

## SERVICE ADJUSTMENT AND ALIGNMENTS

# AMSTRAD CTV3128N

### HIGH VOLTAGE TEST

There is no high voltage adjustment component on the chassis. Changing of +145 depends on the supply voltage. If it's necessary to measure high voltage.

- 1- Connect the probe of high voltage tester to the anode of CPT.
- 2- Adjust contrast and brightness to minimum.
- 3- Measure the high voltage as 27 KV for 25" and 28" screen size.
- 4- For maximum brightness, high voltage regulation should be 2KV dc max.

### AGC ADJUSTMENT

- 1- Apply Philips pattern signal which is 60 dB uV to the RF input.
- 2- Adjust P301 until find a picture without snowy.

### VERTICAL ADJUSTMENT

- 1- Apply Philips pattern.
- 2- Adjust the vertical amplitude with P576 until the top and the bottom lines of the picture appear.
- 3- Center the picture with P579

### HORIZONTAL ADJUSTMENT

- 1- Apply Philips pattern signal.
- 2- Center the picture horizontally by shifting to the left and right positions via P300.

### ADJUSTMENT OF G2

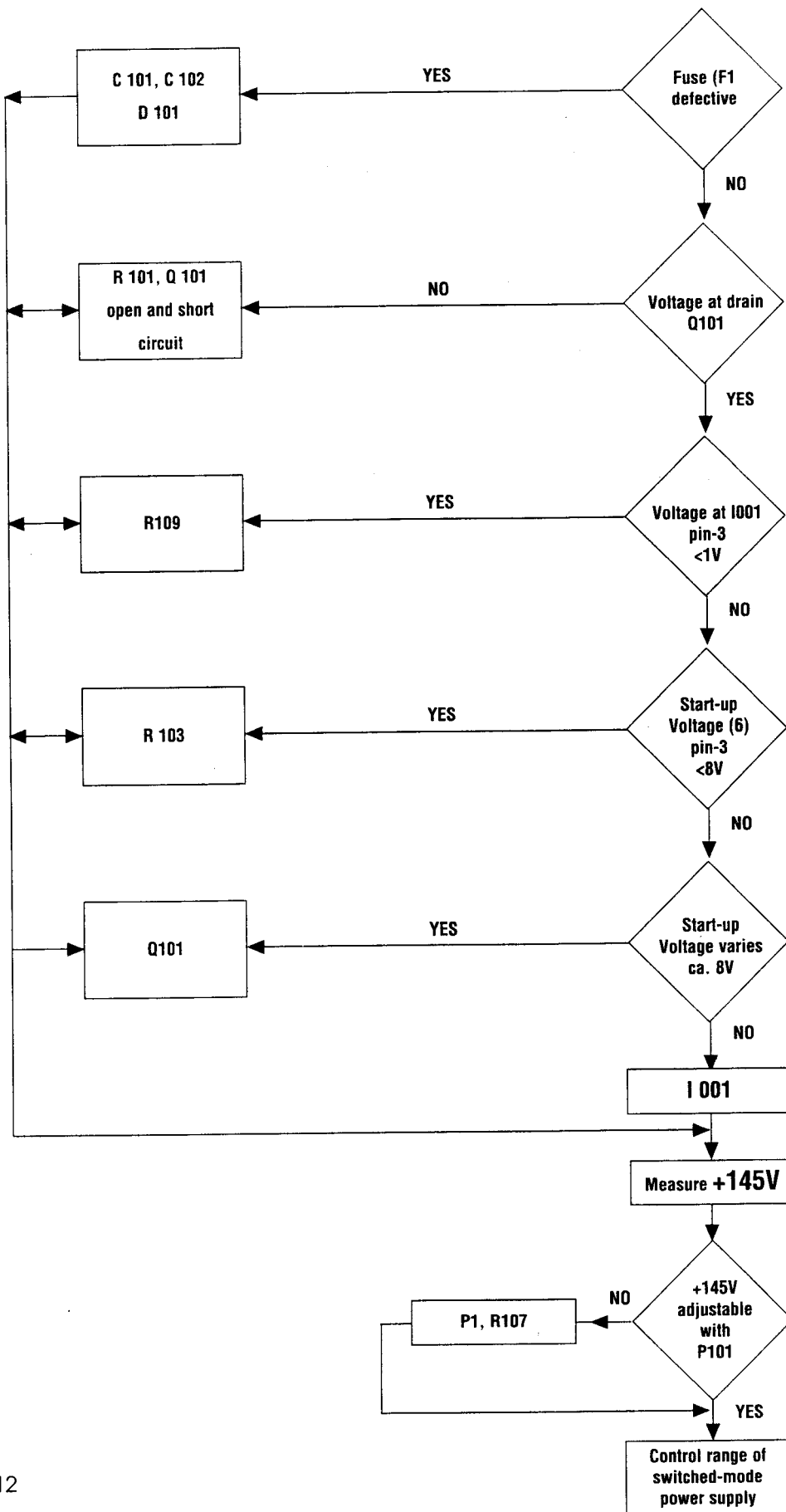
- 1- Apply Philips test pattern
- 2- Adjust all the analog parameters to minimum with RC
- 3- Adjust G2 until the maximum cathode voltage is 175V.

### ADJUSTMENT OF SUPPLY VOLTAGE

- 1- Apply Philips pattern signal.
- 2- Set the volume, brightness and contrast values to minimum.
- 3- Adjust the supply voltage on the PIN cathode of D125 as  $V_{sys} = 145 + 0.5$  by using P101.

