TELESTAR 3055FS

MODEL

SERVICE MANUAL

INSTALLATION AND SERVICE ADJUSTMENT

GENERAL INFORMATIONS

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W picture upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.
This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials.
Plus the power cord into a convenient 220 Volts 50 Hz AC two pin power outlet or frequency.
Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the receiver is switched ON. If the set is moved or faced in different directon, the power switch must be switched off at least 10 minutes in order that the automatic degaussing circuit operates properly.
Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around front of the receiver and slowly withdraw the coil to distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. The +105 volt power supply must be properly adjusted to insure the correct high voltage.

1. Connect an accurate high voltage meter to the anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 24.5 KV (20"; 25.5 KV)

SERVICE MANUAL

CHASSIS: PL-2

HIGH VOLTAGE TEST :

THERE IS NO HIGH VOLTAGE ADJUSTMENT COMPONENT ON THE CHASSIS. CHANGING OF + 107V DEPENDS ON THE SUPPLY VOLTAGE. IF IT'S NECESSARY TO MEASURE HIGH VOLTAGE;

1) CONNENCT THE + PROBE OF HIGH VOLTAGE TESTER TO THE ANODE OF CPT
2) ADJUST CONTRAST AND BRIGHTNESS TO MINIMUM.
3) MEASURE THE HIGH VOLTAGE AS 23.5KV. THAT VOLTAGE IS 24.5KV FOR 20" (51CM) SCREEN SIZE.
4) FOR MAXIMUM BRIGHTNESS, HIGH VOLTAGE MUST BE 22KV. 22.5KV FOR 51CM.

ADJUSTMENT OF HORIZONTAL OSCILLATOR

FOR THE ADJUSTMENT OF HORIZONTAL OSCILLATOR C601 CAPACITOR MUST BE SHORT-CIRCUIT. ADJUST P601, UNTIL OBTAIN AN OPTIMUM STATIONARY PICTURE.

ADJUSTMENT OF HORIZONTAL POSITION

1-APPLY THE CIRCULAR + CROSS-HATCH TEST PATTERN TO RF INPUT.
2- CENTER THE CIRCLE BY USING P601.

ADJUSTMENT OF VERTICAL AMPLITUDE

1- APPLY THE CIRCULAR + CROSS-HATCH TEST PATTERN TO RF INPUT.
2- ADJUST VERTICAL AMPLITUDE TO THE NORMAL LEVEL BY USING P602.

ADJUSTMENT OF SUPPLY VOLTAGE

1- MAKE THE VOLUME, BRIGHTNESS AND CONTRAST ADJUSTMENT TO MINIMUM.
2- ADJUST THE SUPPLY VOLTAGE ON THE PIN OF C118 CAPACITOR. AS 107V. BY USING P100.

FOCUS ADJUSTMENT

ADJUST THE THICKNESS OF LINES UNTIL BEING MINIMUM, BY FOCUS TRIMPOT ON THE EHT TRANSFORMER. BY USING CROSS-HATCH OR MULTI-BURST TEST PATTERN.

38.9MHZ PIF ADJUSTMENT

1- DISCONNECT THE IF OUTPUT OF TUNER FROM IF INPUT.
2- APPLY 38.9MHZ WHITE-PICTURE TO IF INPUT.
3- CONNECT THE OSCILLOSCOPE TO VIDEO OUTPUT.
4- ADJUST THE VIDEO SIGNAL BY USING L206 COIL SHOWN IN THE FIGURE 1. (MAX.AMPLITUDE, MIN.OVERSHOOT)
5- MAKE AFT ADJUSTMENT AFTER 38.9MHZ ADJUSTMENT.

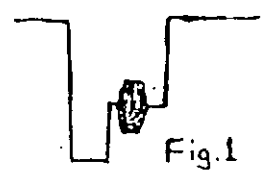


Fig.1

AGC DELAY ADJUSTMENT

1- APPLY PAL COLOUR BAR SIGNAL WHICH IS 60dB uV AMPLITUDE (1mV) TO THE RF INPUT.
2- TURN P200 WHICH IS AGC DELAY CONTROL TRIMPOT TO THE CLOCK-WISE UP TO THE END.
3- ADJUST P200 UNTIL FIND A PICTURE WITHOUT SNOWY.

AFT ADJUSTMENT

1- DISCONNECT THE IF OUTPUT OF TUNER FROM IF INPUT.
2- APLY 38.9 MHZ SIGNAL WITH A PM5518 PHILIPS PATTERN GENERATOR TO IF INPUT.
3- CONNECT A DIGITAL VOLTMETER TO AFT PIN OF IF.
4- ADJUST L207 COIL UNTIL THE VOLTAGE OF AFT PIN OF IF IS BEING 6V DC.
5- CONNECT THE IF INPUT WHICH IS DISCONNECTED IN THE BEGINNING.

COLOR SYNC ADJUSTMENT

1- APPLY COLOR BAR SIGNAL TO RF INPUT.
2- CONNECT A 8K2 RESISTOR BETWEEN THE PINS 8 AND 16 OF IC500. ALSO CONNECT PIN 12 TO GROUND (MAKE CONTRAST, BRIGHTNESS AND COLOR ADJUSTMENT TO MIN).
3- ADJUST THE COLOR SYNCRONISATION BY USING CT500 TRIMMER CAP. TO THE BEST POSITION.
4- REMOVE 8K2 RESISTOR AND GROUND CONNECTION.

COLOUR GAIN AND PHASE ADJUSTMENT

1- APPLY PAL DEMODULATOR SIGNAL TO RF INPUT.
2- CONNECT THE OSCILLOSCOPE TO THE BLUE SIGNAL OUTPUT.
3- ADJUST THE HANOVER BARS TO G-Y=0 LEVEL BY USING L501 COIL THEN MAKE MIN -V, + V CHANGING OF THE HANOVER BARS BY USING P500. LIKEWISE, TEST THE OTHER ALTERNATIVES.
SIGNAL : COLOR BAR PATTERN, ADJUSTMENT : P500 MIN. HANOVER BARS.

SECAM CHROMA ADJUSTMENT

1- APPLY SECAM COLOR BAR SIGNAL TO RF INPUT
2- CONNECT THE CHANNEL 1 OF OSCILLOSCOPE TO PIN 3 OF IC 700 AND THE CHANNEL 2 TO PIN 20 OF IC 700. TURN THE P700 TRIMPOT TO THE CLOCK-WISE UP TO MAXIMUM.
3- ADJUST R-Y AND B-Y OUTPUTS TO 600mVPP BY USING P701.
4- CONNECT A 8K2 RESISTOR BETWEEN THE PINS 8 AND 16 OF IC500. ALSO CONNECT PIN 12 TO GROUND.
5- ADJUST THE COLOR SYNC BY USING CT700.

6- DELETE ALL MODIFICATION.

7- CONNECT OSCILLOSCOPE TO THE PIN 3 OF IC700 AND ADJUST THE SIGNAL LEVEL TO MINIMUM BY USING L700 COIL. (BELL FILTER ADJUSTMENT)

SIF DETECTOR ADJUSTMENT

1- APPLY 1KHz SOUND SINGAL WITH TEST PATTERN TO RF INPUT.

2- ADJUST THE MAXIMUM SOUND OUTPUT BY USING L208 WHICH IS SIF DETECTOR COIL.

3- FOR D/K SOUND ADJUSTMENT, ADJUST L209. COIL THEN REPEAT THE A/M STEPS.

WHITE BALANCE ADJUSTMENT

1- APPLY ONLY WHITE-PATTERN TO RF INPUT AND WAIT 15 MINUTE FOR HEATING.

2- ADJUST P904, 905,906 WHICH ARE RGB BIAS CONTROL TRIMPOTS TO ANTI CLOCK-WISE AT REARSIDE

3- ADJUST P902, AND 903 WHICH ARE G,B DRIVER TRIMPOTS TO MIDDLE LEVEL.

