR1,3,5,6,12 13,16,18,25 27,28,30,33 36,301 | Tr 2SA933S 2SA733K | 150874 |
| TR600 | Tr MJF18004 | 240737 |
| TR304 | Tr 2SD313D | 50005 |
| TR303 | Tr 2SB1143T | 240037 |
| | Diodes | |
| D1-6,603- 605 | D 1N4148 | 270754 |
| D1 | D BB609 | 241430 |
| D7 | DZ BZX55C 6.V8 500mW | 240377 |
| D8 | DZ 27V 500mW | 241233 |
| D600 | D DF10M Bridge | 241403 |
| D303 | D FE1A | 241406 |
| D602,606 | D RGP10D | 241633 |
| D607,608 | D RL2Z | 240733 |
| D601 | D IN4005 | 241402 |
| D4 | DZ 5.1V 500mW | 240815 |
| D501 | LED Red SLP030RA | 241631 |
| D500 | LED Green SLP030GA | 241632 |

| Ref No | Description | Pt.No |
|----------------|----------------------------------|--------|
| | Coils | |
| L8 | Coil 10 μ H | |
| L1,13 | Coil 100 μ H 1404AE | |
| L12,13 | Coil 100 μ H 1041D | |
| L16 | Coil 100 μ H Choke 10457 | |
| L7 | Coil 1.2 μ H | |
| L10 | Coil 1.8 μ H | |
| L9 | Coil 18 μ H | |
| L3 | Coil 3.3 μ H | |
| L11 | Coil 33 μ H | |
| L601,602 | Coil 33 μ H Choke | |
| L2 | Coil 3.9 μ H | |
| L4,5,14 | Coil 8.2 μ H | |
| L300 | Coil 330 μ H Toroidal | 241636 |
| T600 Δ | Tx μ ains Switching LLP007TH | 242224 |
| L600 Δ | Line Filter 39 μ H Toroidal | 241637 |
| | Miscellaneous | |
| SK2,4 | Scart Socket | 153030 |
| | Remote Control Handset | 241568 |
| | CATV Cable 3C-2W | 153048 |
| | Carton | 242309 |
| | Polypacking | 241629 |
| | User Instructions | 242310 |
| S500 | Tact Switch | 240860 |
| | Tuner Assy 1500-P2 | 242177 |
| | Shield Metal IR Sensor | |
| FS600 Δ | Fuse 1.25A (T) | 240083 |
| VR1 | VRSF 10K Ω linear | 240710 |
| VR1 | VRSF 500 Ω 50100 PSU | 241638 |
| C91 | Trimmer Cap 40pF | 24 |
| XL11 | Crystal 17.73447MHz | 241640 |
| | Crystal 4.0MHz | 254427 |
| IC7 | RF Modulator CH30-40 5V | 242178 |
| XL7 | Ceramic Discr. CDA10.52MG38V | 240077 |
| XL2,4 | Cer. Filter SFE10.52MJA10-A | 241028 |
| XL8 | Ceramic Discr. CDA10.7HG38V | 240076 |
| XL1,3 | Ceramic Filter SFE10.7MJA10-A | 241027 |
| SK5 | Phono Jack Red White | 240798 |
| | Slide Switch | 240800 |

ALIGNMENT INSTRUCTIONS

NOTE:

Electrical adjustment is required after replacing certain components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.

NOTE: This flow chart indicates, the electrical adjustment step.

TEST EQUIPMENT REQUIRED

1. Oscilloscope: Dual-trace with 10:1 probe,
V-Range: 0.001~50v/Div.,
F-Range: AC~DC-20MHz
2. PAL Pattern Generator
(Color bar with 100% white)
3. AC Voltmeter (RMS)

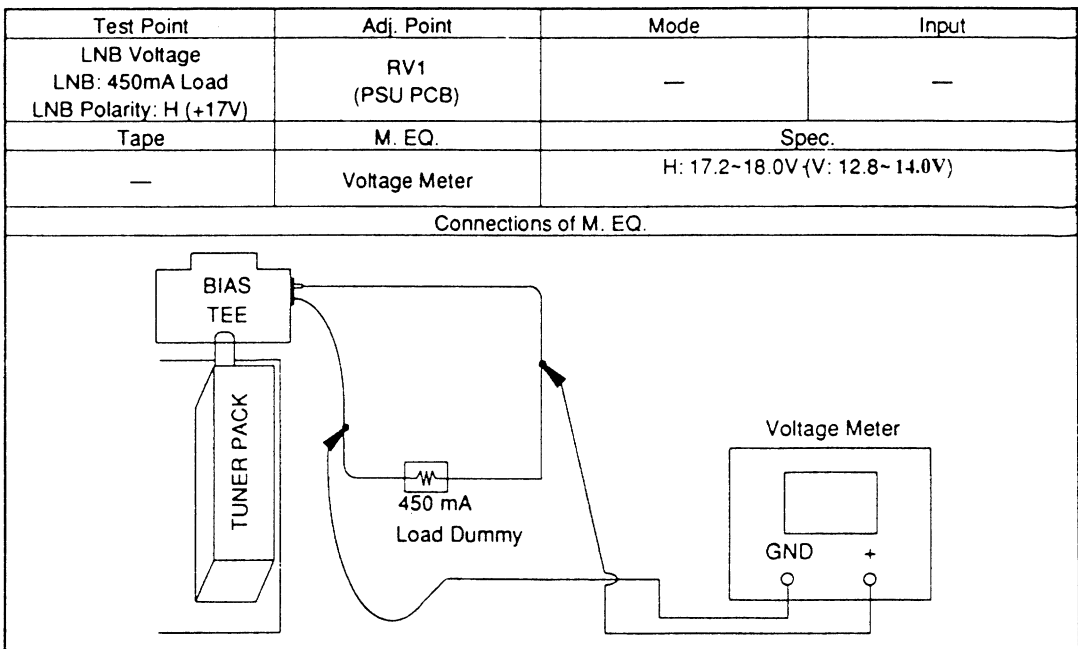
1. LNB Voltage Adjustment

Purpose:

To separate receiving signal into horizontal and vertical polarisation.

Symptom of Misadjustment:

Receiving signal is not separated into horizontal and vertical correctly.



Reference Notes:

1. Check that LNB Polarity is "H" on the step 1 (Vp-p Voltage Adjustment).
2. Connect equipment as shown in the above table.
3. Adjust RV1 to obtain 17.6V LNB Voltage.

2. Video Level Adjustment

Purpose:

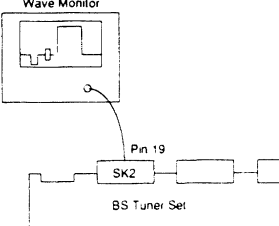
Adjust Contrast level of video signal at TV Scart/Modulator output.

Symptom of Misadjustment:

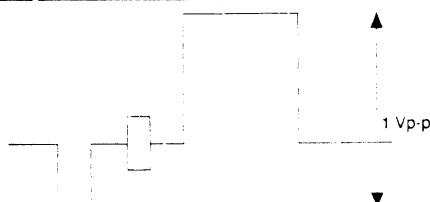
Display will be too dark or too bright.

| Test Point | Adj. Point | Mode | Input |
|---|-------------------|----------------------------|---|
| SK2 Pin 19 LNB: 450mA Load LNB Polarity: H (+17V) | RV1 (Main PCB) | — | CH8: 1317.5MHz, White 100%, RF= -45dBm, C/N= Max |
| Tape | M. EQ | Spec. | |
| — | Wave Monitor | Video Level: 1Vp-p±0.5Vp-p | |

Connections of M. EQ.



Figure



Reference Notes:

1. Input CH8: 1317.5MHz, White 100%, RF=-45dBm, C/N=Max.
2. Connect the signal from SK2 Pin 19 to Wave Monitor.
3. Adjust RV1 (Main PCB) to obtain 1Vp-p.