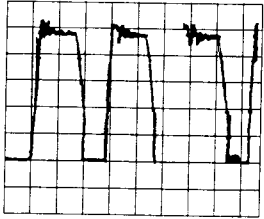
# FAULT TRACING DIAGRAM - POWER SUPPLY

**SWITCHED MODE POWER SUPPLY  
DEFECTIVE, +145V IS MISSING OR  
LEVEL IS WRONG**



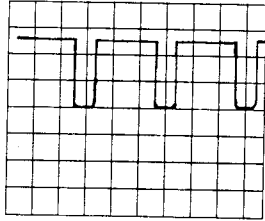
# OSCILLOSCOPE SIGNALS

1) 5 $\mu$ s/div/100 volts/div



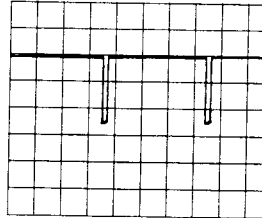
Drain of Q101

2) 20  $\mu$ s/div/2 volts/div



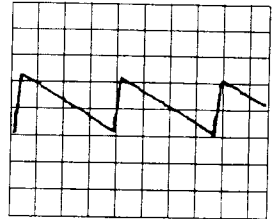
I301 pin 36

3) 5 msn/2 volts/div



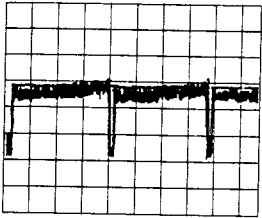
I301 pin 37

4) 5 msn/0.5 volt/div



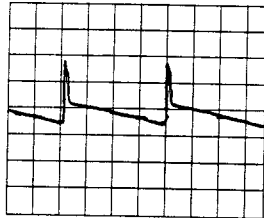
I101 pin 42

5) 5msn/1 volt/div



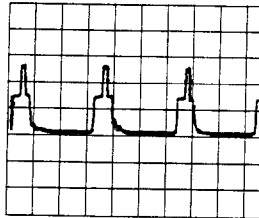
I576 pin 3

6) 5msn/20 volts/div



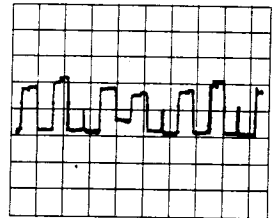
I576 pin 5

7) 20 $\mu$ s/div/2 volts/div



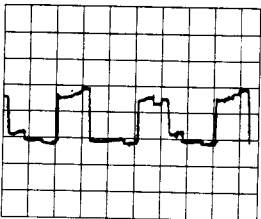
I101 pin 38

8) 20 $\mu$ s/div 2 volt/div



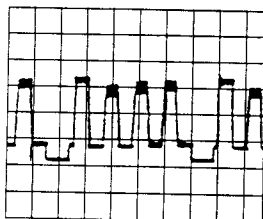
I101 pin 20

9) 20 $\mu$ s/div/2 volts/div



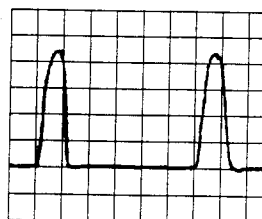
I101 pin 19

10) 10 $\mu$ s/div/2 volts/div



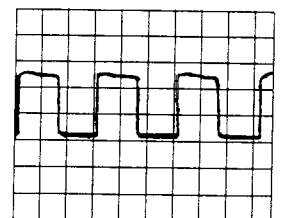
I101 pin 18

11) 10 $\mu$ s/div/250 volts/div



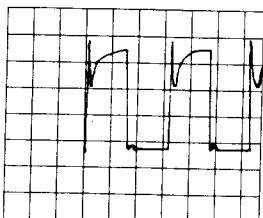
Collector of Q602

12) 20  $\mu$ s/div/0.5 volt/div



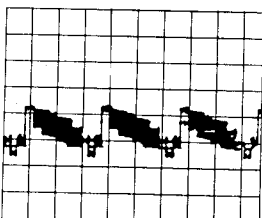
I101 pin 37

13) 20msn/50 volts/div



Collector of Q580

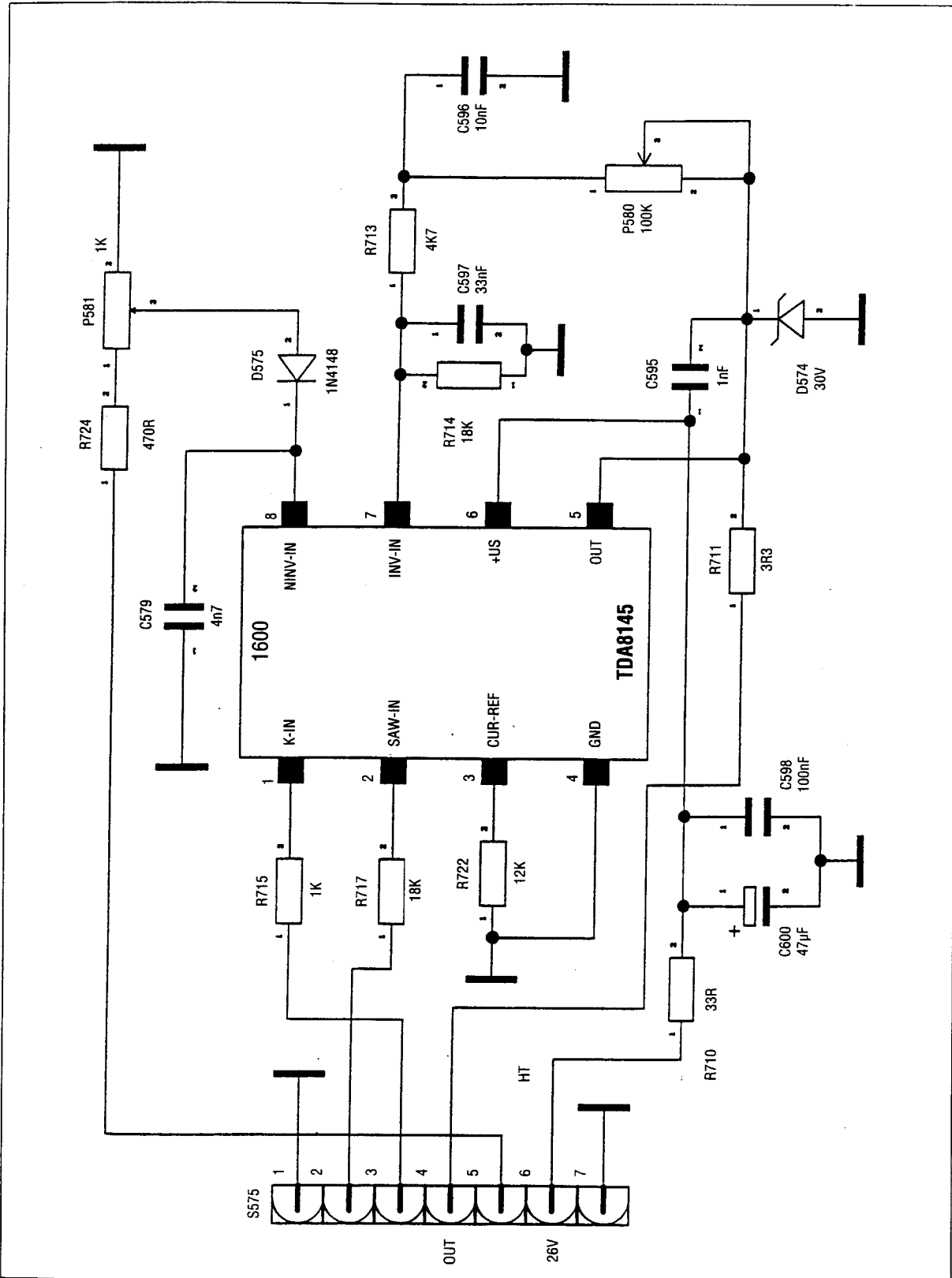
14) 20 $\mu$ s/div/1 volt/div

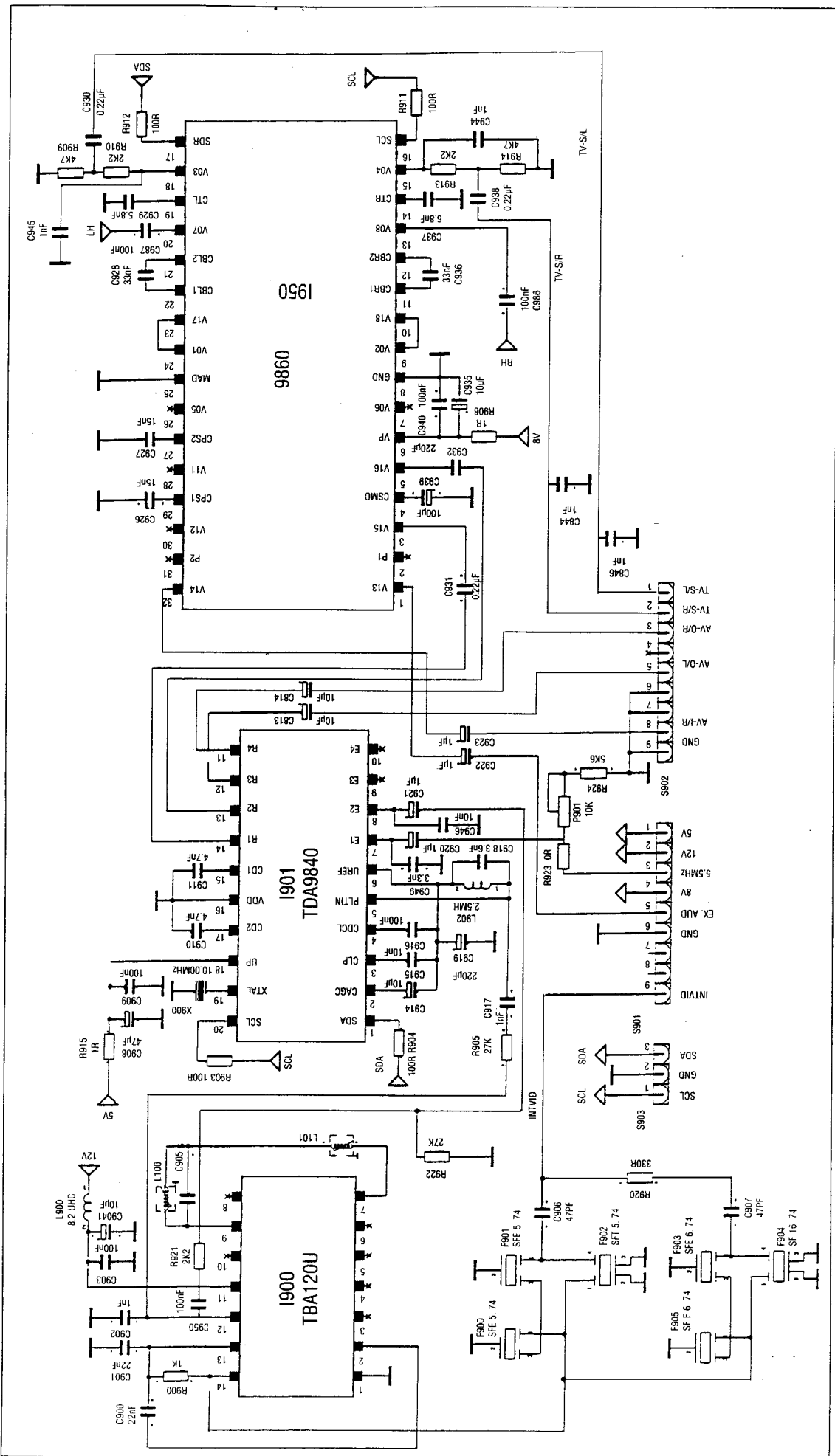


I101 pin 13

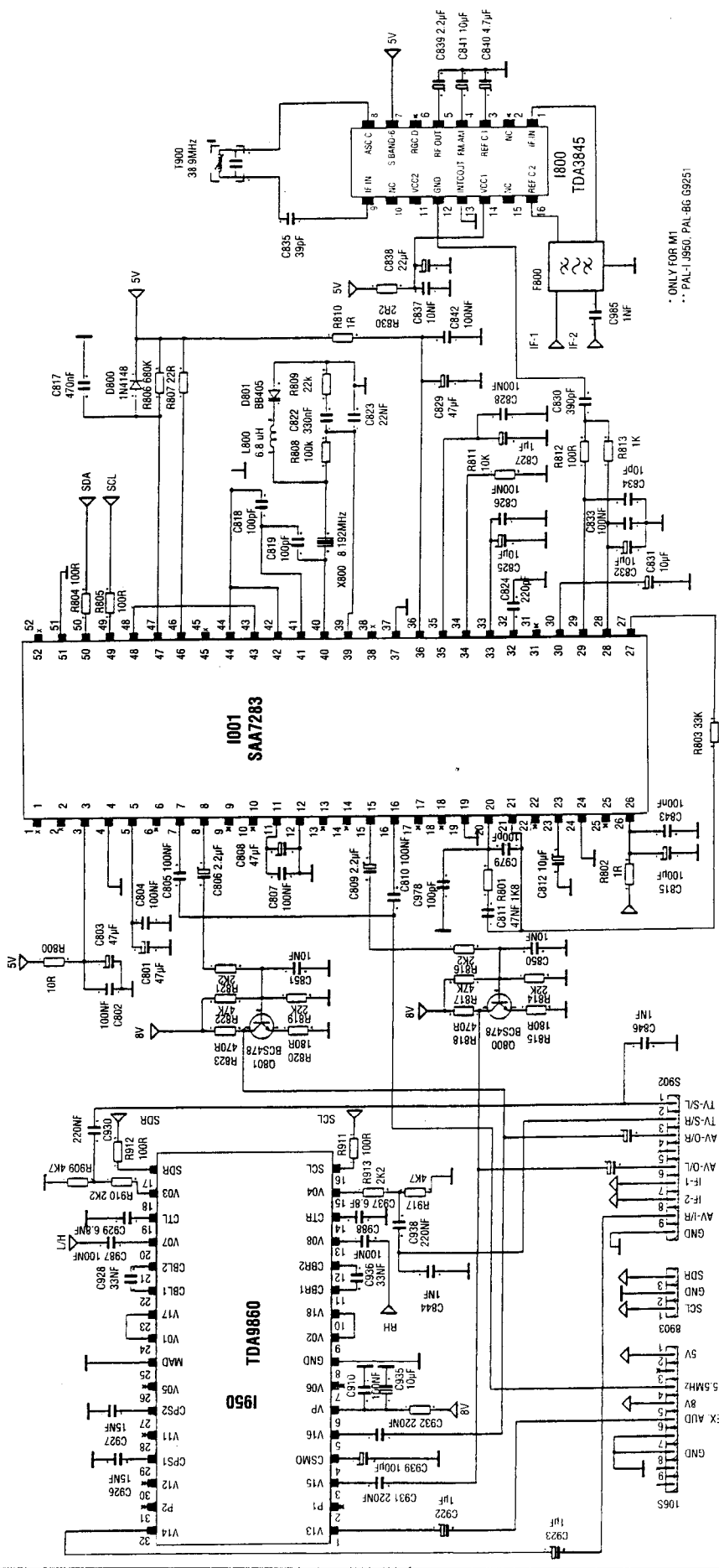


# E/W BOARD CIRCUIT DIAGRAM



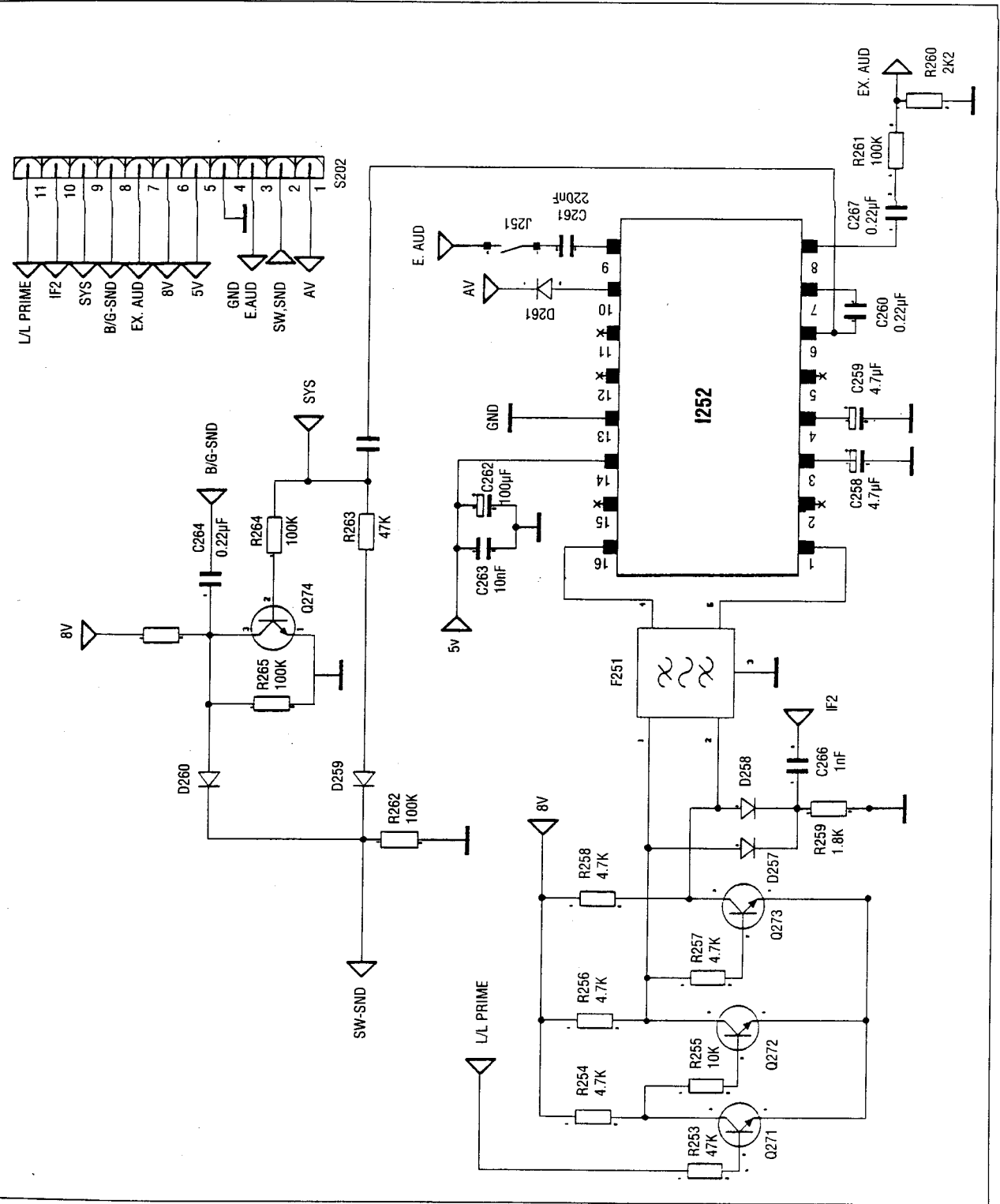


GERMAN STEREO BOARD CIRCUIT DIAGRAM



NICAM BOARD CIRCUIT DIAGRAM

# MONO SECAM L/L' BOARD CIRCUIT DIAGRAM





## PIN VOLTAGES OF IC'S

| Pin. | CTV811S | 24C08/PCF8594C |      | TDA8361A | TDA4665 | TDA2616 | TDA3654 | TDA4605 |
|------|---------|----------------|------|----------|---------|---------|---------|---------|
| 1    | 1.5V    | 0V             | 0V   | 2.9V     | 5V      | 15V     | 2.2V    | 0.4V    |
| 2    | 0V      | 0V             | 0V   | 5.80V    | 0V      | 30V     | 0V      | 1.2V    |
| 3    | 0V      | 0V             | 0V   | 5.8V     | 0V      | 15V     | 2.2V    | 1.9V    |
| 4    | 1.7V    | 0V             | 0V   | 7.3V     | 0V      | 15.2V   | 0V      | 0V      |
| 5    | 1.8V    | 3.15V          | 3.3V | 3.25V    | 0.5V    | 0V      | 13.2V   | 2.8V    |