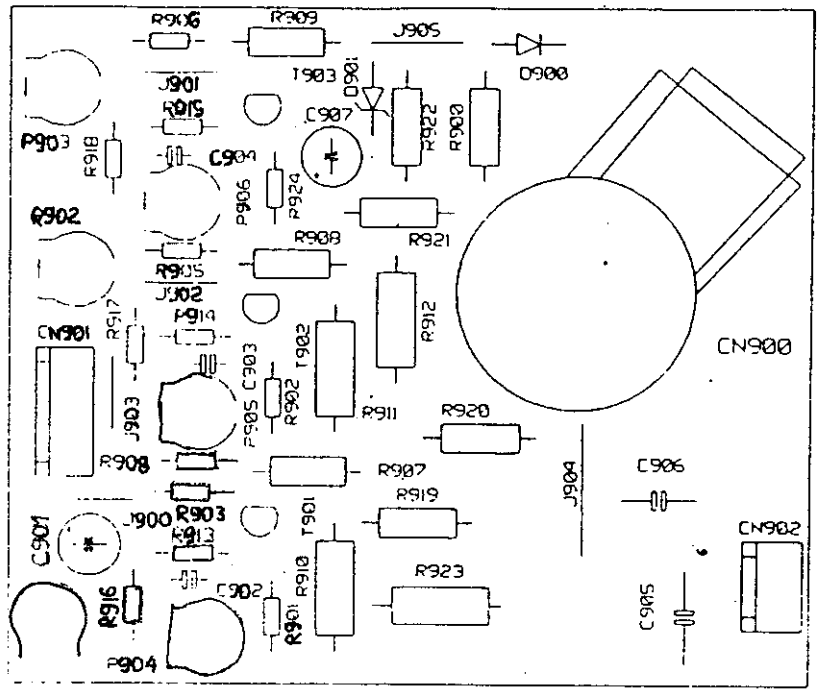
4- ADJUST BRIGHTNESS, CONTRAST AND COLOR TO MIN.

5- TURN THE SCREEN VOLTAGE TRIMPOT ON THE EHT TRANSFORMER TO CLOCK-WISE UNTIL APPEAR ANY VISIBLE PICTURE ON THE SCREEN.

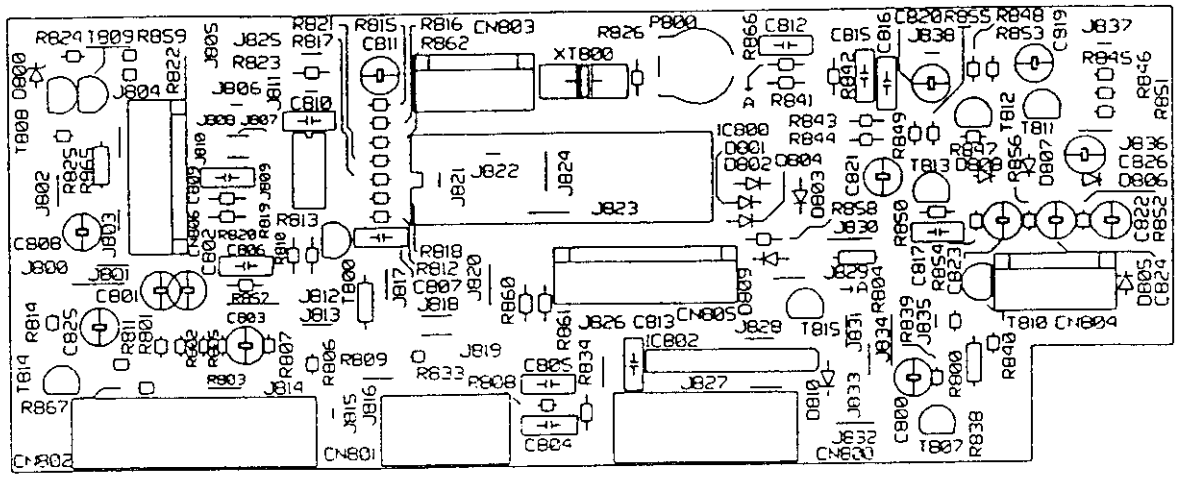
6- ADJUST BRIGHTNESS TO 15% DARK PICTURE.

7- ADJUST THE GRAY LEVEL BY USING P904,905,906 AN IDEAL LEVEL.

8- ADJUST BRIGHTNESS AND CONTRAST TO MAX. THAN ADJUST P902 AND 903 WHICH ARE G,B DRIVER TRIMPOTS UNTIL OBTAIN A WHITE LEVEL IF APPEARS ANY COLOR ON THE SCREEN.



PL2 CRT BOARD



PL2 CONTROLLER BOARD

4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 25.0 KV (20"; 27.5 KV), under any conditions.

HORIZONTAL OSCILLATOR ADJUSTMENT

If there is an indication of unstable horizontal sync. adjust the horizontal freq. with P600. Before the adjustment connect C601 cap. to ground (short circuit) and adjust horiz. freq. to the centre of the pullin range; and remove short circuit on the C601 capacitor.

HORIZONTAL SHIFT ADJUSTMENT

1. Tune in a FUBK test picture (Phillips test pattern)
2. Adjust the horizontal centre with R610 to the centre of the FUBK signal.

VERTICAL AMPLITUDE ADJUSTMENT

1. Tune in a FUBK test picture.
2. Adjust the vertical amplitude with P602 to the optimum amplitude.

OPERATION VOLTAGE

1. Set the BRIGHTNESS, CONTRAST, COLOUR and VOLUME Control to minimum.
2. Adjust operation voltage with P100 to 105 V at C118 cap.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FOCUS PACK for well defined scanning lines in the centre area on the screen.

DELAYED AGC ADJUSTMENT

1. Apply a 60 dB uV PAL Colour Bar Signal to the antenna terminal.
2. Turn AGC Delay Control (P200) on Main Board to fully counter clockwise position.
3. Adjust P200 to get 4.6 V DC voltage on the pin 2 of IC200 (TDA8212).

AFT (AUTOMATIC FINE TUNING) ADJUSTMENT

1. Open the slit between Tuner IF output with IF stage input.
2. Apply 38.9 MHz RF signal to IF input.

3. Connect a DVM at IC800 (pin 9).
4. Adjust AFT voltage with L205 2.5 V at pin 9 (IC800).
5. Close the slit between Tuner IF output with IF stage input with solder.

SIF DETECTOR ADJUSTMENT

1. Tune in programme which has a pure tone (Forexample 400 KHz or 1 KHz) with SIF carrier.
2. Adjust SIF detector coil L206 so that the sound output power goes to maximum.

WHITE BALANCE ADJUSTMENT

1. Tune in a monochrome channel (full white picture) and warm up the set for 15 minutes.
2. Set the R, G, B bias control (black level) P04, P905, P906 to maximum.
3. Set the G, B drive controls P902, P903 to the centre position.
4. Set to maximum BRIGHTNESS, CONTRAST and COLOUR Controls.
5. Connect to ground pin 2 (IC600) via 100K external resistor.
6. Rotate the screen control (UG2) counter clockwise until just visible horizontal line on the screen.
7. Disconnect short circuit at pin 2 (IC600).
8. Set the BRIGHTNESS Control to % 15 black picture (Dark Grey).
9. Adjust this picture with P904, P905, P906 to real grey picture until no remains any colour.
10. Set the BRIGHTNESS and CONTRAST Controls to maximum. Set the G, B drive P902, P903 to white picture until no remains any colour.

ADJUSTMENT POINTS ON THE CHASSIS

TEA2019

POWER ON MODE	STAND BY MODE
Pin 1 = 3.15 V	Pin 1 = 3.73 V
Pin 2 = 7.47 V	Pin 2 = 8.42 V
Pin 3 = 7.65 V	Pin 3 = 8.77 V
Pin 4 = 3.20 V	Pin 4 = 2.97 V
Pin 5 = 21 mV	Pin 5 = 12 mV
Pin 6 = 2.33 V	Pin 6 = 2.34 V
Pin 7 = 0 V	Pin 7 = 0 V
Pin 8 = 3.72 V	Pin 8 = 3.98 V
Pin 9 = 3.61 V	Pin 9 = 4 V
Pin 10 = 3.70 V	Pin 10 = 4.17 V
Pin 11 = 0 V	Pin 11 = 0 V
Pin 12 = 54 mV	Pin 12 = 11 mV
Pin 13 = 4.56 V	Pin 13 = 4.56 V
Pin 14 = 4.56 V	Pin 14 = 4.56 V

TEA2014A

Pin 1 = 0 V	Pin 5 = 9.5 V
Pin 2 = 2.93 V	Pin 6 = 2.84 V
Pin 3 = 4.24 V	Pin 7 = 11.40 V
Pin 4 = 8.8 V	Pin 8 = 2.18 V

TDA1905

Pin 1 = 8.58 V	Pin 9 = GND
Pin 2 = 3.67 V	Pin 10 = GND
Pin 3 = 8.8 mV	Pin 11 = GND
Pin 4 = 3.67 V	Pin 12 = GND
Pin 5 = 9.3 mV	Pin 13 = GND
Pin 6 = 2.84 V	Pin 14 = GND
Pin 7 = 0 V	Pin 15 = GND
Pin 8 = 2.18 V	Pin 16 = GND