3. OSD Freq. Adjustment

Purpose:

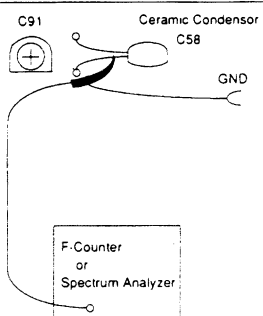
To adjust frequency of OSD (On Screen Display) control signal.

Symptom of Misadjustment:

OSD may be not distinct or colour background may be grey.

| Test Point | Adj. Point | Mode | Input |
|--|-----------------------------------|--------------------------------|-------|
| C58 LNB: 450mA Load LNB Polarity: H (+17V) | C91 | — | — |
| Tape | M. EQ | Spec. | |
| — | Spectrum Analyzer or F-Counter | OSD Freq. : 17.734475MHz±200Hz | |

Connections of M. EQ.



Reference Notes:

1. Push "TIMER" key on the Remote Control to place units in TIMER mode.
2. Connect equipment as shown in the above table.
3. Adjust C91 to obtain 17.734475MHz.

5. Clamp Level Adjustment (with 450mA LNB load)

Adjust RV3 to achieve 1.85V at the Jn. of RV3 & R5.

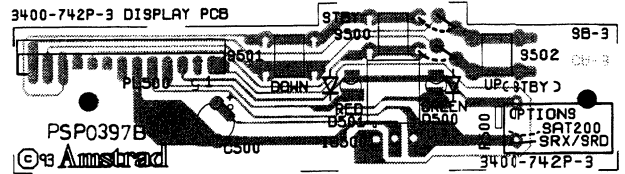
Note: This allows maximisation of video ADC input.

| Description | Ref. No. | Pt.No. |
|---------------------------|---|--------|
| Resistors 1/6w | | |
| Unless stated differently | | |
| 0.91 Ω 1/2w | R308 | |
| 2.2 Ω 1/2w | R610 | |
| 4.7 Ω 1/2w | R609 | |
| 27 Ω 1/4w | R32 | |
| 75 Ω | R110,115 | |
| 75 Ω 1/4w | R54-56,84,129 | |
| 100 Ω | R35,36,59,60,73,76,116,120,121 123,165,307,500 | |
| 100 Ω 1/4w | R617 | |
| 100 Ω 1/2w | R607 | |
| 120 Ω | R10 | |
| 150 Ω | R8,14,15,106,111,173 | |
| 180 Ω | R176 | |
| 220 Ω | R3,47,48,50,309,608 | |
| 240 Ω | R71 | |
| 270 Ω | R157,158,203,204 | |
| 330 Ω | R93,162 | |
| 390 Ω | R49 | |
| 430 Ω | R39,40 | |
| 470 Ω | R1,7,9,51,65,67,103,108,113,118 130,144,618 | |
| 560 Ω | R34,37 | |
| 750 Ω | R72,200,201 | |
| 820 Ω | R70 | |
| 910 Ω | R29,30 | |
| 1k Ω | R7,811,12,21,22,31,57,58,62,63, 87,88,124-126,133,137,611,616 | |
| 1k Ω 1/2w | R622 | |
| 1.8k Ω | R620A,621A | |
| 2.2k Ω | R26 | |
| 2.2k Ω 1/4w | R310 | |
| 2.7k Ω | R16 | |
| 3k Ω | R107,112 | |
| 3.3k Ω | R1,82,142,320 | |
| 4.7k Ω | R23,24,86,117,148,149,154,155 319 | |
| 5.1k Ω | R145 | |
| 6.8k Ω | R74 | |
| 8.2k Ω | R66 | |
| 10k Ω | R2,4,5,17,18,43,68,69,79,80,104 105,300,305,306,312,318,614,615 624 | |
| 15k Ω | R38,89,90 | |
| 22k Ω | R2,77,83,109,114,119,141,171 314 | |
| 27k Ω | R52,131 | |
| 27k Ω 1% | R613 | |
| 33k Ω 1/4w | R621A | |

| Description | Ref. No. | Pt.No. |
|---------------------|---|--------|
| 47k Ω | R6,13,25,78,91,92,314, | |
| 100k Ω | R3,6,44,53,64,81,132,143,156 | |
| 100k Ω 1/2w | R602,603 | |
| 150k Ω | R75 | |
| 180k Ω | R | |
| 220 k Ω | R315 | |
| 470k Ω | R159 | |
| 820k Ω 1/2w | R600 | |
| 1M Ω | R45,122,127,128,612 | |
| Fuse | | |
| 2.2 Ω 1/4w | R604 | 272445 |
| Wire Wound | | |
| 10 Ω 5w | R601 | 242143 |
| 1k Ω 5w | R605 | 241378 |
| Capacitors | | |
| Ceramic | | |
| 4.7pF | C51,111 | |
| 15pF | C84 | |
| 22pF | C5,37,47,61,83 | |
| 33pF | C53 | |
| 47pF | C52,58 | |
| 56pF | C90,105 | |
| 82pF | C19 | |
| 100pF | C7,59,108,303 | |
| 150pF | C4,106 | |
| 200pF | C3,10 | |
| 270pF | C36 | |
| 330pF | C63 | |
| 330pF 1kV | C610 Δ | 241381 |
| 100pF | C | |
| 0.001μF | C1-3,25,34,98,110,613 | |
| 0.001μF 1 | C602,603,608 | |
| 0.0033μF | C27,27,60 | |
| 0.0047μF | C104 | |
| 0.01μF | C9,30,33,35,38,616 | |
| 0.047μF | C20 | |
| 0.1μF | C2,12,16,26,39,40,41,56,57,82,85 87,89,100,107,306 | |
| Electrolytic | | |
| 1μF 50V | C31,43,102,103,611,614 | |
| 10μF 16V | C6,14,15,22,23,45,48,49,55,64-66 71-80 | |
| 10μF 16V np | C1,13,32 | |
| 10μF 35V | C113 | |
| 68μF 400V | C609 | |
| 100μF 10V | C500 | |
| 100μF 16V | C18,44,62,93 | |

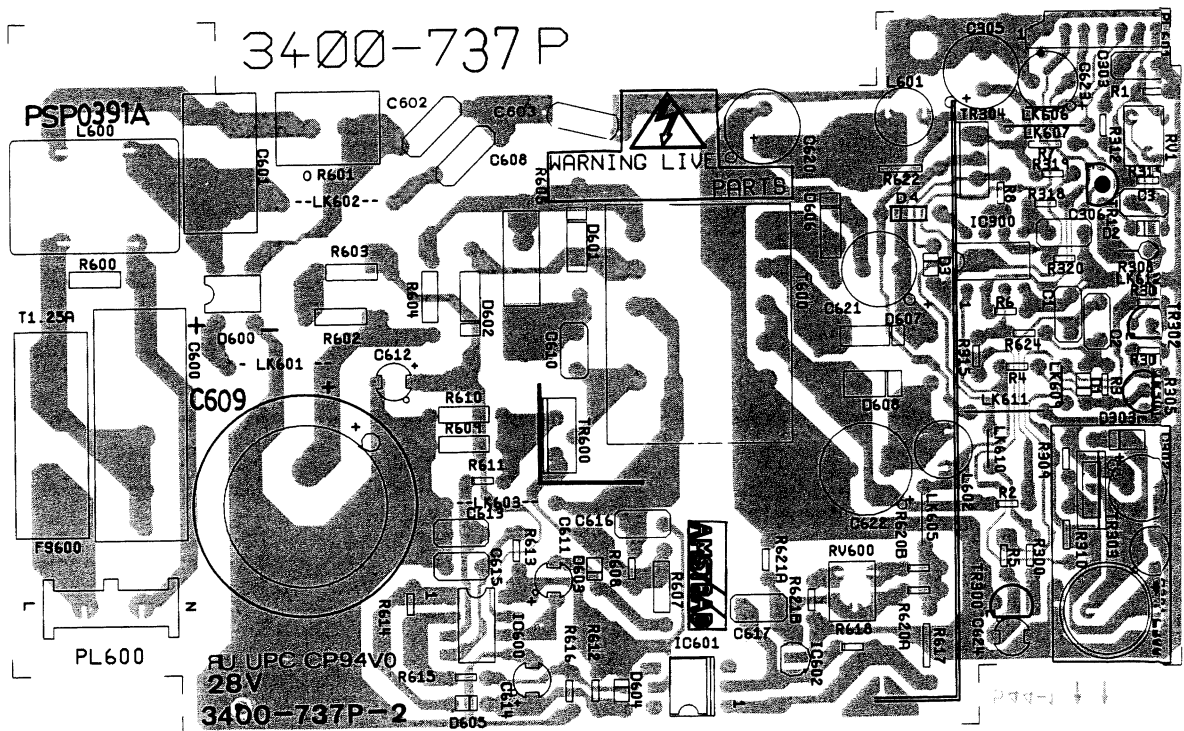
| Description | Ref. No. | Pt.No. |
|-----------------|-------------------|--------|
| 100µF 25V | C612 | |
| 100µF 50V | C302 | |
| 330µF 16V | C622 | |
| 330µF 35V | C621 | |
| 330µF 50V | C620 | |
| 470µF 6.3V | C46 | |
| 470µF 10V | C623 | |
| 470µF 16V | C305 | |
| | Mylar | |
| 0.082µF | C21,24 | |
| | Polyester | |
| 0.001µF 100v | C8,615 | |
| 0.1µF | C11,54 | |
| 0.22µF 63V | C617 | |
| 0.47µF | C88,94,95 | |
| | Metal Film | |
| 0.1µF | C601 | |
| 0.22µF 250V | C600 | |