| 6    | 2.4V    | 3.6V           | 3.3V | 3.8V     | 0V      | 15.2V   | 27V     | 10.73V  |
| 7    | 2.5V    | 4.5V           | 5V   | 3.1V     | 0V      | 30.4V   | 1.6V    | 1.9V    |
| 8    | 0V      | 5V             | 5V   | 1.8V     | 0V      | 15.2V   | 3.5V    | 0.4V    |
| 9    | 2.75V   |                |      | 1V       | 5V      | 15V     | 26V     |         |
| 10   | 0V      |                |      | 7.8V     | 0V      |         |         |         |
| 11   | 0V      |                |      | 0V       | 3V      |         |         |         |
| 12   | 4.28V   |                |      | 3.28V    | 3V      |         |         |         |
| 13   | 0V      |                |      | 4.32V    | 0V      |         |         |         |
| 14   | 4.23V   |                |      | 4.15V    | 1.4V    |         |         |         |
| 15   | -       |                |      | 3.4V     | 0V      |         |         |         |
| 16   | -       |                |      | 0V       | 1.4V    |         |         |         |
| 17   | -       |                |      | 2.1V     |         |         |         |         |
| 18   | -       |                |      | 1.8V     |         |         |         |         |
| 19   | -       |                |      | 2V       |         |         |         |         |
| 20   | 5V      |                |      | 1.7V     |         |         |         |         |
| 21   | 0V      |                |      | 0.3V     |         |         |         |         |
| 22   | 0V      |                |      | 3.37V    |         |         |         |         |
| 23   | 2.6V    |                |      | 3.37V    |         |         |         |         |
| 24   | 0V      |                |      | 3.37V    |         |         |         |         |
| 25   | 2.26V   |                |      | 1.8V     |         |         |         |         |
| 26   | 2.41V   |                |      | 1.8V     |         |         |         |         |
| 27   | 0V      |                |      | 5.85V    |         |         |         |         |
| 28   | 0V      |                |      | 3.86V    |         |         |         |         |
| 29   | -       |                |      | 3.86V    |         |         |         |         |
| 30   | -       |                |      | 1.47V    |         |         |         |         |