PCA84C640P

Pin 1 = 4.18 V	Pin 22 = 0 V
Pin 2 = 2.25 V	Pin 23 = 0.19 V
Pin 3 = 3.04 V	Pin 24 = 2.2 V
Pin 4 = 3.2 V	Pin 25 = 0.29 V
Pin 5 =	Pin 26 = 0.250 V
Pin 6 = 4.68 V	Pin 27 = 0.198 V
Pin 7 = 20 mV	Pin 28 = 5 V
Pin 8 = 20 mV	Pin 29 = 4.7 V
Pin 9 = 2.44 V	Pin 30 = 0 V

IC VOLTAGE CHART

TDA8212

Pin 1 = 461 mV
Pin 2 = 2.62 V
Pin 3 = 8.45 V
Pin 4 = 0 V
Pin 5 = 3.6 V
Pin 6 = 3.6 V
Pin 7 = 0 V
Pin 8 = 2.8 V
Pin 9 = 5.10 V
Pin 10 = 6 V
Pin 11 = 2.92 V
Pin 12 =
Pin 13 = 0 V
Pin 14 = 2.85 V
Pin 15 = 3.25 V
Pin 16 = 3.24 V
Pin 17 =
Pin 18 = 4.65 V
Pin 19 = 4.65 V
Pin 20 = 3.5 V

TDA8217

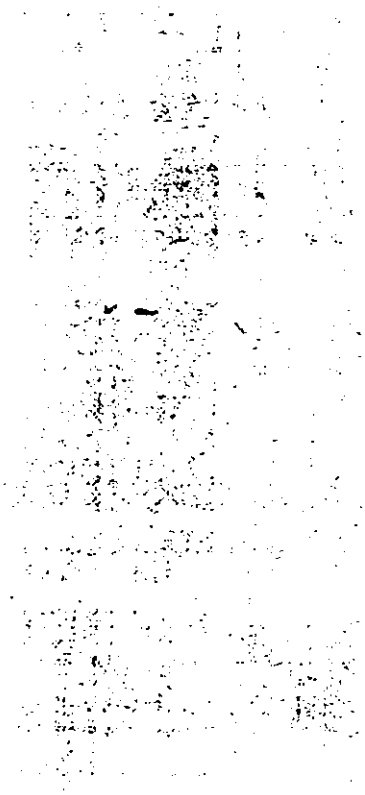
Pin 1 = 3.51 V
Pin 2 = 7.8 V
Pin 3 = 3.13 V
Pin 4 = 1.51 V
Pin 5 = 3.13 V
Pin 6 = 2.35 V
Pin 7 = 9.6 V
Pin 8 = 4.85 V
Pin 9 = 5 V
Pin 10 = 2.94 V
Pin 11 = 0 V
Pin 12 = 3.50 V
Pin 13 = 7.16 V
Pin 14 = 4.1 V
Pin 15 = 0 V
Pin 16 = 5.15 V
Pin 17 = 4.19 V
Pin 18 = 4.23 V
Pin 19 = 4.1 V
Pin 20 = 9.6 V

TDA8215

Pin 1 = 9.9 V
Pin 2 = 2.46 V
Pin 3 = 23.2 V
Pin 4 = 8.49 V
Pin 5 = 0 V
Pin 6 = 0 V
Pin 7 = 0.64 V
Pin 8 = 0.47 V
Pin 9 = 23.35 V
Pin 10 = 13.35 V
Pin 11 = 5.1 V
Pin 12 = 4.77 V
Pin 13 = 2.61 V
Pin 14 = 4.84 V
Pin 15 = 0 V
Pin 16 = 0 V
Pin 17 = 3.49 V
Pin 18 = 0.12 V
Pin 19 = 1.51 V
Pin 20 = 2.38 V

TDA8196

Pin 1 = 6.19 V
Pin 2 = 12.44 V
Pin 3 = 8.67 V
Pin 4 = 2.6 V
Pin 5 = 4 mV
Pin 6 = 2.48 V
Pin 7 = 2.39 V
Pin 8 = 2.37 V



Pin 10 = 3.45 V
Pin 11 = 0.68 V
Pin 12 = 3.53 V
Pin 13 = 5 V
Pin 14 = 5 V
Pin 15 = 5 V
Pin 16 = 5 V
Pin 17 = 5 V
Pin 18 = 0.90 V
Pin 19 = 5 V
Pin 20 = 5 V
Pin 21 = 0 V

Pin 31 =
Pin 32 =
Pin 33 = 5 V
Pin 34 = 5 V
Pin 35 = 5 V
Pin 36 = 0 V
Pin 37 = 0 V
Pin 38 = 0 V
Pin 39 = 5 V
Pin 40 = 5.13 V
Pin 41 = 0 V
Pin 42 = 5 V

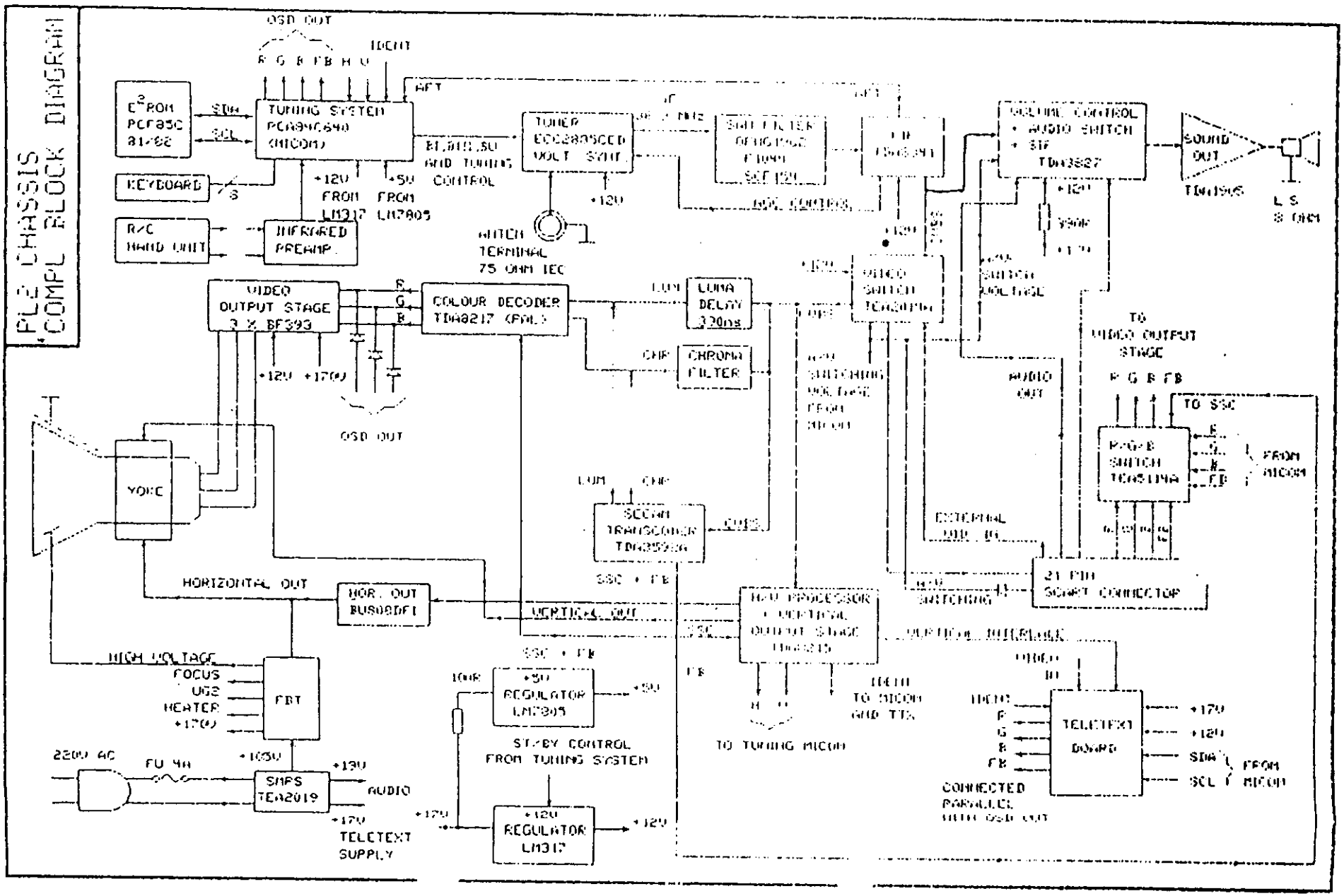
TDA8138

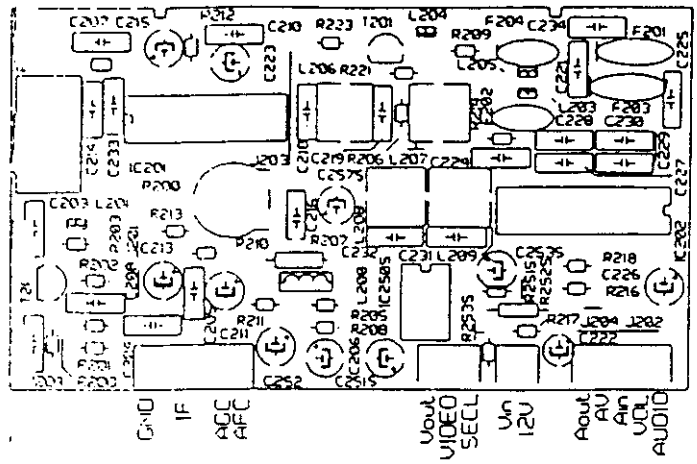
Pin 1 = 16.37 V
Pin 2 = 16.37 V
Pin 3 = 0 V
Pin 4 = 4.63 V
Pin 5 =
Pin 6 = 3.21 V
Pin 7 =
Pin 8 = 11.85 V
Pin 9 = 5.1 V