Front Panel PCB Component Layout



Amstrad reserves the right to supply selective components.

P.S.U. PCB Component Layout



Schematic Diagram P.S.U. Main

NOTES: -

1. Δ DENOTES SAFETY CRITICAL COMPONENTS

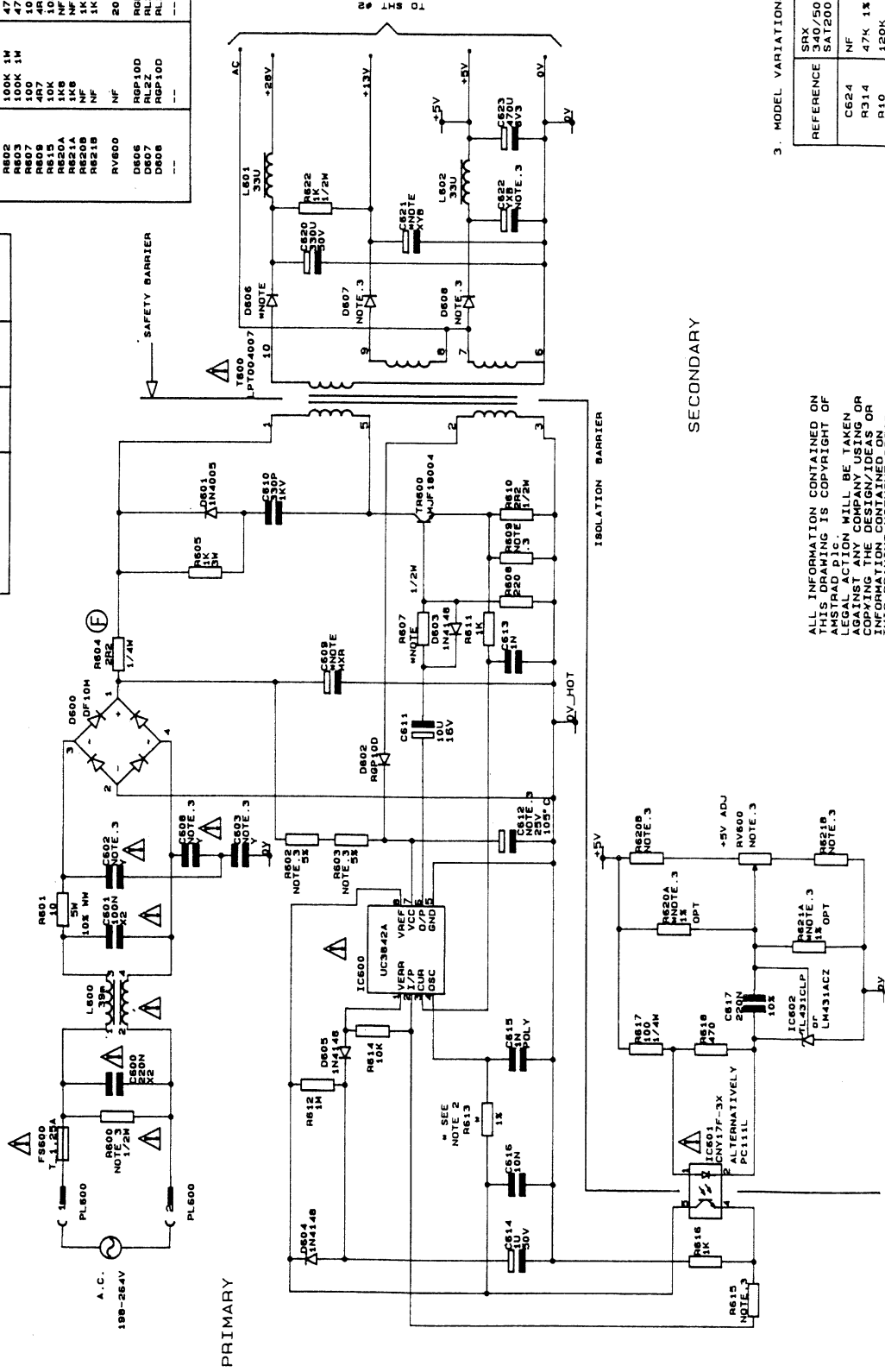
2. * VALUES FOR R613

| IC600 SUPPLIER | BRX360 | SRD650 | ALL OTHER |
|-------------------|--------|--------|-----------|
| SGS UC3842 | 30K | 33K | 27K |
| CHERRY C53842A | 30K | 33K | 27K |
| MOTOROLA UC3842AN | 27K | TBD | 24K |

3. MODEL VARIATIONS

| REFERENCE | SAT200 BRX340/50 | SRD540/50 | BRX360 | SRD650 |
|-----------|---------------------|-----------|-----------|-----------|
| C602 | 1N | 2N2 | 1N | 1N |
| C603 | 1N | 2N2 | 1N | 1N |
| C606 | 1N | 2N2 | 1N | 1N |
| C612 | 100U | 220U | 100U | 100U |
| C621 | 330U 25V | 330U 25V | 470U 25V | 470U 25V |
| C622 | 330U 25V | 2200U 6V3 | 1000U 6V3 | 2200U 6V3 |
| R600 | 820K | 820K | 100K 1M | 820K |
| R602 | 100K 1M | 47K 2M | 100K 1M | 100K 1M |
| R603 | 100K 1M | 47K 2M | 100K 1M | 100K 1M |
| R607 | 100 | 100 | 56 | 56 |
| R619 | 10K | 10K | 10K | 10K |
| R620 | 1K | 1K | 1K | 1K |
| R621A | 1K8 | 1K8 | 1K1 | 1K1 |
| R621B | 1K8 | 1K8 | 1K1 | 1K1 |
| R6208 | NF | NF | NF | NF |
| R6219 | NF | NF | NF | NF |
| RV600 | NF | 200 | NF | 200 |
| D605 | RP10D | RP10D | RL22 | RL22 |
| D606 | RP10D | RP10D | RL22 | RL22 |
| D608 | RP10D | RP10D | RK33 | RK33 |
| | -- | -- | -- | -- |