| 31   | 5V      |                |      | 1.5V     |         |         |         |         |
| 32   | 0V      |                |      | 0V       |         |         |         |         |
| 33   | 0V      |                |      | 5.14V    |         |         |         |         |
| 34   | 0V      |                |      | 2.8V     |         |         |         |         |
| 35   | 0V      |                |      | 2V       |         |         |         |         |
| 36   | 3.8V    |                |      | 8V       |         |         |         |         |
| 37   | 4.7V    |                |      | 0.5V     |         |         |         |         |
| 38   | 5V      |                |      | 0.43V    |         |         |         |         |
| 39   | 5V      |                |      | 3V       |         |         |         |         |
| 40   | 0V      |                |      | 3.6V     |         |         |         |         |
| 41   | -       |                |      | 0V       |         |         |         |         |
| 42   | 2.5V    |                |      | 2.35V    |         |         |         |         |
| 43   | 0V      |                |      | 2.8V     |         |         |         |         |
| 44   | 5V      |                |      | 3.58V    |         |         |         |         |
| 45   | 5.4V    |                |      | 3.95V    |         |         |         |         |
| 46   | -       |                |      | 3.95V    |         |         |         |         |
| 47   | 5V      |                |      | 4.28V    |         |         |         |         |
| 48   | 0V      |                |      | 4.55V    |         |         |         |         |
| 49   | 3.5V    |                |      | 0.37V    |         |         |         |         |
| 50   | 3.5V    |                |      | 3.43V    |         |         |         |         |
| 51   | 0V      |                |      | 4.5V     |         |         |         |         |
| 52   | 0V      |                |      | 6.57V    |         |         |         |         |

\* All voltages are in Volt

\* Readings are taken with a digital multimeter.

\* Readings are taken with PAL B/G colour-bar signal input

\* Measurements are taken when there is not any on the screen.

\* Sound Contrast } min.