WIRING CONNECTION

OSCILLOSCOPE WAVE FORMS

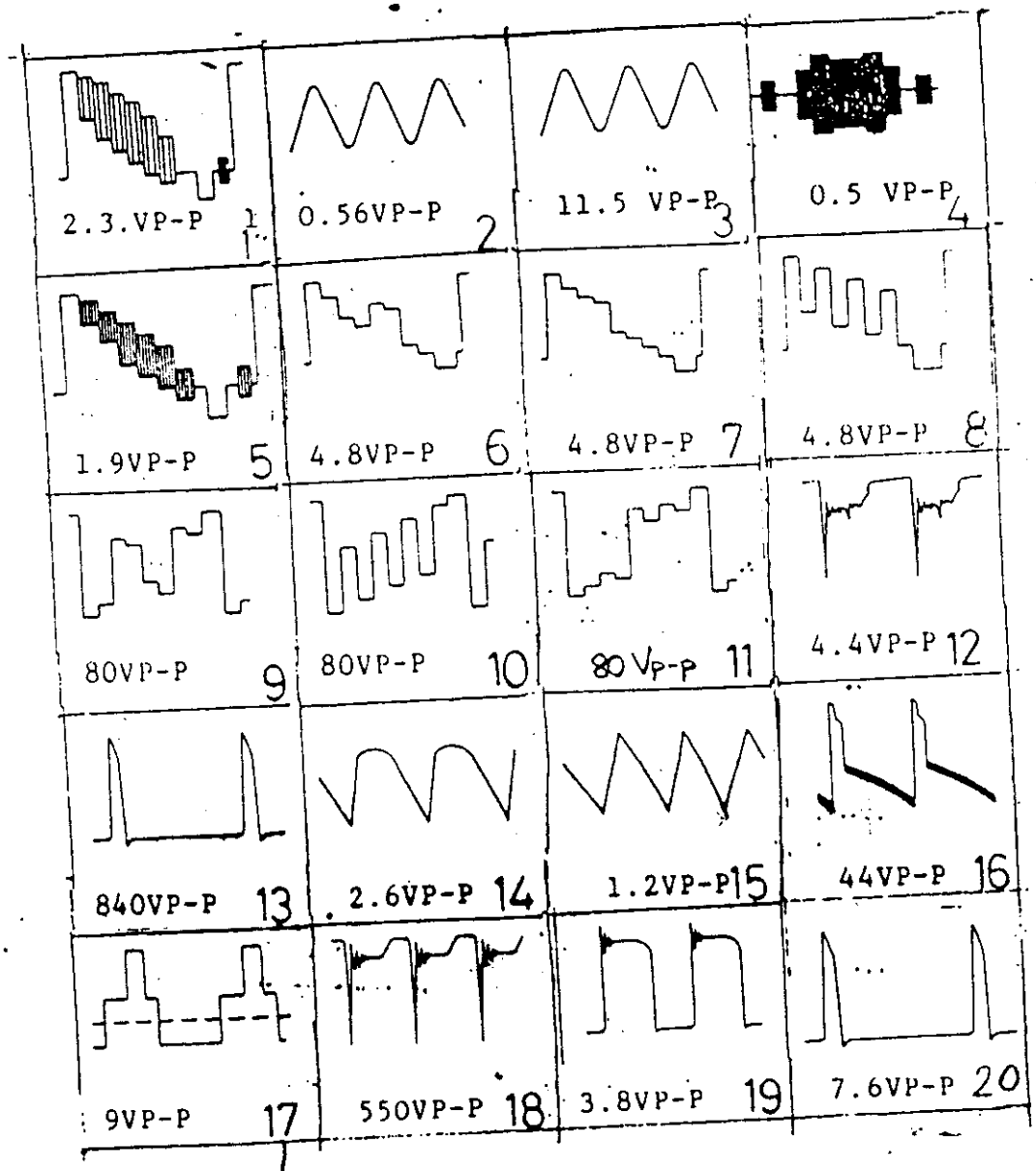
BLOCK DIYAGRAM





PL2 IF BOARD

WAVE FORMS



EXAMPLE: PLEASE REFER TO THE CIRCUIT DIAGRAM TO FIND THE TEST POINTS.

FIGURE E

PICTURE IF SWEEP ALIGNMENT

1. Open the slit (IF Output terminal of TUNER)
2. Connect the "Output Terminal" of the sweep/marker generator to the IF input on Main Board.
3. Connect the "DET. IN" with direct probe to pin 14 of IC200 (TDA8212) on Main Board.
4. Adjust L204 for max. gain at 38.9 MHz on scope.

INSTALLATION AND SERVICE ADJUSTMENT

GENERAL INFORMATIONS

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W picture upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.
This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials.
Plus the power cord into a convenient 220 Volts 50 Hz AC two pin power outlet or frequency.
Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the receiver is switched ON. If the set is moved or faced in different directon, the power switch must be switched off at least 10 minutes in order that the automatic degaussing circuit operates properly.
Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around front of the receiver and slowly withdraw the coil to distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures, as mentioned later.

