SANYO

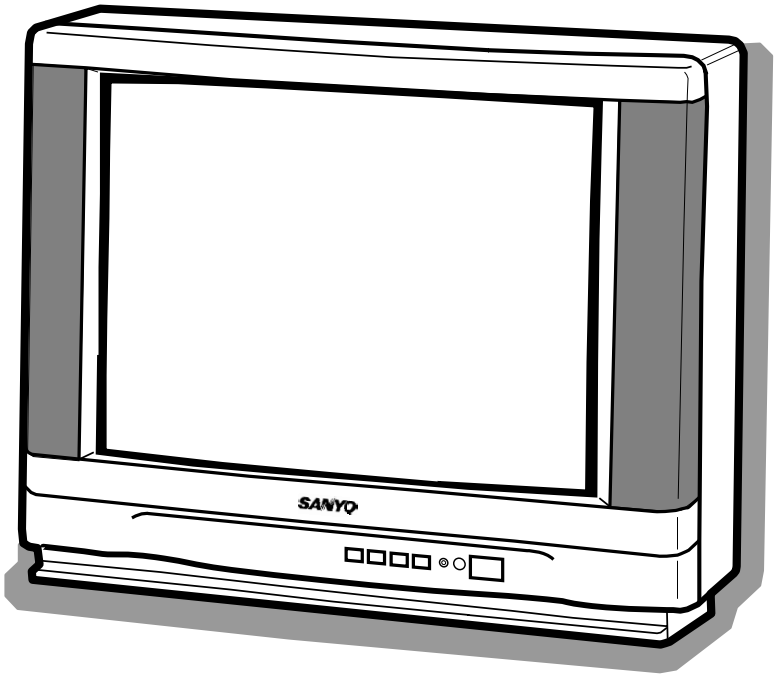
Colour Television Service Manual

CE21P2-C

Model CE21P2-C (W.Europe)

Service Ref. No. CE21P2-C-02

PRODUCT CODE: 111336306
ORIGINAL VERSION: Chassis No. EB4-A



Give complete "SERVICE REF. NO." for parts order or servicing, it is shown on the rating sheet on the cabinet back of the TV set.

Note
This TV receiver will not work properly in foreign countries where the television transmission system and power source differ from the design specifications. Refer to the specifications for the design specifications

Contents

Part No. SKSM0323 F5JGS SEPT 1999

SAFETY PRECAUTION

1: An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.

2: Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.

3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc.Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

X-RADIATION PRECAUTION

The primary source of X-RADIATION in the television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may produce potentially hazardous X-RADIATION. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual, high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for +B1 volt power supply adjustment, and high voltage adjustment to maintain the high voltage within the specified limits.