Brightness } Normal  
Color }

## PIN VOLTAGES OF IC'S

| Pin. | TDA8145 | TDA6107Q | SA47283 | TDA9860 | TBA120U | TDA3845 |
|------|---------|----------|---------|---------|---------|---------|
| 1    | 13.42V  | 2V       | 4.7V    | 3.9V    | 0V      | 1.75V   |
| 2    | 13.42V  | 2.13V    | 2.3V    | -       | -       | -       |
| 3    | 8V      | 2.55V    | 4.8V    | 3.9V    | -       | 1.95V   |
| 4    | 0V      | 0V       | 0V      | 3.9V    | -       | 4.38V   |
| 5    | 8.5V    | 5.70V    | 2.3V    | 3.9V    | -       | 0.1V    |
| 6    | 17.6V   | 200V     | 1.7V    | 8V      | -       | -       |
| 7    | 1V      | 158V     | 2.4V    | -       | -       | 4.83V   |
| 8    | 1.75V   | 152V     | 2.4V    | 0V      | -       | 3.7V    |
| 9    |         | 156V     | 0V      | 3.9V    | -       | 3.7V    |
| 10   |         |          | 0V      | 3.9V    | -       | -       |
| 11   |         |          | 2.4V    | 3.9V    | 12V     | -       |
| 12   |         |          | 0V      | 3.9V    | 0.5Vpp  | 1.57V   |
| 13   |         |          | 0V      | 3.9V    |         | 0V      |
| 14   |         |          | 0V      | 3.9V    |         | 4.74V   |
| 15   |         |          | 2.3V    | 3V      |         | -       |
| 16   |         |          | 2.3V    | 3V      |         | 1.75V   |
| 17   |         |          | 1.6V    | 2.8V    |         |         |
| 18   |         |          | 4.7V    | 3.9V    |         |         |
| 19   |         |          | 0V      | 3.9V    |         |         |
| 20   |         |          | 2.4V    | 3.9V    |         |         |
| 21   |         |          | 2.6V    | 3.9V    |         |         |
| 22   |         |          | 2.4V    | 3.9V    |         |         |
| 23   |         |          | 2.4V    | 3.9V    |         |         |
| 24   |         |          | 0V      | 3.9V    |         |         |
| 25   |         |          | 2.4V    | 0V      |         |         |
| 26   |         |          | 5V      | -       |         |         |
| 27   |         |          | 2.4V    | 3.9V    |         |         |
| 28   |         |          | 2.4V    | -       |         |         |
| 29   |         |          | 2.4V    | 3.9V    |         |         |
| 30   |         |          | 2.3V    | -       |         |         |
| 31   |         |          | 2.4V    | -       |         |         |
| 32   |         |          | 1.3V    |         |         |         |
| 33   |         |          | 2.4V    |         |         |         |
| 34   |         |          | 2.3V    |         |         |         |
| 35   |         |          | 2.4V    |         |         |         |
| 36   |         |          | 4.8V    |         |         |         |
| 37   |         |          | 0V      |         |         |         |
| 38   |         |          | 4.7V    |         |         |         |
| 39   |         |          | 0V      |         |         |         |
| 40   |         |          | 3.4V    |         |         |         |
| 41   |         |          | 2.4V    |         |         |         |
| 42   |         |          | 0V      |         |         |         |
| 43   |         |          | 2.4V    |         |         |         |
| 44   |         |          | 0V      |         |         |         |
| 45   |         |          | 2.3V    |         |         |         |
| 46   |         |          | 4.7V    |         |         |         |
| 47   |         |          | 4.6V    |         |         |         |
| 48   |         |          | 2.5V    |         |         |         |
| 49   |         |          | 2.9V    |         |         |         |
| 50   |         |          | 2.5V    |         |         |         |
| 51   |         |          | 4.7V    |         |         |         |
| 52   |         |          | 4.7V    |         |         |         |

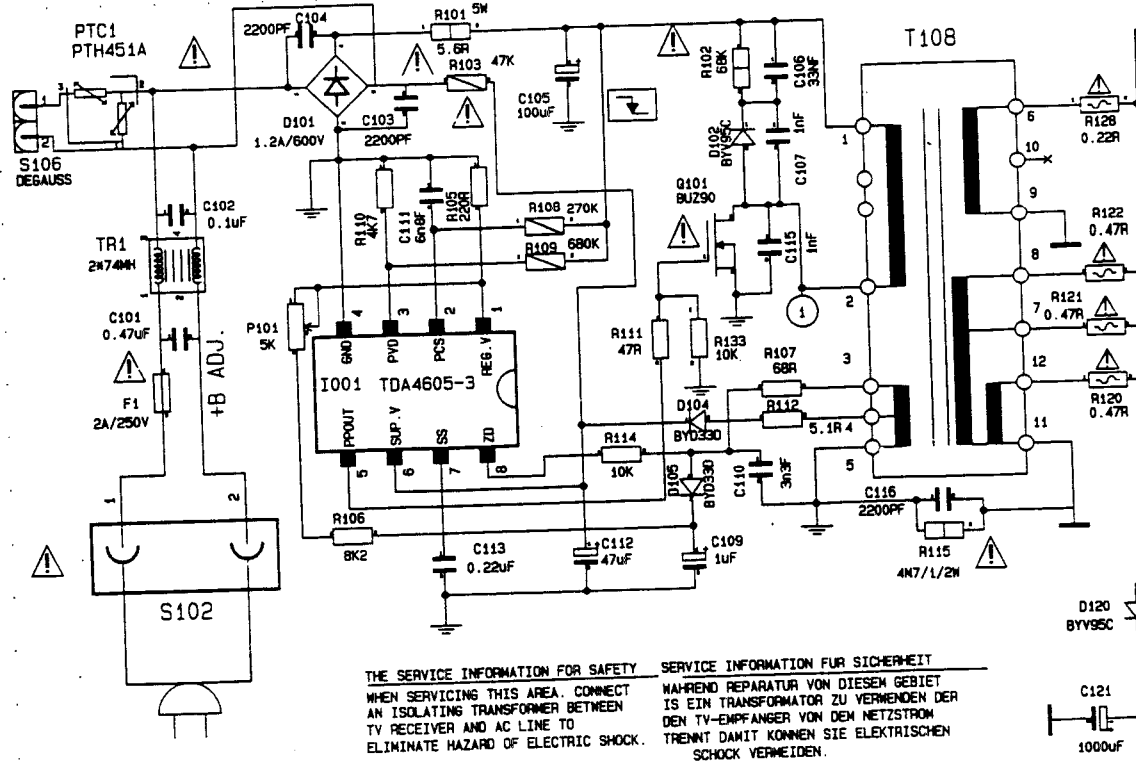
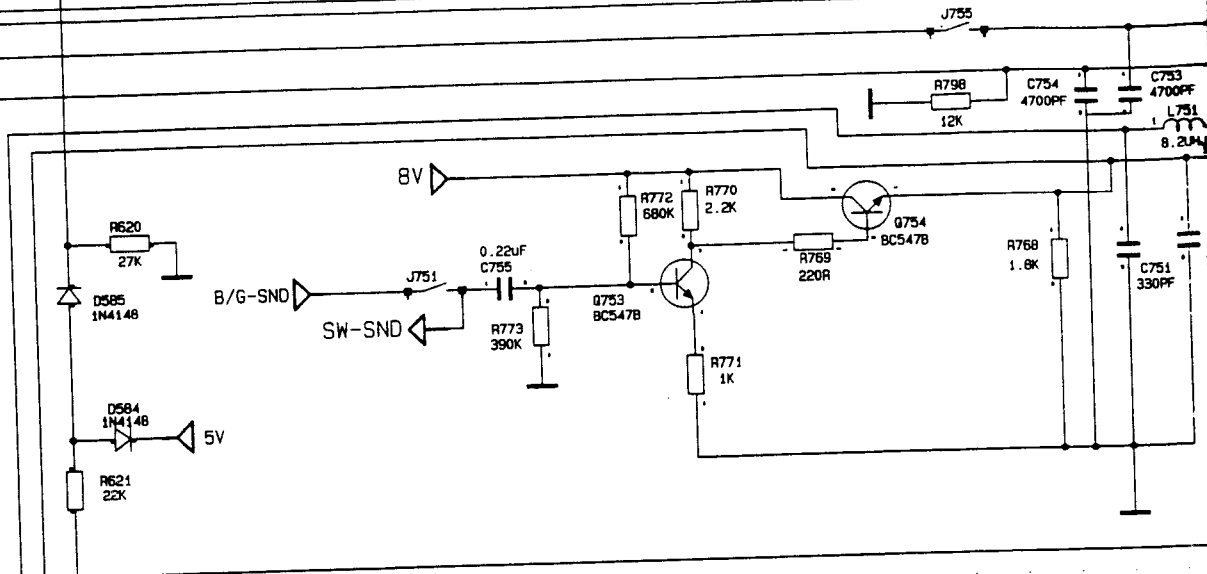
\* All voltages are in Volt

\* Reading are taken with a digital multimeter.