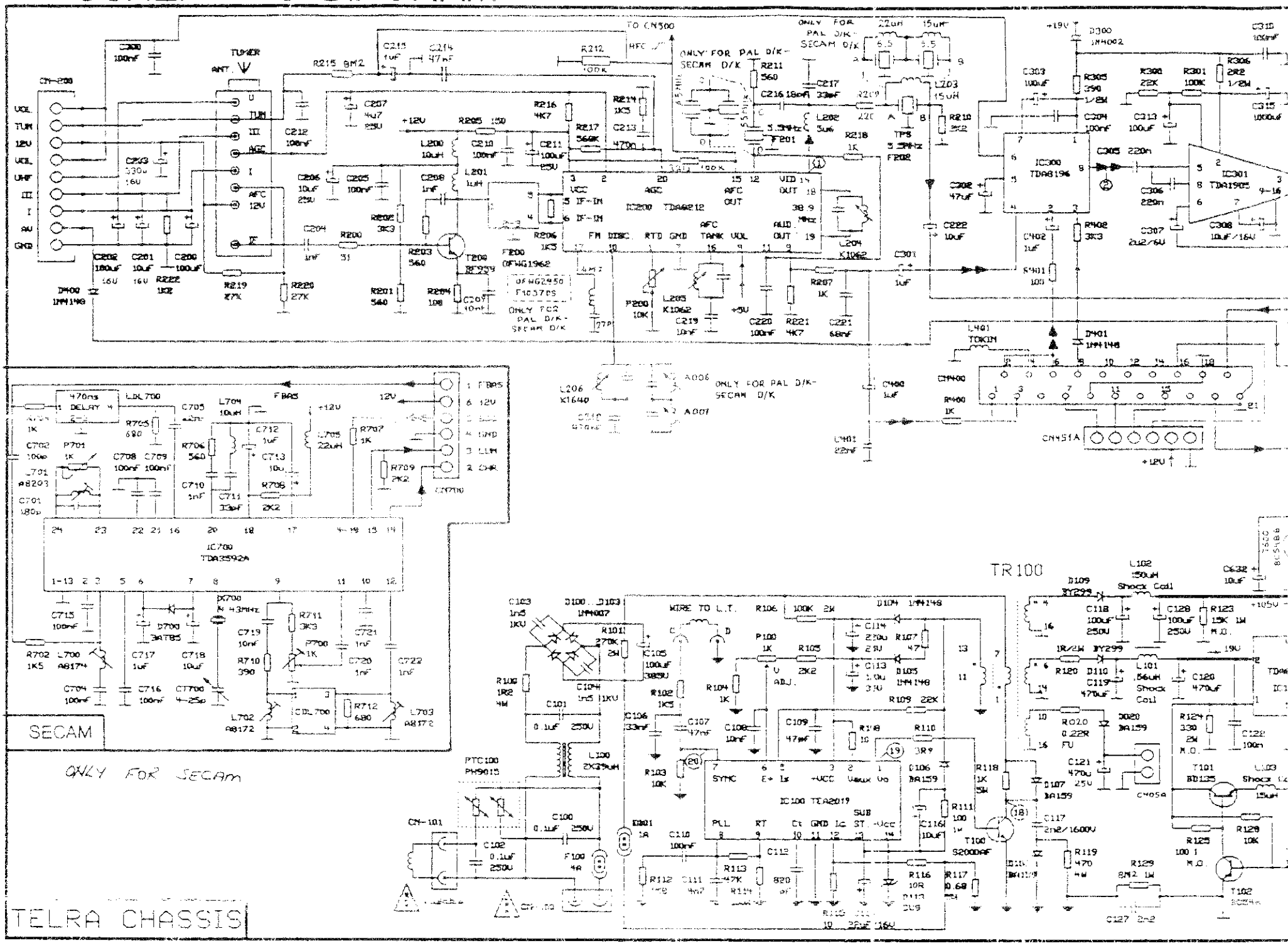
HIGH VOLTAGE CHECK

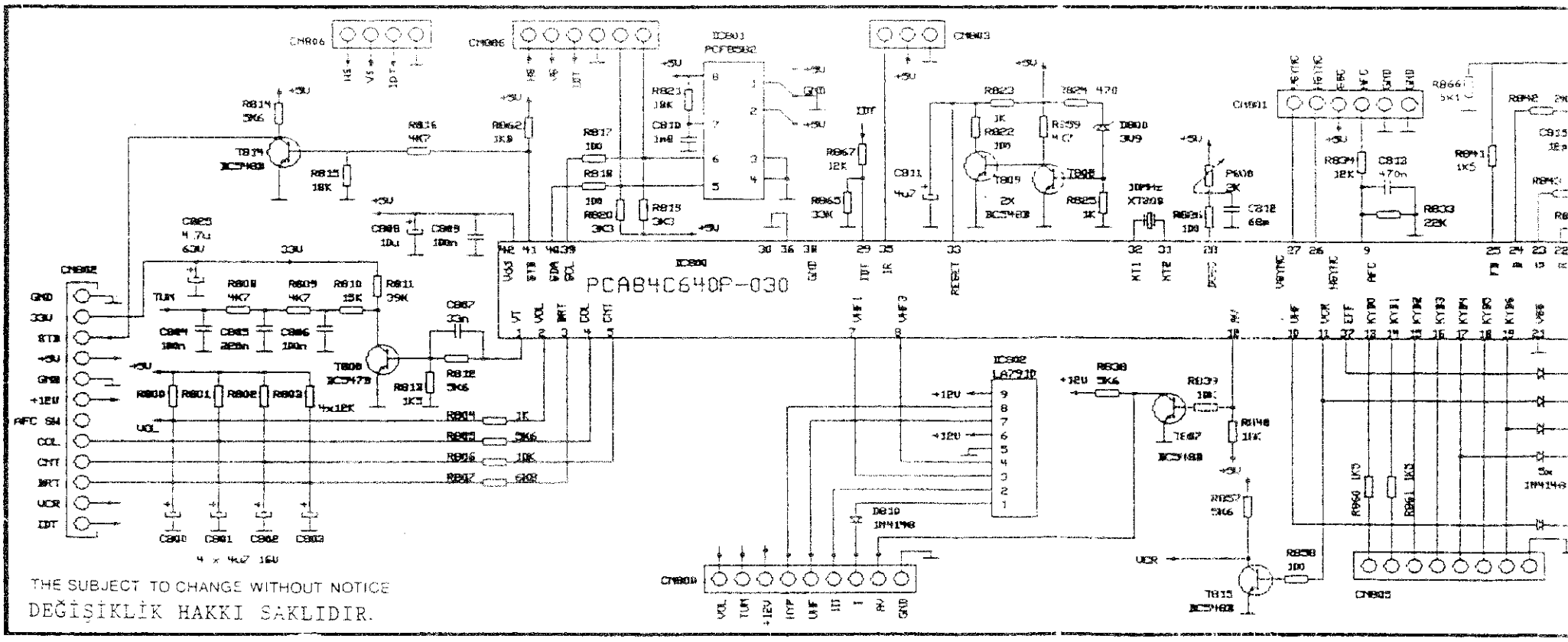
CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. The +105 volt power supply must be properly adjusted to insure the correct high voltage.

1. Connect an accurate high voltage meter to the anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 24.5 KV (20"; 25.5 KV)

TELRA CTV
SCHEMATIC DIAGRAM

DEVRE ŞEM





VE * İŞARETLİ DİRENÇLERİN DEĞERLERİ KULLANILAN TÜBÜN CINSİNE GÖRE DEĞİSTİRİLECEKTİR.

* İŞARETLİ KONDANSATÖRÜN DEĞERI KULLANILAN TÜBÜN CİNSİNE GÖRE DEĞİŞTİRİLECEKTİR.

BU MALZEMELERİN FARKLI DEĞERLERI İÇİN TABLOYA BAKINIZ.

11 93

ŞEMASI

TUBE NO.	C625 (1.6KV)	R644	R645	TUBE SOCKET	LIN COIL
A51-230X NOKIA	9.1nF	1K8Ω	1K8Ω	NARROW NECK	57uH
A48KCS120X GOLDSTAR	8.2nF	1K8Ω	1K8Ω	NARROW NECK	57uH
A48JRV90X01 ORION	10nF	1K8Ω	1K8	NARROW NECK	57uH
A48KCS120X01 GOLDSTAR	8.2nF	1K8Ω	1K8	NARROW NECK	57uH
A51JSY61X03 HITACHI	9.1nF	1K8Ω	1K8Ω	NARROW NECK	57uH
51GG95X-TC SAMSUNG	9.1nF	1K8Ω	1K8Ω	NARROW NECK	57uH
A48JRV50X6M ORION	8.2nF	1K8Ω	1K5	NARROW NECK	57uH

RESMİ YUKARI KAYDIRMAK İÇİN #
İSARETLİ DİRENCİN BACAĞINI KESİN.