CONTIN. SMT#2

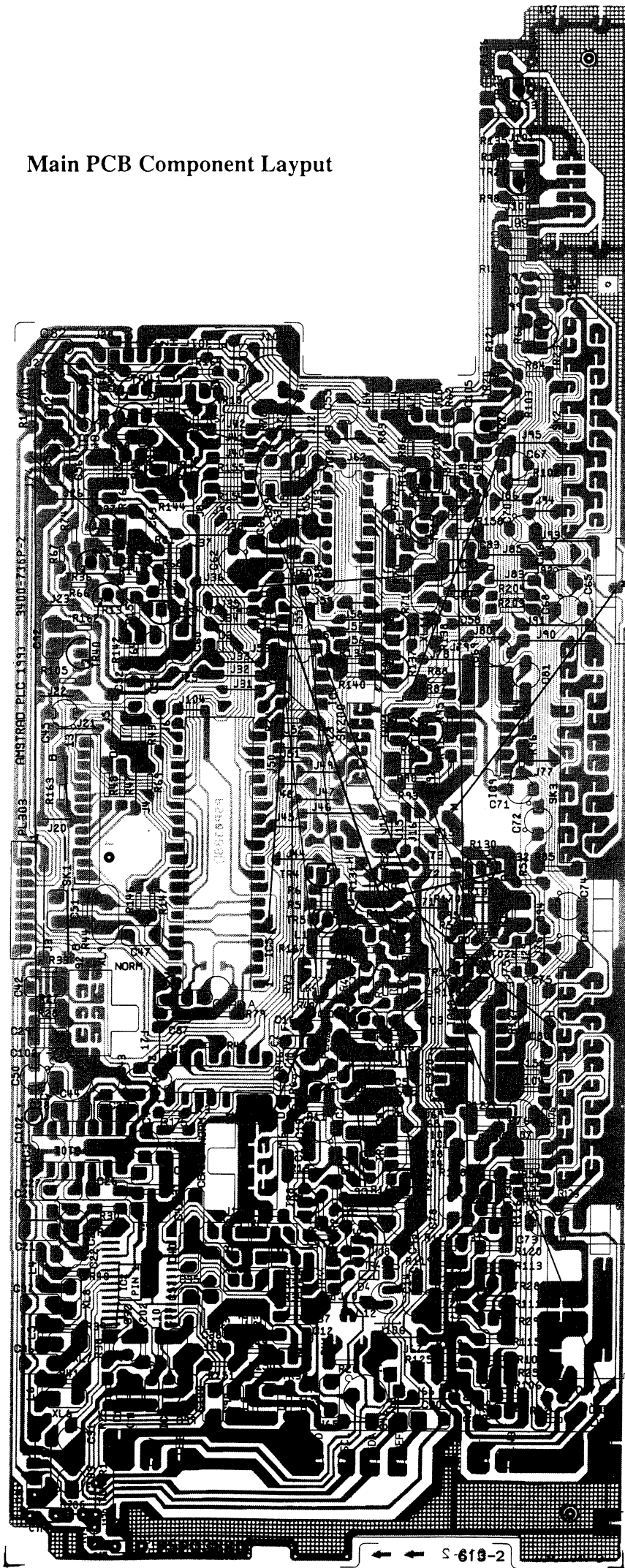


3. MODEL VARIATIONS (CONTIN.)

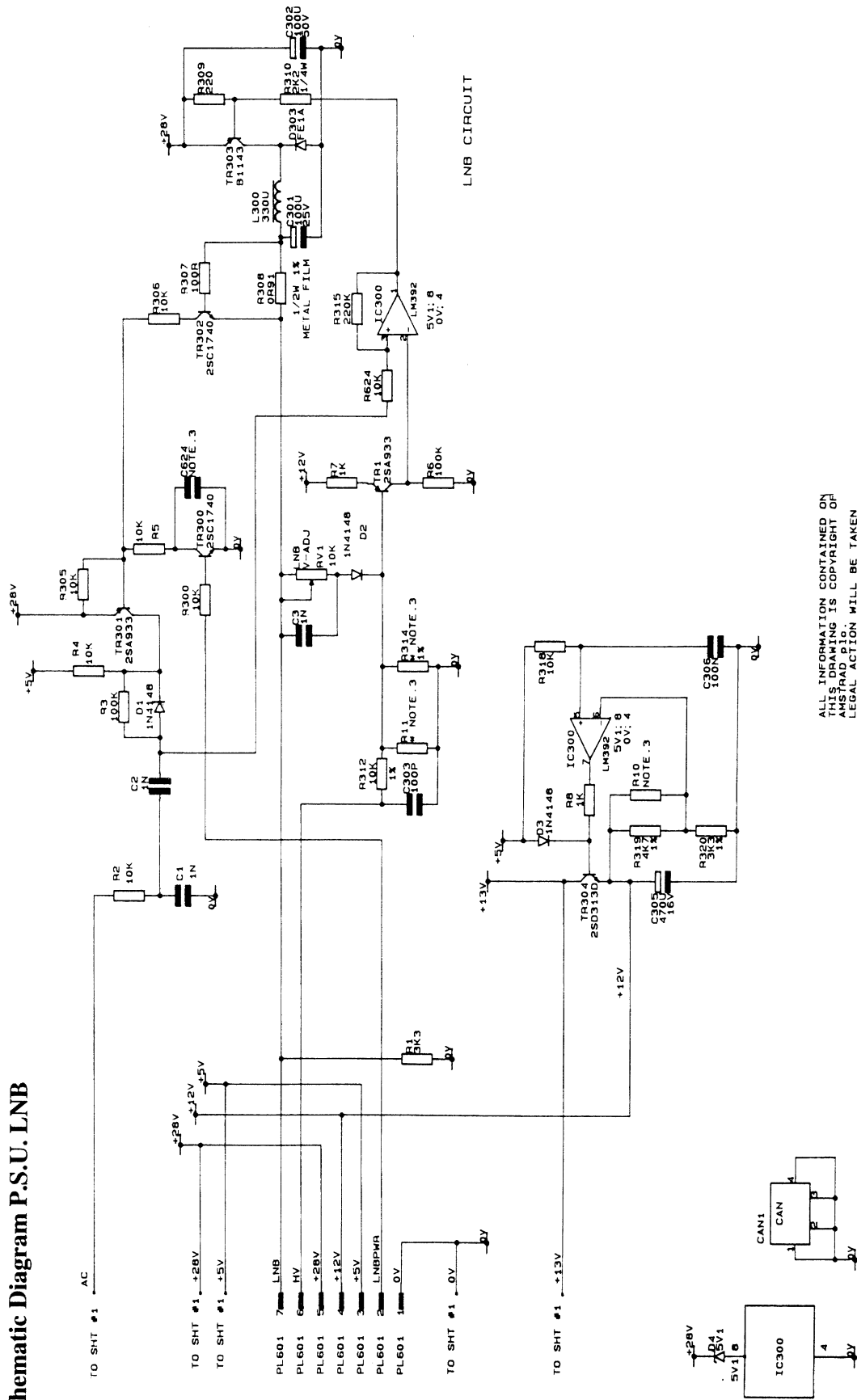
| REFERENCE | SRX 340/50 SAT200 | SRD 540/50 | SRX360 |
|-----------|-------------------------|---------------|--------|
| C624 | NF | NF | NF |
| R314 | 47K 1K | 47K 1K | 39K 1K |
| R10 | 120K | 120K | 120K |
| R11 | 180K 5K | 180K 5K | NF |