\* Reading are taken with a colour-bar signal input.

\* Sound Contrast } min.

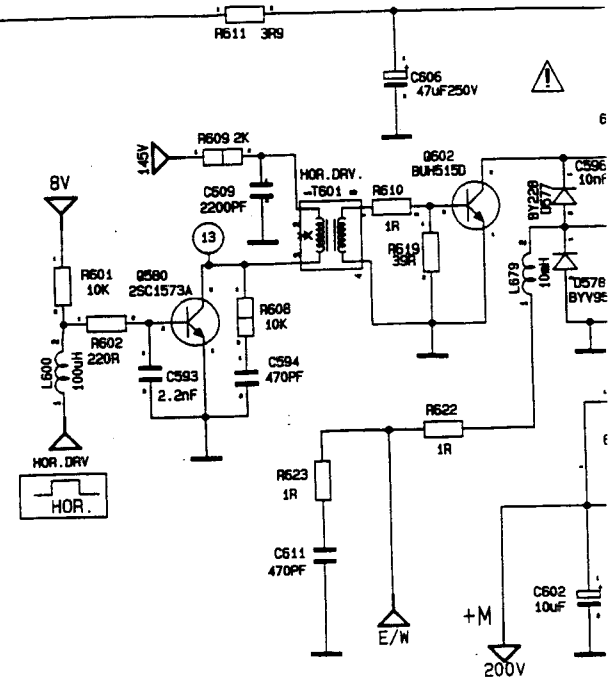
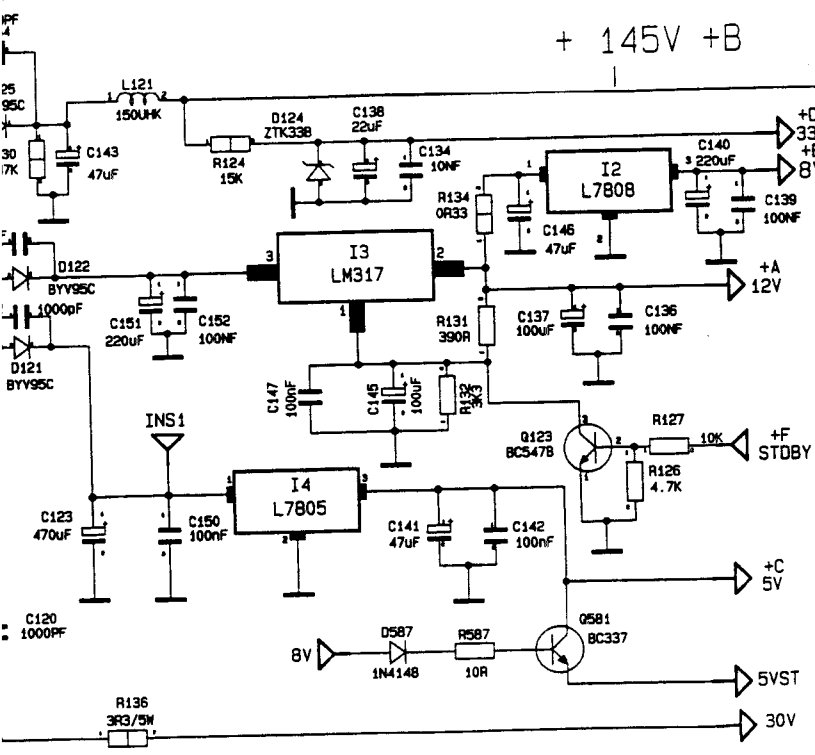
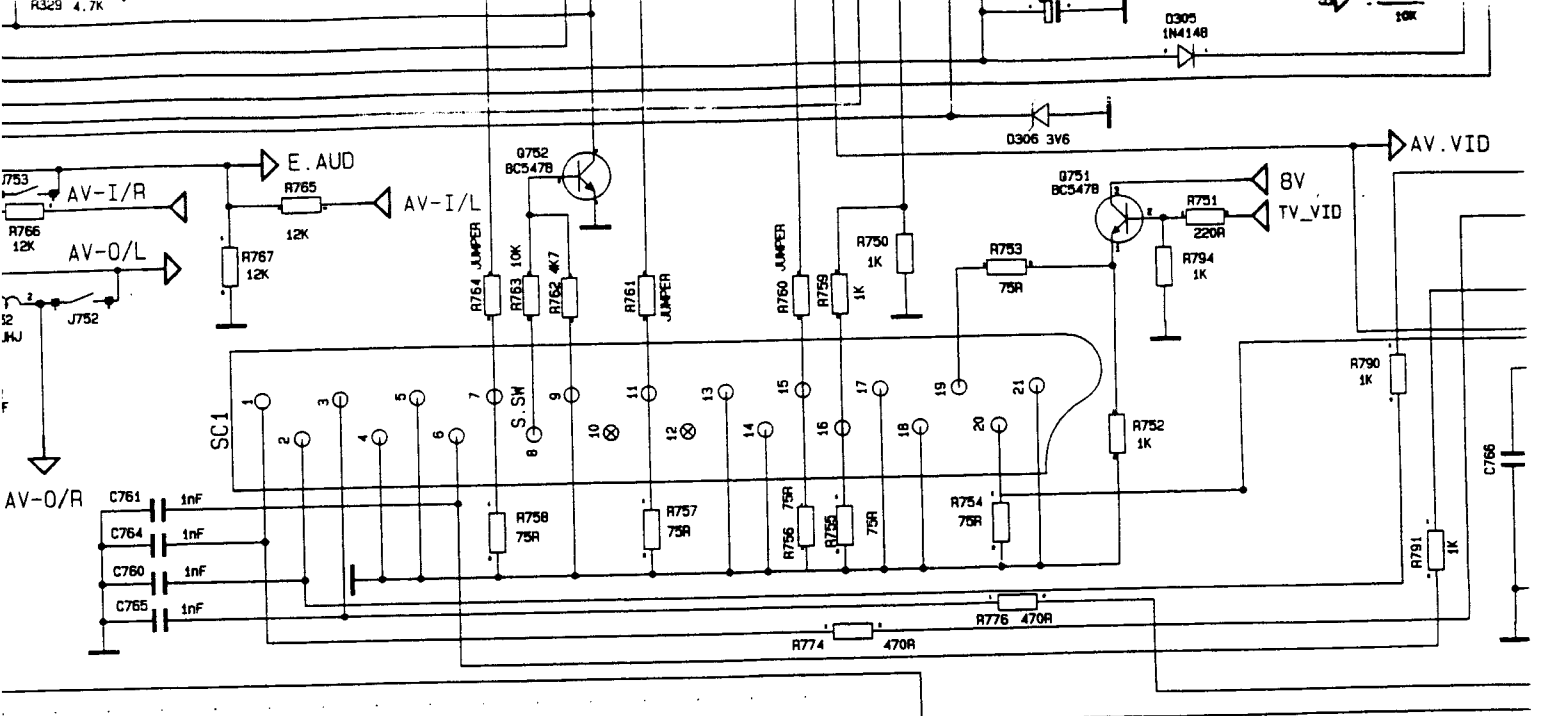
Brightness }  
Color } Normal



THE SERVICE INFORMATION FOR SAFETY  
 WHEN SERVICING THIS AREA, CONNECT  
 AN ISOLATING TRANSFORMER BETWEEN  
 TV RECEIVER AND AC LINE TO  
 ELIMINATE HAZARD OF ELECTRIC SHOCK.