PRODUCT SAFETY NOTICE

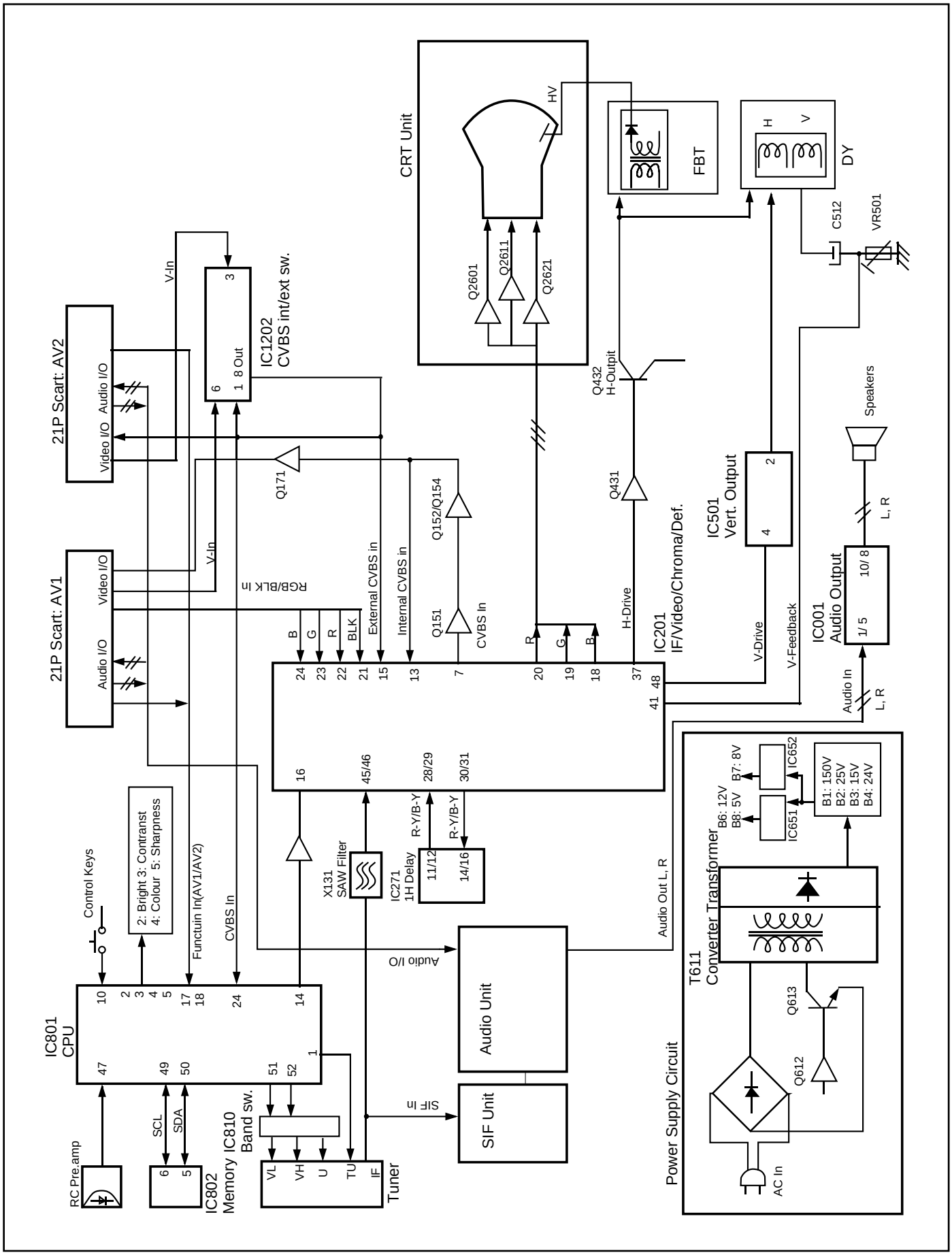
Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark ⚠. No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark ⚠.

SPECIFICATIONS

Power source	AC 220~240V, 50Hz
Television system	System B/G
Colour system	PAL
Receiving channel	VHF: E2~E12
	CATV: X, Y, Z, S1~S41
	UHF: #21~69
Aerial input impedance	75ohm
AV terminal	
21 Pin socket	AV1: CENELEC standard (S-Video Input)
	AV2: CENELEC standard
Sound output(Music)	9 watts x 2
Picture tube	55cm diagonal, 90 degree
(Visible picture diagonal)	51cm
Dimensions (WxHxD)	596 x 466 x 483 mm
Weight	21.5 Kg

BLOCK DIAGRAM

This is a diagram for all models and therefore differs slightly from the actual block diagram.



F5JGS

CIRCUIT DESCRIPTION

1. POWER SUPPLY

The power supply circuit of the EB4-A chassis is composed of a rectifier smoothing circuit, an oscillation circuit, a control circuit and an output rectifier circuit. The AC input voltage is full-wave rectified by the rectifier smoothing circuit, and an unstable DC voltage is generated at both terminals of the smoothing capacitor C607. This voltage is input to the oscillation circuit. The oscillation circuit is provided with a blocking oscillator circuit that switches the switching transistor Q613 ON and OFF, and an oscillation frequency and a duty square wave pulse are generated in the input windings according to operation of the control circuit. A square-wave pulse whose size is dependent on the turn ratio of the input and output windings is obtained in the output winding. This is rectified in the output rectifier circuit, and the desired DC voltage is obtained.