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Main PCB Component Layout

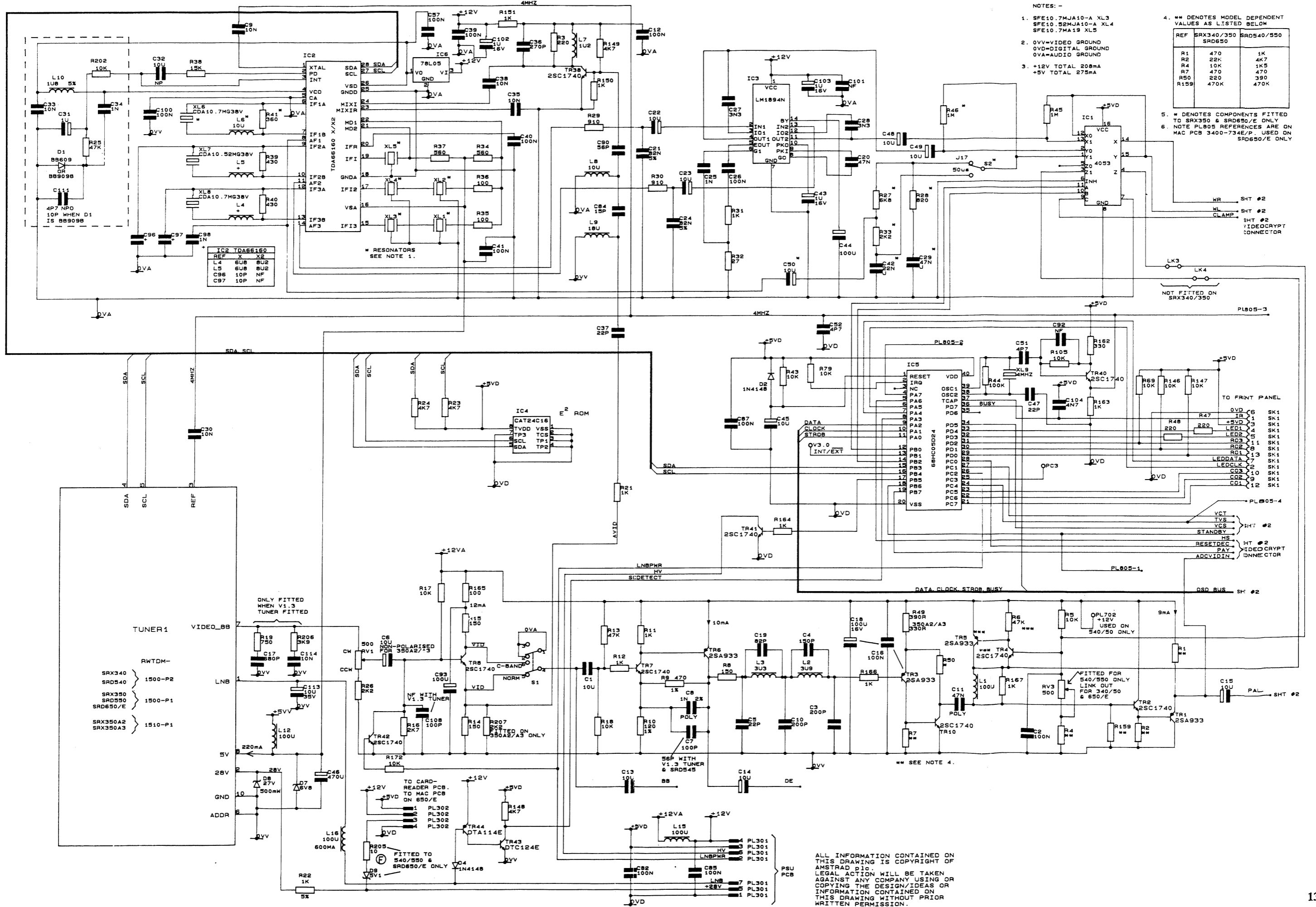


Schematic Diagram P.S.U. LNB

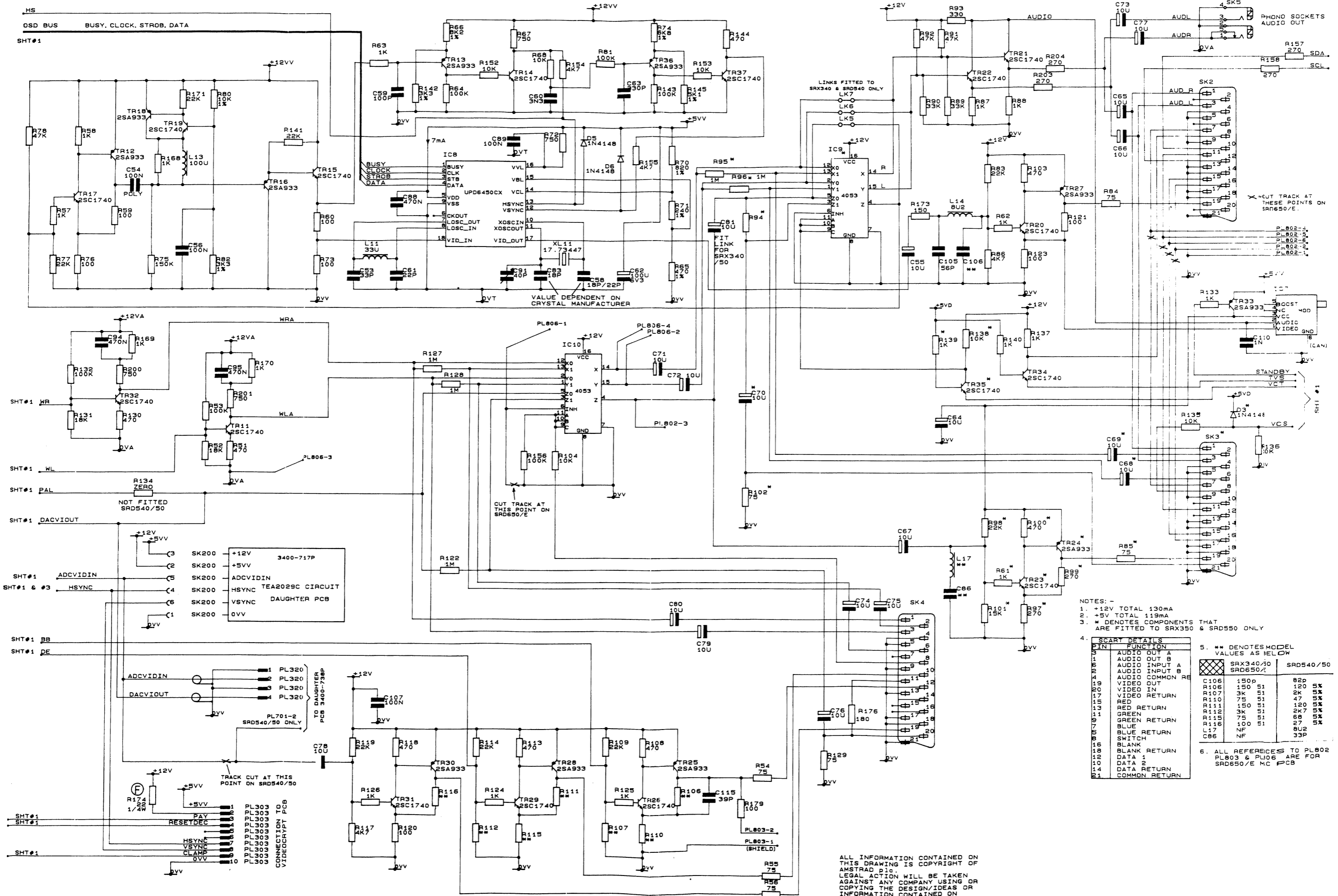


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Schematic Diagram Main, Video, Audio & Microprocessor