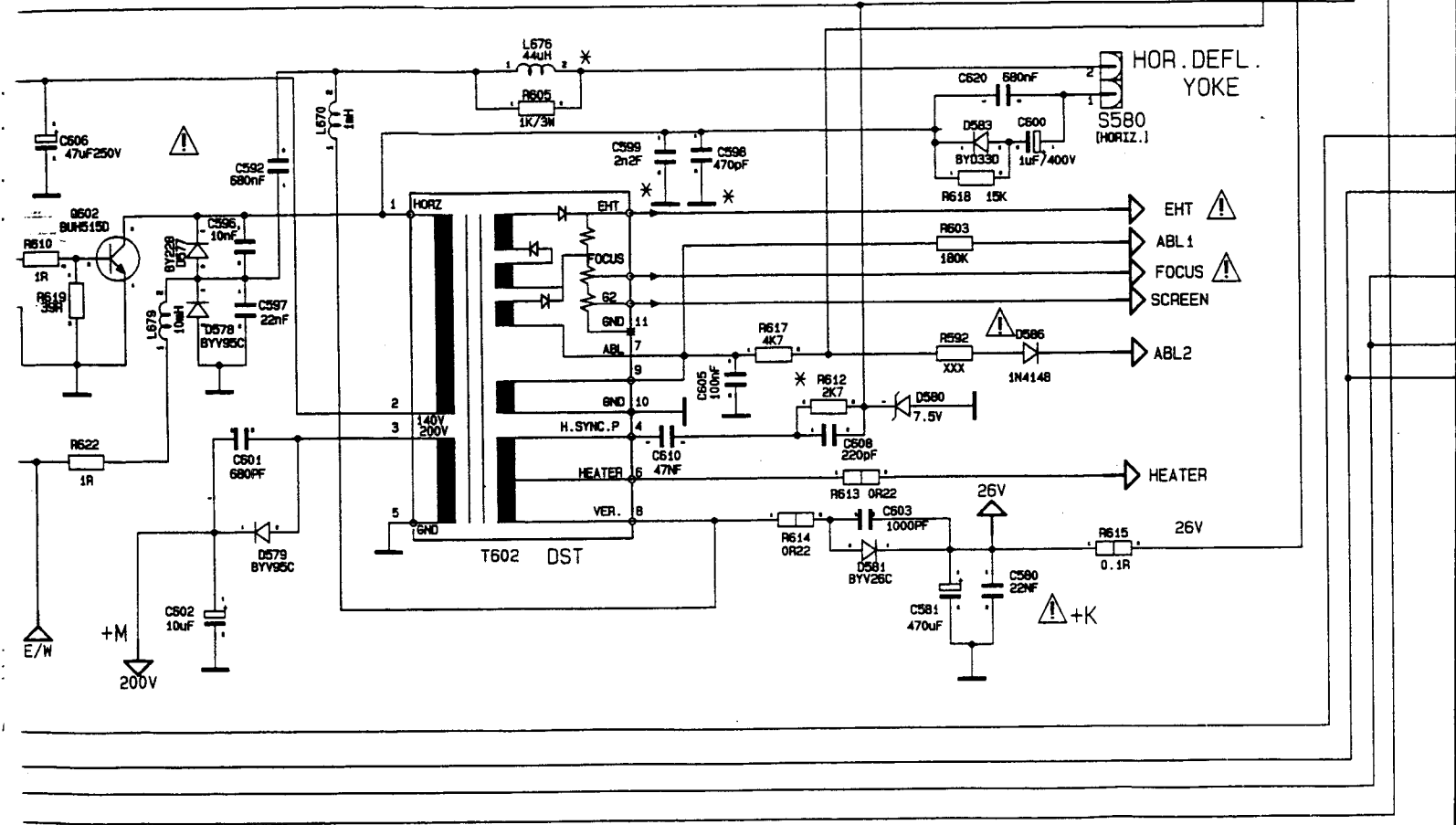
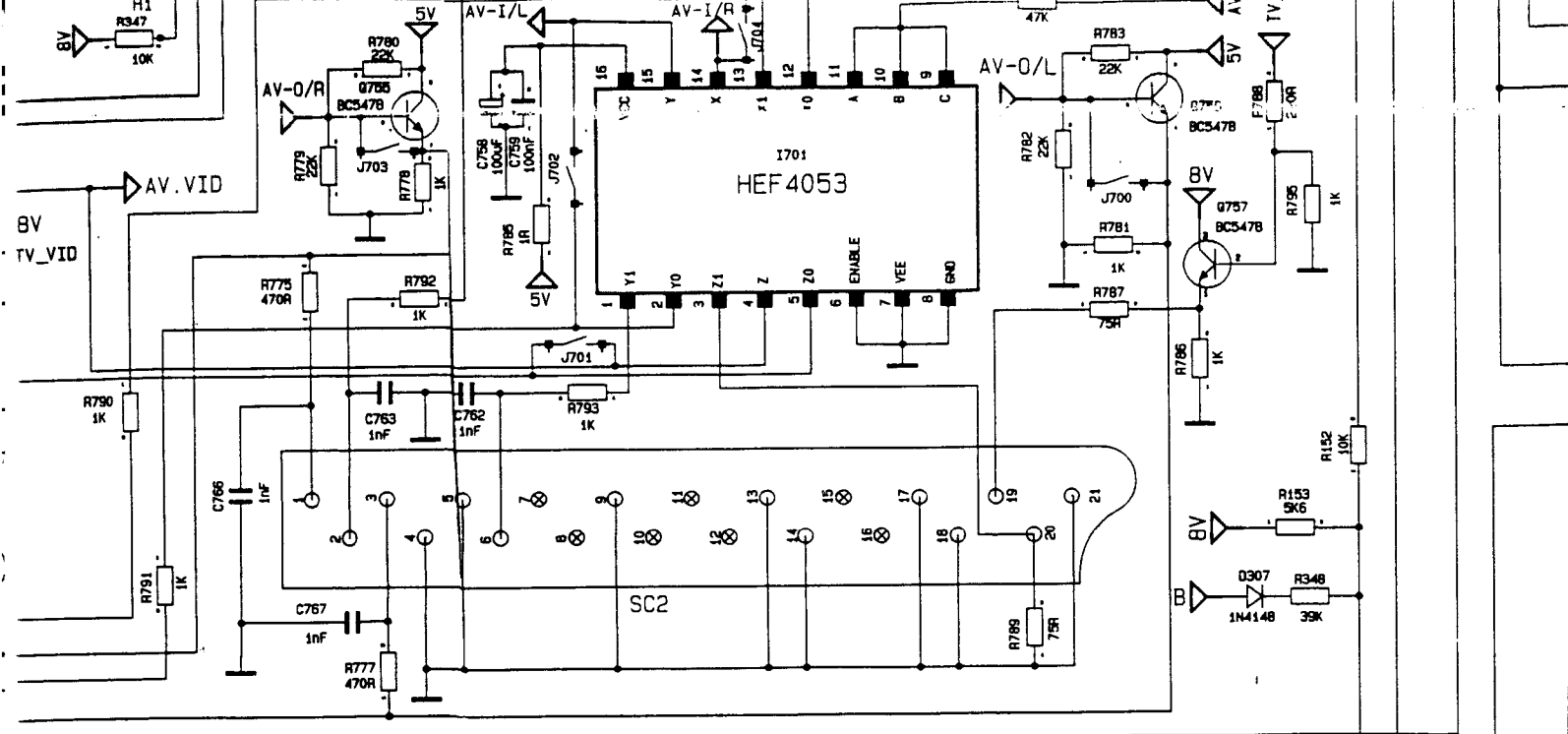
SERVICE INFORMATION FÜR SICHERHEIT  
 WÄHREND REPARATUR VON DIESEM GEBIET  
 IS EIN TRANSFORMATOR ZU VERWENDEN DER  
 DEN TV-EMPFÄNGER VON DEM NETZSTROM  
 TRENNT DAMIT KÖNNEN SIE ELEKTRISCHEN  
 SCHOCK VERMEIDEN.