RESMİ ASAĞI KAYDIRMAK İÇİN e
İSARETLİ DİRENCİN BACAĞINI KESİN

CUT THE LEAD OF RESISTOR MARKED WITH # IN ORDER TO SHIFT PICTURE UP

CUT THE LEAD OF RESISTOR MARKED WITH @ IN ORDER TO SHIFT PICTURE DOWN

THE VALUES OF RESISTORS MARKED ## & ### ARE DIFFERENT ACCORDING TO THE CRT TYPES

THE VALUE OF CAPACITOR MARKED x IS DIFFERENT ACCORDING TO THE CRT TYPES

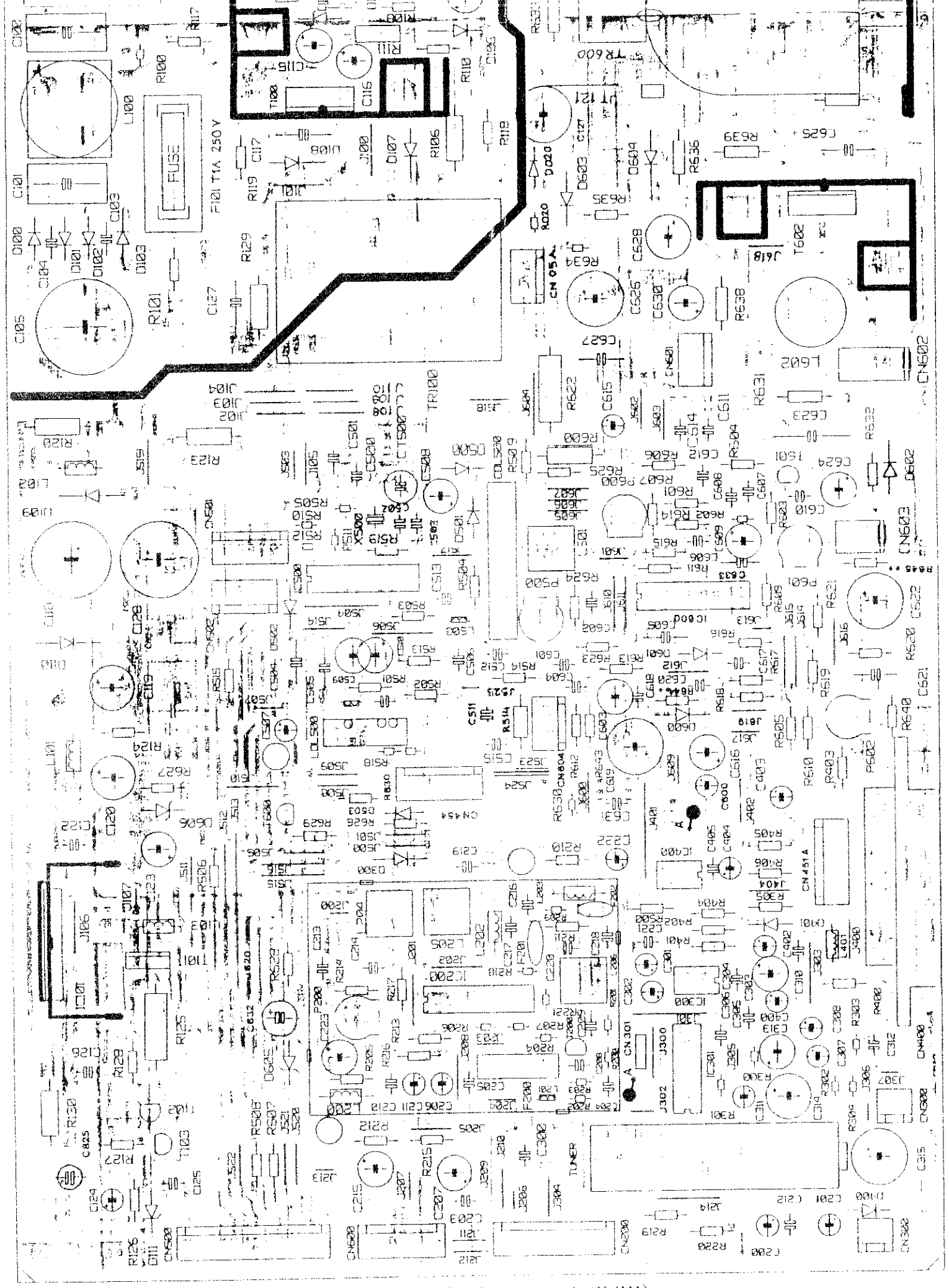
PLEASE LOOK AT THE TABLE FOR THE VALUES OF THESE COMPONENTS