Schematic Diagram Main Output Switching



- NOTES: -
- +12V TOTAL 130mA
 - +5V TOTAL 119mA
 - * DENOTES COMPONENTS THAT ARE FITTED TO SRX350 & SRD550 ONLY

4. SCARY DETAILS

| PIN | FUNCTION | SRX340/30 | SRD540/50 |
|-----|-----------------|-----------|-----------|
| 1 | AUDIO OUT A | | |
| 2 | AUDIO OUT B | | |
| 3 | AUDIO INPUT A | | |
| 4 | AUDIO INPUT B | | |
| 5 | AUDIO COMMON RE | | |
| 6 | VIDEO IN | | |
| 7 | VIDEO OUT | | |
| 8 | RED | | |
| 9 | VIDEO RETURN | | |
| 10 | RED | | |
| 11 | GREEN | | |
| 12 | GREEN RETURN | | |
| 13 | BLUE | | |
| 14 | BLUE RETURN | | |
| 15 | SWITCH | | |
| 16 | BLANK | | |
| 17 | BLANK RETURN | | |
| 18 | DATA 1 | | |
| 19 | DATA 2 | | |
| 20 | DATA RETURN | | |
| 21 | COMMON RETURN | | |

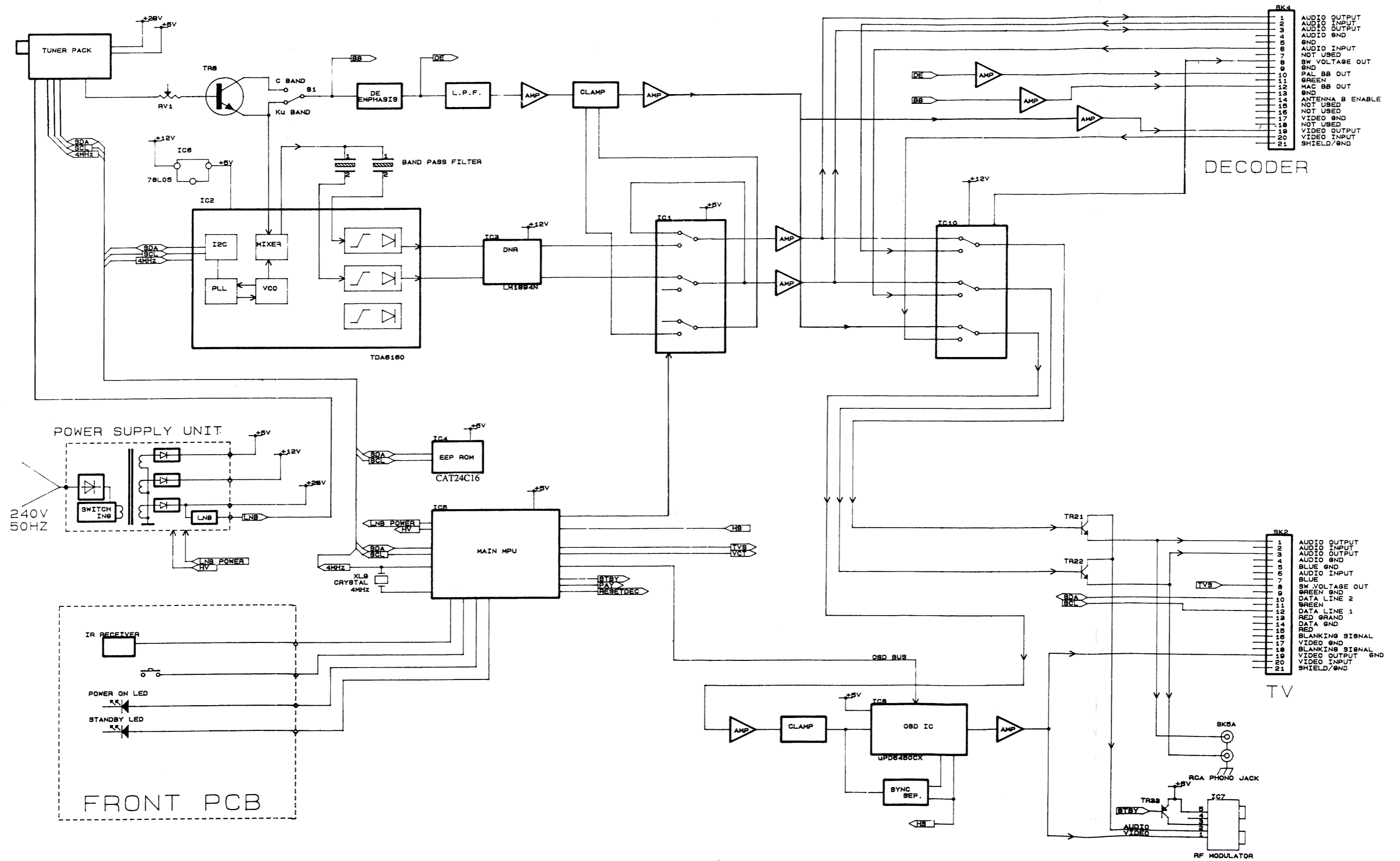
5. ** DENOTES MODEL VALUES AS BELOW

| COMPONENT | SRX340/30 | SRD540/50 |
|-----------|-----------|-----------|
| C106 | 150p | 82p |
| R106 | 150 51 | 120 5% |
| R107 | 3k 51 | 2k 5% |
| R110 | 75 51 | 47 5% |
| R111 | 150 51 | 120 5% |
| R112 | 3k 51 | 2k 5% |
| R115 | 75 51 | 68 5% |
| R116 | 100 51 | 27 5% |
| L17 | NF | 8U2 |
| C86 | NF | 33P |

6. ALL REFERENCES TO PL802, PL803 & PL806 ARE FOR SRD550/E MC PCB

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SRX345 BLOCK DIAGRAM



Test Waveforms

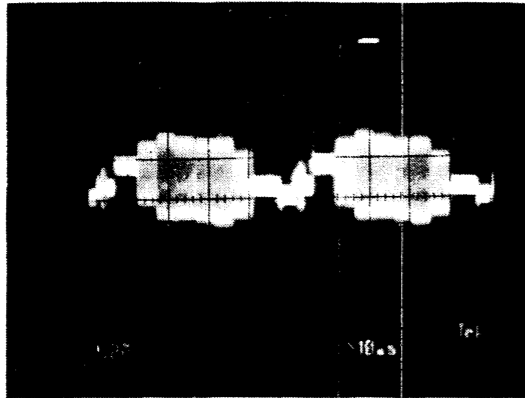


Fig. 1. TP Junction of RV1 & R19
Video Baseband



Fig. 2. TP TR6 Collector
De Emphasis Video

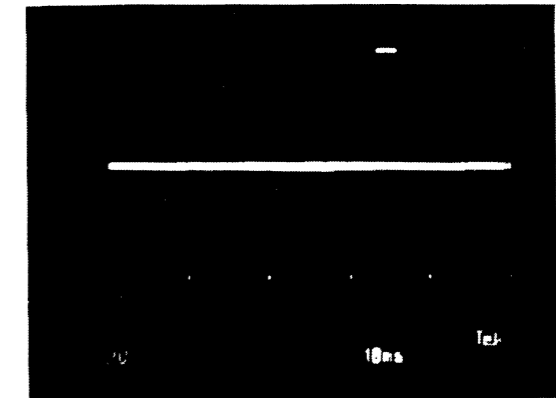


Fig. 7. TP D6 5.5Vp-p
VSync (OSD)

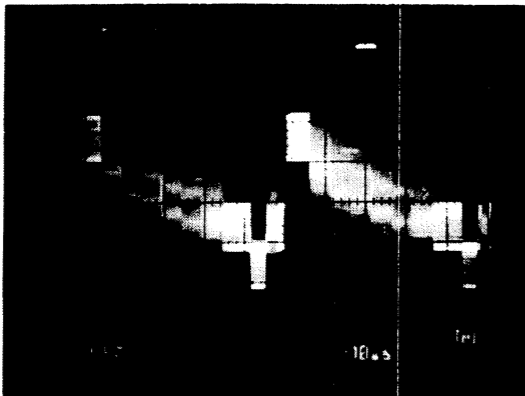


Fig. 3. TP TR10 Collector
Sub Carrier Filter



Fig. 4. TP Jn of C11 & R167 1.6Vp-p
Clamped (Ed Removed)