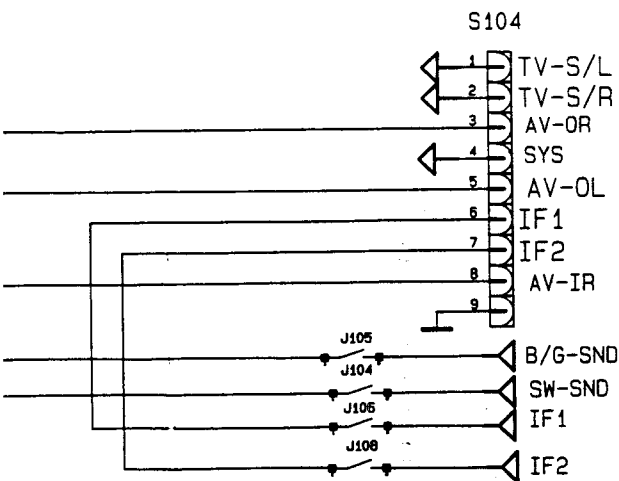
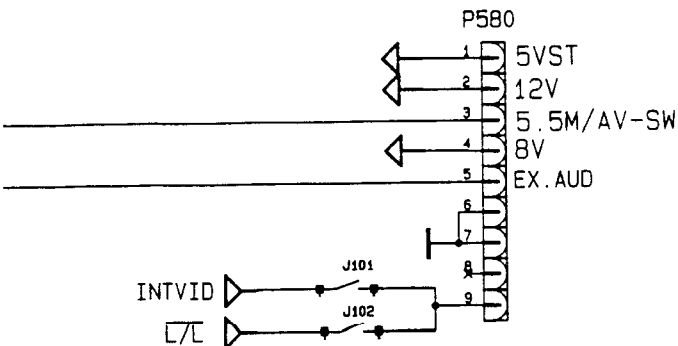
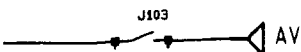
PROPERTY OF  
**TELETECH**



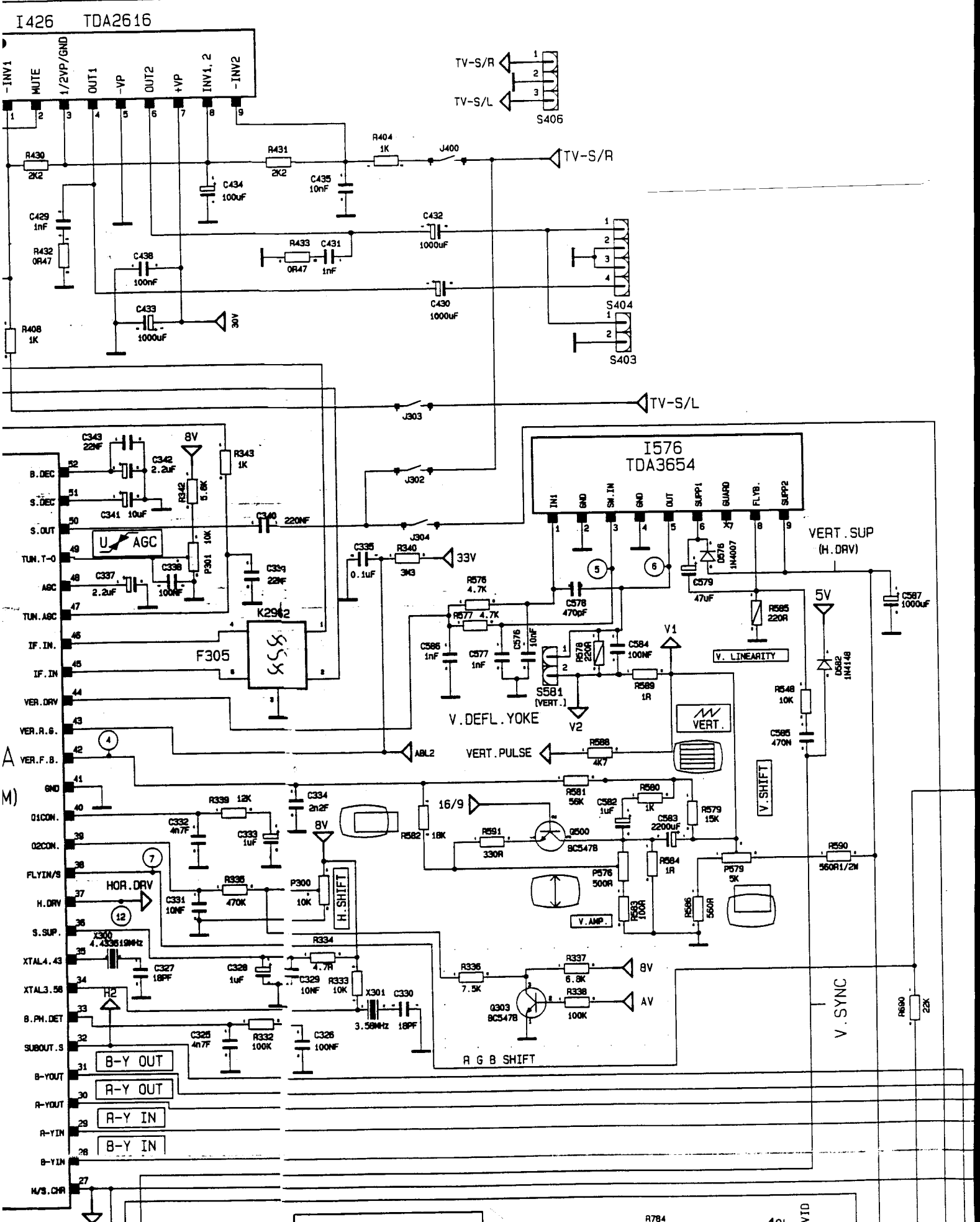
AV-OR  
 AV-OL  
 AV-IR  
 EX. AUD

OSCILLOSCOPE SHAPES / OSZILLOGRAMME /

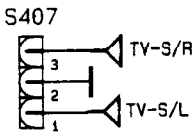
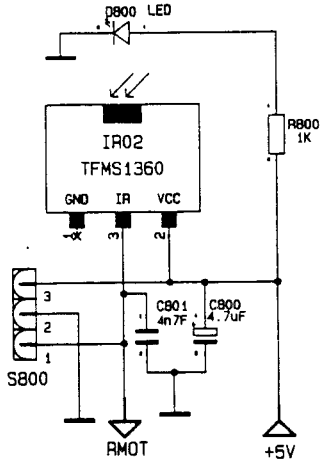
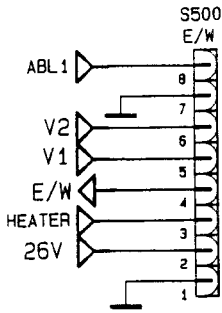




# SAMTSCHALTPLAN / SM-2 CIRCUIT DIAGRAMME



# IR. MODULE



# FOR. MONO. SECAML/L'. MODULE