TELRA R/C

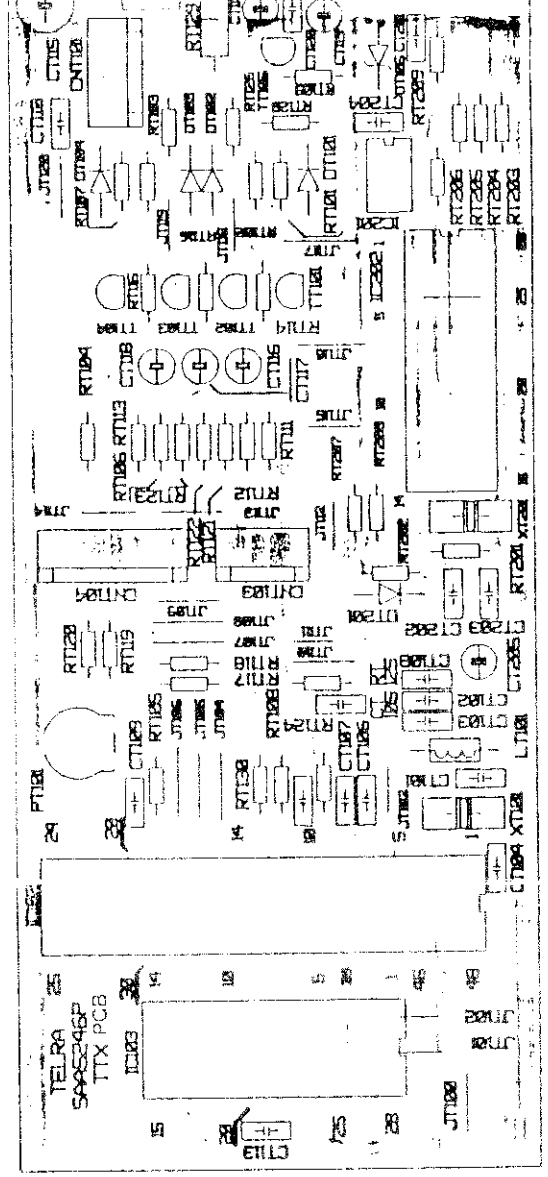
TELRA CRT

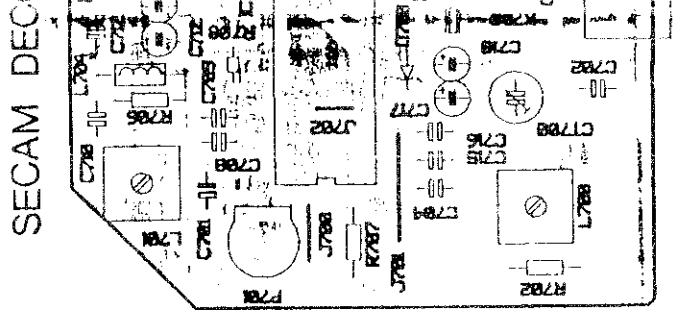
RGB

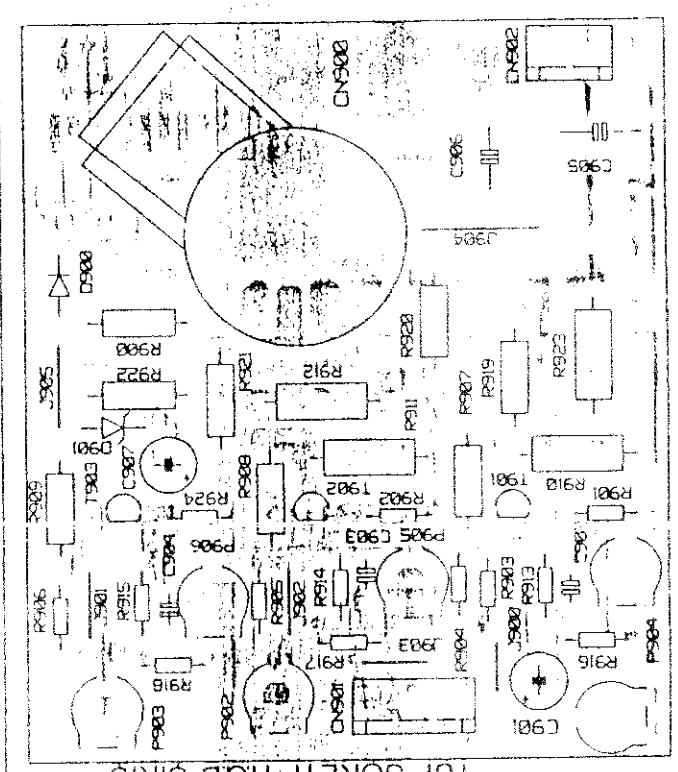
065 031 000 310



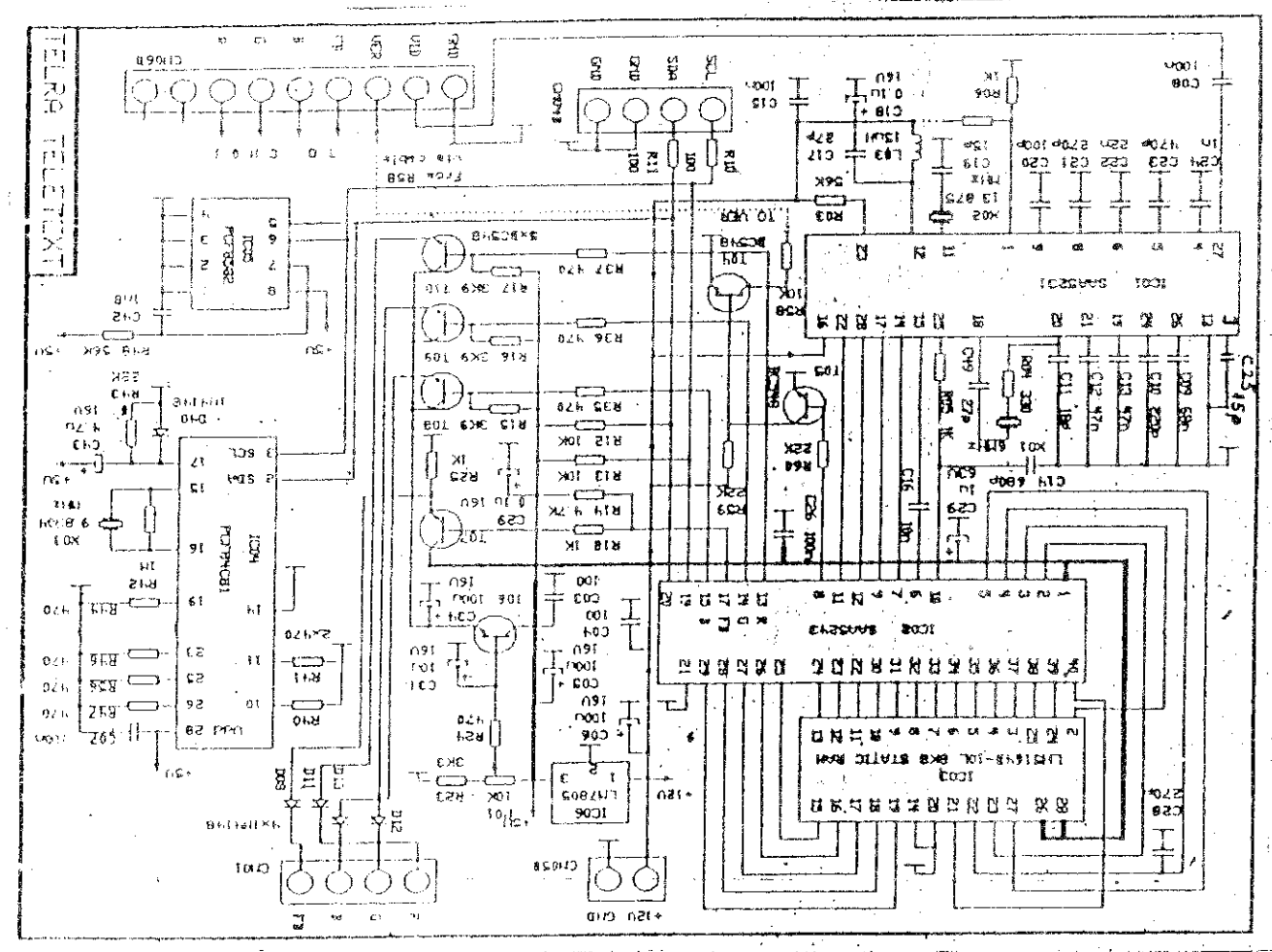
(MAIN) ANA PCB

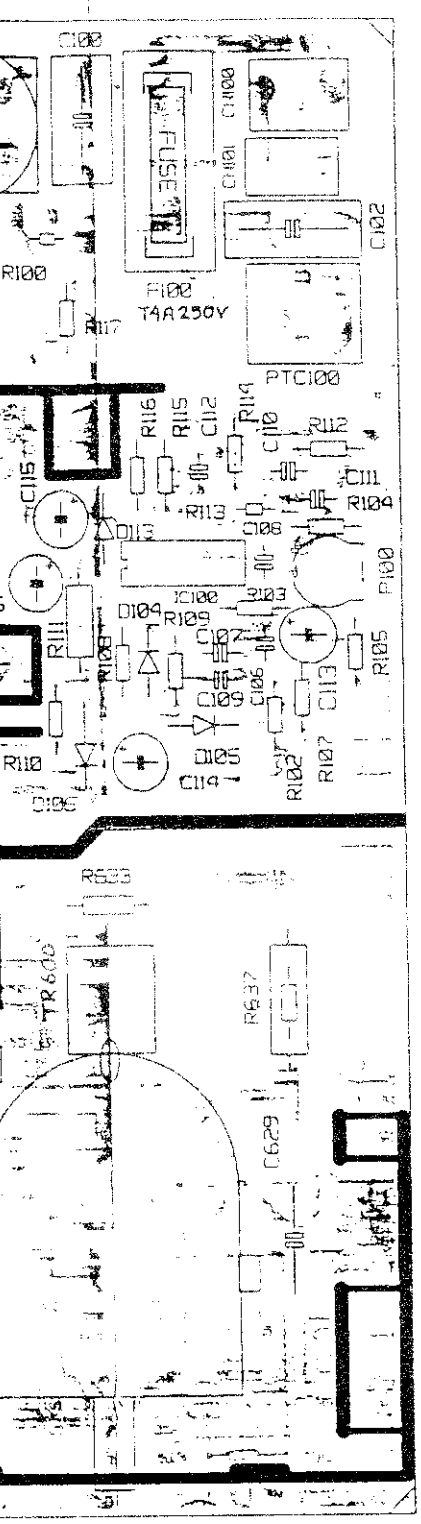




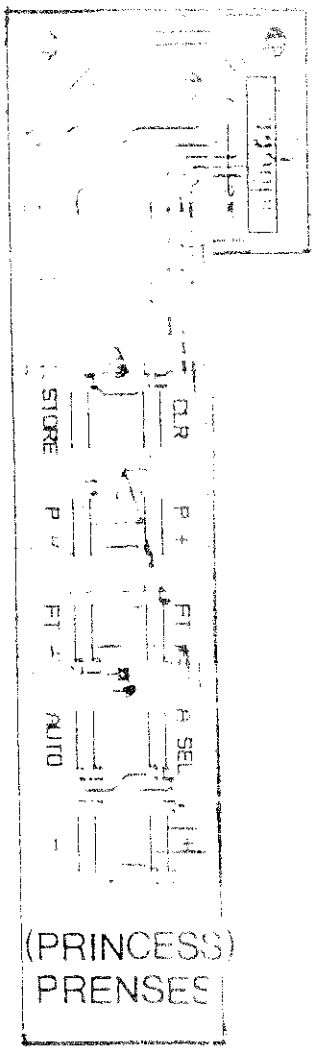


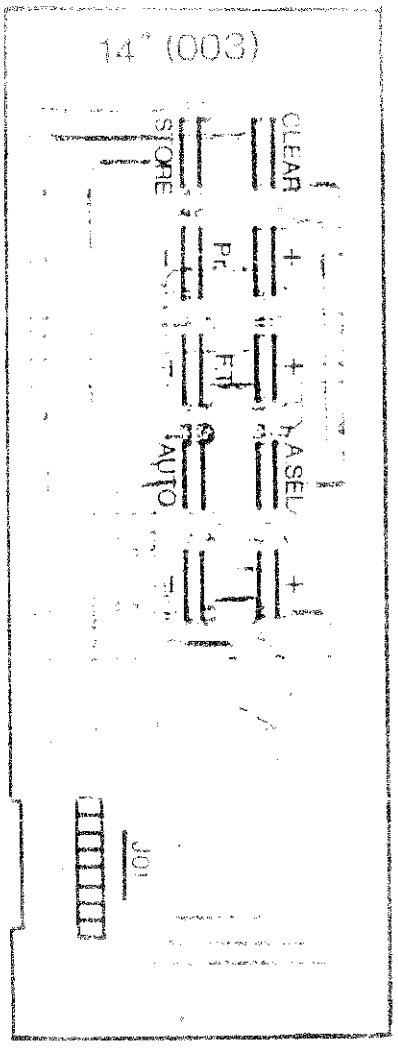
CRT PCB : R.G.B OUT
TUP SOKETI : R.G.B CIKIS