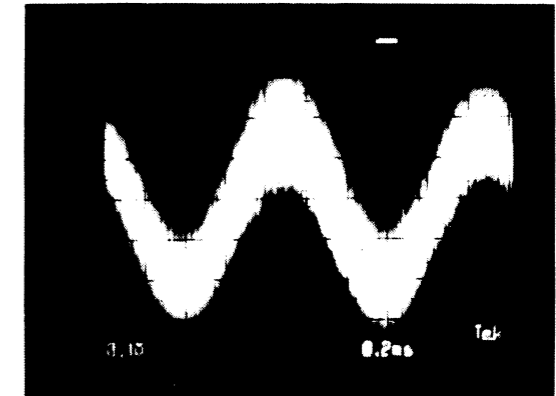


Fig. 10. TP Jn R29 & IC2 Pin14
Audio (Left)

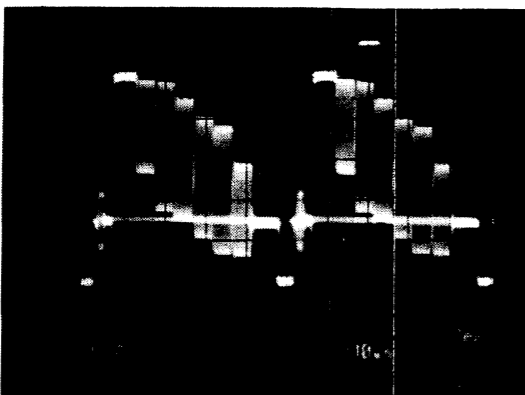


Fig. 5. TP TV Scart Pin19 1Vp-p
Video Out

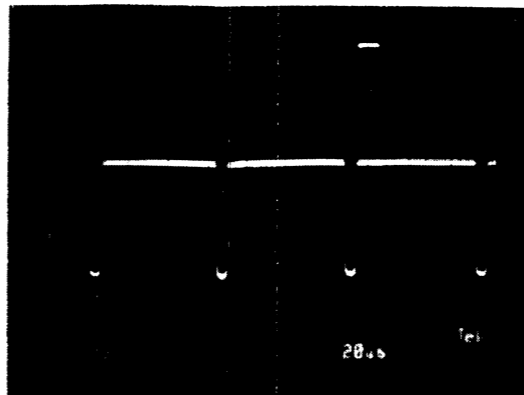


Fig. 6. TP D5 5.5Vp-p
HSync (OSD)

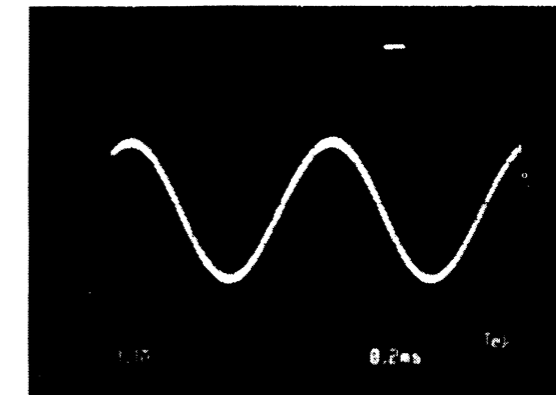


Fig. 11. TP Jn R29 & C22
Audio (Left)

VOLTAGE CHARTS

ICs

| | |
|--------------|----------------|
| IC300 | LM392 |
| PIN 1 | 24.96V |
| 2 | 4.54V |
| 3 | 7.07V |
| 4 | 0.021V |
| 5 | 5.29V |
| 6 | 5.30V |
| 7 | 15.31V |
| 8 | 26.33V |
| | |
| IC500 | 74LS164 |
| PIN 1 | 3.96V |
| 2 | 4.05V |
| 3 | 0.29V |
| 4-6 | 0.28V |
| 7 | 0 |
| 8 | 5.07V |
| 9,14 | 5.06V |
| 10 | 0.329 |
| 11 | 0.33V |
| 12 | 0.34V |
| 13 | 4.06V |
| | |
| IC501 | 74LS164 |
| PIN1,2 | 5.07V |
| 3,5,6 | 4.01V |
| 4 | 4.02V |
| 7 | 0 |
| 8 | 5.07V |
| 9 | 5.05V |
| 10,11,13 | 4.05V |
| 12 | 4.06V |
| 14 | 5.06V |
| | |
| IC900 | LM324 |
| PIN1 | 0 |
| 2 | 6.49V |
| 3 | 5.07V |
| 4 | 26.5V |
| 5 | 0 |
| 6 | 0.55V |
| 7-14 | 0 |
| | |
| IC901 | 74HCT08 |
| PIN1 | 0.1V |
| 2,5 | 4.92V |
| 3,6-8,11 | 0 |
| 4,9,12 | 0.1V |
| 10,13 | 0.07V |
| 14 | 5.05V |

| | |
|-----------------|-------------------|
| IC902 | CD4053BE |
| PIN 1,3,4 | 0.068V |
| 2,5-8,12 | 0 |
| 9,11 | 4.96V |
| 10 | 4.95V |
| 13 | 4.98V |
| 14 | 4.97V |
| 15 | 0.06V |
| 16 | 5.08V |
| | |
| IC1 | MC14053BCP |
| PIN 1 | 2.23V |
| 2,12,14,15 | 2.42V |
| 3 | 2.03V |
| 4,5 | 1.72V |
| 6-8,10,11 | 1.72 |
| 9 | 0.46V |
| 13 | 2.33V |
| 16 | 5.09V |
| | |
| IC2 | TDA61602X |
| PIN 1 | 0.41V |
| 2 | 2.51V |
| 3 | 1.31V |
| 4,26 | 4.92V |
| 5,8,15,16,18,25 | 0 |
| 6,7,10 | 2.27V |
| 9,11 | 2.26V |
| 12,13 | 2.25V |
| 14,17,19-21 | 2.32V |
| 22 | 4.15V |
| 23,24 | 2.94V |
| 27,28 | 5.07V |
| | |
| IC3 | LM1894N |
| PIN 1 | 12.78V |
| 2,13 | 6.3V |
| 3,14 | 6.32V |
| 4 | 6.33V |
| 5 | 5.39V |
| 6 | 0.74V |
| 8 | 5.86V |
| 9 | 1.18V |
| 10 | 1.28V |
| 11 | 6.53V |
| 12 | 6.31V |

| | |
|-----------------|---------------------|
| IC4 | 24C16 |
| PIN 1-4,7 | 0 |
| 5 | 5.09V |
| 6 | 4.01V |
| 8 | 4.07V |
| | |
| IC5 | 68HC0524 CPU |
| PIN 1,2,8,10,12 | 5.09V |
| 15,16,24,29-31 | |
| 33,40 | |
| 3,7,9,11,13,14 | 0 |
| 17,18,20-23 | |
| 25,26,28,34-36 | |
| 4 | 4.94V |
| 5 | 5.14V |
| 19 | 5.01V |
| 32 | 2.98V |
| 37 | 4.78V |
| 38 | 2.25V |
| 39 | 2.27V |
| | |
| IC6 | 78L05AC |
| PIN 1 | 12.77V |
| 2 | 0 |
| 3 | 4.95V |
| | |

| | |
|------------|--------------------------|
| IC8 | UPD6450CX-002 OSD |
| PIN 1,3,9 | 0 |
| 2 | 4.92V |
| 4,5,10,11 | 4.92V |
| 6 | 2.5V |
| 7 | 2.4V |
| 8 | 2.36V |
| 12 | 5.49V |
| 13 | 5.10V |
| 14 | 2.29V |
| 15 | 1.49V |
| 16 | 2.58V |
| 17 | 1.74V |
| 18 | 1.73V |
| | |
| IC9 | MC14053BCP |
| PIN 1 | 2.76V |
| 2,12 | 3.01V |
| 3 | 3.9V |
| 4,5 | 4.1V |
| 6-8 | 0 |
| 9-11 | 0.12V |
| 13 | 2.68V |
| 14 | 2.94V |
| 15 | 3V |
| 16 | 12.76V |
| | |

TRANSISTORS

| REF Q/TR | C | B | E |
|----------|--------|--------|--------|
| 1 | 12.31V | 4.69V | 12.82V |
| 6 | 12.01V | 8.02V | 1.67V |
| 7 | 12.02V | 2.28V | 1.7V |
| 8 | 9.43V | 2.6V | 1.94V |
| 12 | 7.03V | 12.03V | 12.69V |
| 14 | 10.37V | 0.1V | 0 |
| 16 | 0.25V | 3.59V | 3.55 |
| 20 | 12.07V | 2.18V | 1.06V |
| 23 | 4.32V | 1.94V | 1.34V |
| 24 | 1.43V | 12.04V | 12.68V |
| 26 | 12.02V | 1.04V | 0.4V |
| 27 | 3.2V | 1.05V | 12.68V |
| 28 | 2.04V | 12.04V | 12.68V |
| 29 | 12.05V | 1.37V | 0.79V |
| 30 | 1.94V | 12.04V | 12.68V |
| 31 | 12.04V | 2.16V | 1.57V |
| 33 | 4.96V | 4.24V | 5.04V |
| 36 | 0 | 10.27V | 5.41V |
| 37 | 11.96V | 0 | 0 |
| 38 | 3.74V | 0.6V | 0 |
| 40 | 3.97V | 3.87V | 3.23V |
| 42 | 2.6V | 0 | 0 |
| 280 | 3.4V | 0.04V | 0 |

| REF | C | B | E |
|-----|--------|--------|--------|
| 300 | 3131V | 0.12V | 0 |
| 301 | 6.15V | 31.32V | 31.34V |
| 302 | 31.32V | 15.36V | 15.29V |
| 900 | 0 | 0.3V | 0.7V |
| 901 | 12.69V | 0 | 0.76V |
| 903 | 6.93V | 0.01V | 0 |
| 904 | 0.04V | 0.22V | 0.7V |
| 906 | 0 | 0.7 | 0.7 |
| 907 | 0.7V | 0 | 0 |
| 908 | 1.0V | 4.96V | 5V |
| 909 | 1V | 4.96V | 5.0 |
| 910 | 1V | 4.96 | 5.01 |
| 911 | 0 | 0 | 0 |
| 912 | 0 | 0 | 0.6V |
| 913 | 0 | 0 | 0 |
| 914 | 0 | 0 | 0 |
| 915 | 0.04V | 0.68V | 0 |
| 916 | 0.01V | 0.04V | 0.03V |
| 917 | 5.06V | 5.06V | 4.38V |
| 918 | 0.6V | 0 | 0 |
| 919 | 0.01V | 0 | 0.28V |
| 920 | 0.03V | 0 | 0.56V |

NOTE FOR THE ENGINEERS

Please note which type of satellite dish and type of LNB is installed when installing this equipment.

This receiver is factory set for SLB3 or TLB3. To use older type of Amstrad LNB, change receivers local oscillator setting to 10GHz. To do this press set-up repeatedly so installation menu is displayed on the screen. Press select + to change LNB setting to 10.000GHz and then exit.

Reset:

To achieve full factory reset

- 1): Set in stand by mode
- 2): Press Ok, Setup and Status buttons in sequence on the handset
- 3): Hold Setup button pressed down until LEDs on the front panel start to flash.

Now the set is in full reset mode.

TECHNISCHE DATEN

EMPFÄNGER

| | |
|--|---|
| Abmessungen, Gewicht: | 335 x 62 x 250mm (B x H x T), 1,9kg |
| Stromversorgung: | 220-230V/50Hz Wechselstrom |
| Empfangsfrequenzbereich: | 700-2050MHz |
| Kanalbandbreite: | 27MHz |
| Oszillatorfrequenzbereich: | 0 und 9,3-12GHz |
| Feinabstimmungsbereich: | ±10MHz |
| Dynamikbereich: | -20 bis -60dBm |
| Schwellenwert: | 8dB Störspannungsabstand (mit Schwellenwerterweiterung) |
| AM-Kanalinterferenzschwelle: | -15dBc (typisch) |
| RF-Ausgangssignal: | Kanal 38 (einstellbar von Kanal 30-40) |
| Signal-Rauschabstand S/N: (bezogen auf Basisbandbreite 5MHz für PAL bei C/N=14dB und nominellen Hub s-s des Nutzsignals) | 43,5dB |
| Audio-Zwischenträger: | 5,5-8,5MHz |
| Audio-Ausgangspegel: | 2Vs-s bei 50kHz Hub |
| Frequenzgang: | 40Hz-15kHz |
| Eingangs-/Ausgangsanschlüsse: | LNB 75 Ohm Typ F RF 75 Ohm koaxial (2x) AUDIO OUT RCA-Phonostecker (2x) SCART/PERITEL 21-polig DECODER 21-polig |

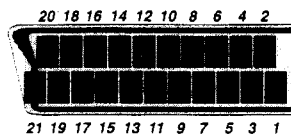
SLB3 LNB

| | |
|---------------------------|---------------------|
| Eingangsfrequenzbereich: | 10,70-11,80GHz |
| Ausgangsfrequenzbereich: | 950-2050MHz |
| Oszillatorfrequenz: | 9,75 GHz |
| Verstärkung: | 55dB |
| Rauschmaß: | 1dB typisch |
| Träger-Rauschabstand C/N: | 15 dB |
| Polarisationsumschaltung: | elektrisch (13/17V) |
| Ausgangsbuchse: | 75 Ohm Typ F |

ANTENNE

| | SDM60 | SDM80 |
|----------------------|--------------|--------------|
| Öffnungswinkel: | 3,0 | 2,4 |
| Gewinn G: | 36dB | 38dB |
| bei 11,5GHz | | |
| Rauschtemperatur Ta: | 75K | 65K |
| 'Clear Sky' beim 30° | | |
| Elevationswinkel | | |
| G/T-Wert (dB/K): | 14 | 16,5 |
| (mit o.g.LNB) | | |

BUCHSEN AN DER GERÄTERÜCKSEITE



TV SCART/PERITEL

- 1 Audio-Ausgang rechts
- 2 Audio-Eingang rechts
- 3 Audio-Ausgang links
- 4 Audio/Erde
- 5 Blau/Erde
- 6 Audio-Eingang links
- 7 Blau*
- 8 Externe Schaltspannung
- 9 Grün/Erde
- 10 Serielle Schnittstelle (Daten) †

- 11 Grün*
- 12 Serielle Schnittstelle (Uhr) †
- 13 Rot/Erde
- 14 Serielle Schnittstelle (Erde) †
- 15 Rot*
- 16 Austastsignal*
- 17 Video/Erde
- 18 Austastsignal/Erde
- 19 Video-Ausgang
- 20 Video-Eingang
- 21 Abschirmung/Erde

DECODER

- 1 Audio-Ausgang rechts
- 2 Audio-Eingang rechts
- 3 Audio-Ausgang links
- 4 Audio/Erde
- 5 Erde
- 6 Audio-Eingang links
- 7 (nicht belegt)
- 8 Audio/Video INT/EXT
- 9 Erde
- 10 PAL-Grundband-Ausgang (ungefiltert/ungeklemmt)
- 11 Grün
- 12 MAC-Grundband-Ausgang
- 13 Erde
- 14 (nicht belegt)
- 15 (nicht belegt)
- 16 (nicht belegt)
- 17 Video/Erde
- 18 (nicht belegt)
- 19 PAL-Grundband-Ausgang (gefiltert/geklemmt)
- 20 Video-Eingang
- 21 Abschirmung/Erde

* (nicht belegt)

† (Verwendung nur durch Fachhändler)