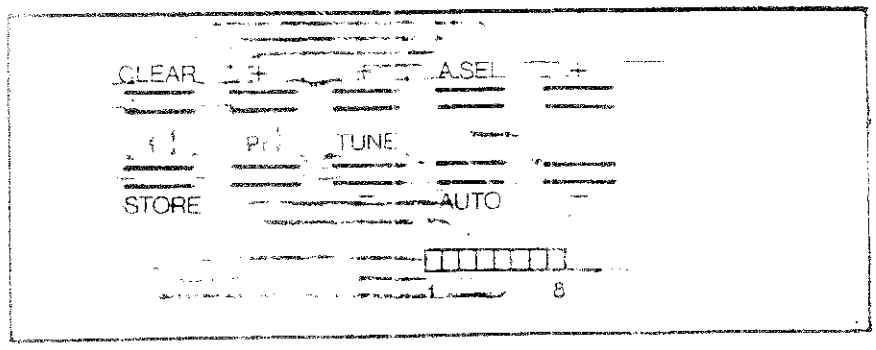


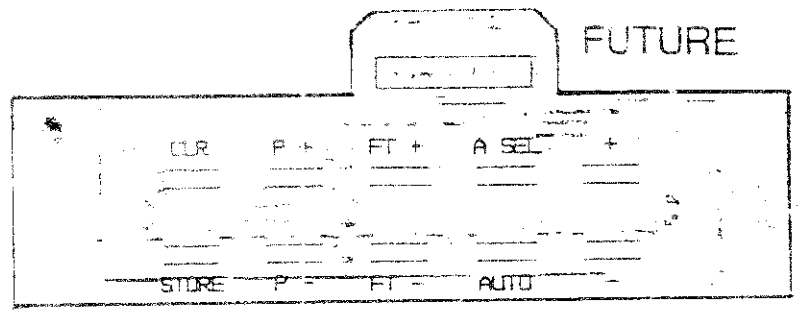


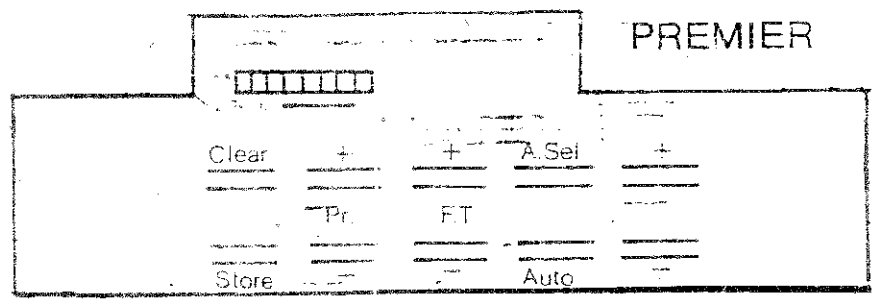
TUŞ TAKIMI (KEYBOARD) PCB'LER (TS)

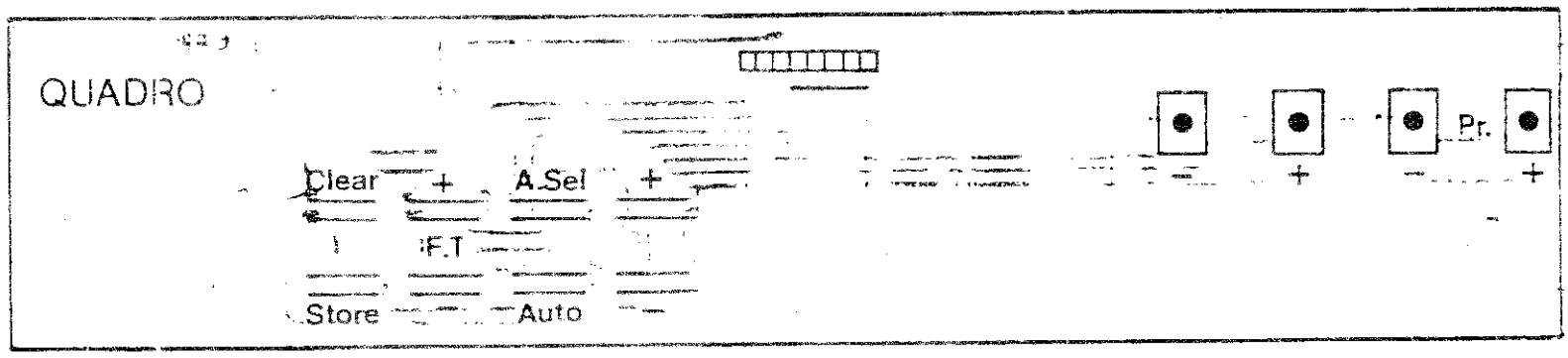




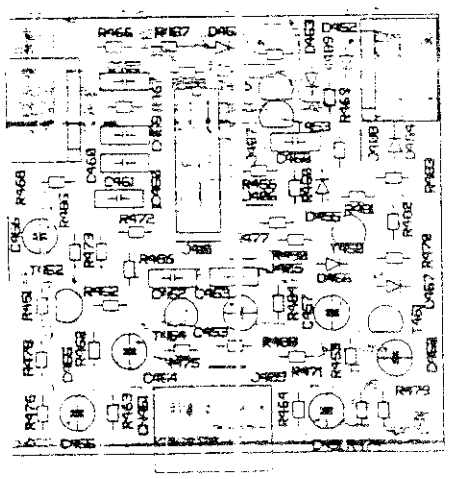




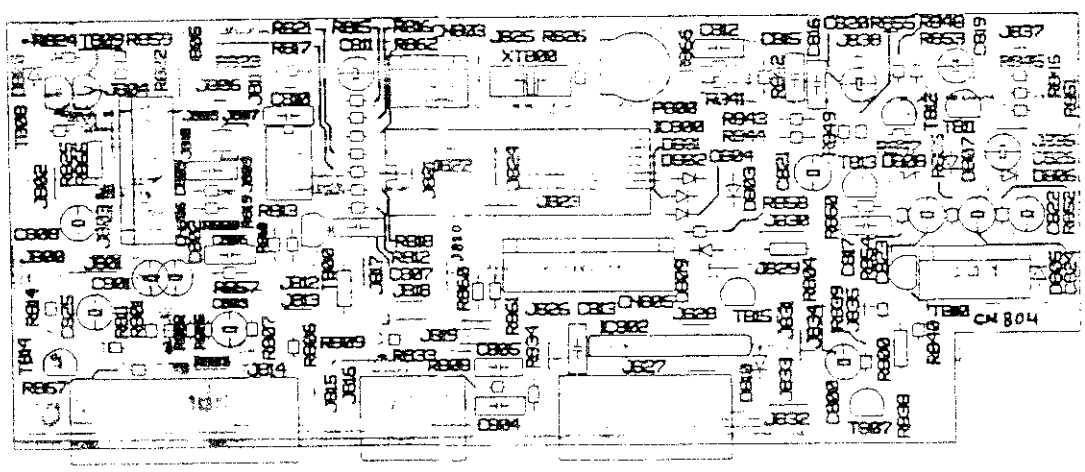


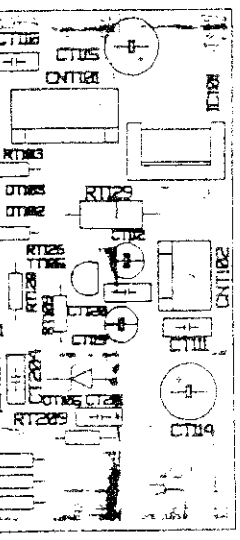


R.G.B. (SCART)

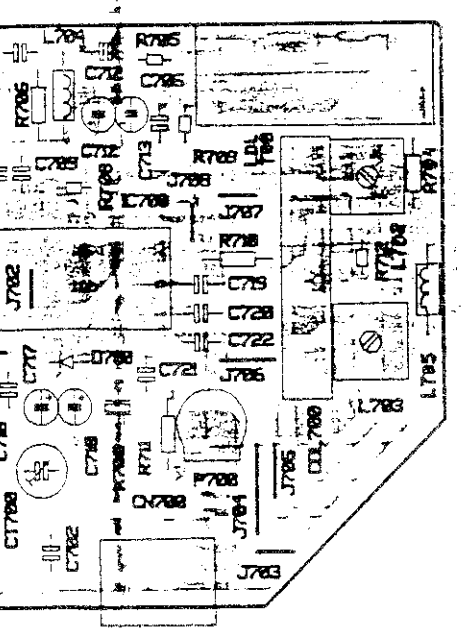


(CONTROLLER) KONTROL PCB





AM DECODER PCB



CODE	:	TV MODE
00	:	PROGRAM DIGIT 0
01	:	PROGRAM DIGIT 1
02	:	PROGRAM DIGIT 2
03	:	PROGRAM DIGIT 3
04	:	PROGRAM DIGIT 4
05	:	PROGRAM DIGIT 5
06	:	PROGRAM DIGIT 6
07	:	PROGRAM DIGIT 7
08	:	PROGRAM DIGIT 8
09	:	PROGRAM DIGIT 9
10	:	ONE/TWO DIGIT ENTRY
12	:	STANDBY MODE
13	:	MUTE ON/OFF
14	:	PERSONAL PREFERENCE
15	:	TV STATUS
16	:	VOLUME UP
17	:	VOLUME DOWN
18	:	BRIGHTNESS UP
19	:	BRIGHTNESS DOWN
20	:	COLOUR UP
21	:	COLOUR DOWN
28	:	CONTRAST UP
29	:	CONTRAST DOWN
32	:	PROGRAM UP
33	:	PROGRAM DOWN
38	:	SLEEP TIMER
56	:	AV
63	:	TV