2. IF & DEFLECTION (TDA8361)

The IF output signal from the tuner passes through the SAW filter, and it is input to pin45 and pin46 of IC201. The signal input to the IC passes through the IF amplifier, video detection and video amplifier circuits and is output from pin7 as a composite video signal. And after this signal is converted to impedance at Q151, supplies to the video and chroma amplifier stages.
The sync.-separation circuit separates the video signals applied to pin13(internal video signal) or pin15(external video signal) to vertical- and horizontal-sync. signals respectively. The horizontal oscillator requires no external components and is fully integrated. The oscillator is always running when the start-pin36 is supplied with 8V. Horizontal drive signal is output from pin37. VR361 is for adjustment of the horizontal centring. The separated vertical-sync. signal from sync. separation circuit passes through the vertical-separation circuit, and applied to trigger divider circuit. The horizontal oscillation pulse and input vertical sync. pulse are monitored by the trigger divider circuit, and switching 50Hz and 60Hz system, the vertical amplitude automatically adjusted for 50Hz and 60Hz. The output signal from the trigger divider is triggered vertical oscillation circuit consisting of C351, R352 and pin42, and vertical drive pulse is output from pin43. VR501 is for changing the amount of AC feedback applied to pin41 and for adjustment of the vertical amplitude.

3. VIDEO CHROMA & R.G.B. (TDA8361)

The composite video signal output from the pin7 of IC101 passes through Q151-Q154, and it is supplied to pin13. The external video signal output from SCART is supplied to pin15. The video signal input to pin13 or pin15 is separated to luminance (Y) signal and chroma signal in IC201. These pins are used in common with H/V-sync. separation input. The peaking of Y signal is adjusted by DC voltage of pin14. (“SHARPNESS” control) The chroma signal is divided into R-Y and B-Y chroma signals, demodulated in IC201, and output from pin30 (R-Y) and pin31 (B-Y). These chroma signals pass through the 1H delay line circuit (IC271), and they are input to pin29 (R-Y) and pin28 (B-Y). These R-Y/B-Y signals pass through RGB matrix circuit and RGB selector circuit of IC101. The internal RGB signals are generated in RGB matrix circuit and the RGB selector, consisting linear amplifiers, clamps and selects either the internal RGB signals or the external RGB signals input from pin22(R), pin23(G), pin24(B). Selection is controlled by the voltage at the RGB switch control (pin21) and mixed RGB modes are possible since RGB switching is fast. The RGB switch also functions as a fast blanking pin by blanking the RGB output stages; here internal and external RGB signals are overruled. The colour gain is controlled by DC voltage of pin26. (“COLOUR” control) The contrast control voltage present at pin25, and the brightness control voltage present at pin17 controls DC level of RGB signals. The RGB signals are finally buffered before being available at the RGB output pins [pin20 (R), pin19 (G), pin18 (R)].

4. AUDIO OUTPUT(TDA7263M)

The audio signals output from the audio unit are input to pin1(L) and 5(R) of IC171 and passes through the pre-amplifier circuit and drive circuit, after which it is input to the audio amplifier. The audio amplifier is an SEPP (single-ended, push-pull) OTL type and output to pin8(R) and 10(L) to directly drive the speakers.

5. VERTICAL OUTPUT (LA7832/LA7832)

An IC (LA7832/LA7833) is used for the vertical output circuit in this chassis. The vertical drive pulse from pin43 of IC201 is input to pin4 of IC501. This pulse drives IC501, and vertical scanning is performed. In the first half of scanning a deflecting current is output from pin2 and passes through the following path:
Vcc(B4) → D501 → pin3 → pin2 → DY → C512 → VR501/R509. An electric charge is then stored in C512. In the last half of scanning the current path is C512 → DY → pin2 → pin1 → VR501/R509 → C512. In this way, an amplifying sawtooth waveform current flows directly to DY to perform electron beam defection. Next, in the first half of the banking period the vertical drive pulse suddenly becomes OFF, and in order to reduce the current flowing to DY, the current path becomes as follows by the inductance of DY:
DY → pin2 → pin1 → VR501/R509 → C512 → DY. Also, when the charge of DY has dissipated, the current path becomes Vcc24V → pin6 → pin7 → C502 → pin3 → pin2→ DY → C512 → VR501/R509, and when the prescribed current value is reached, the vertical drive pulse becomes ON. This completes one cycle.

6. HORIZONTAL OUTPUT

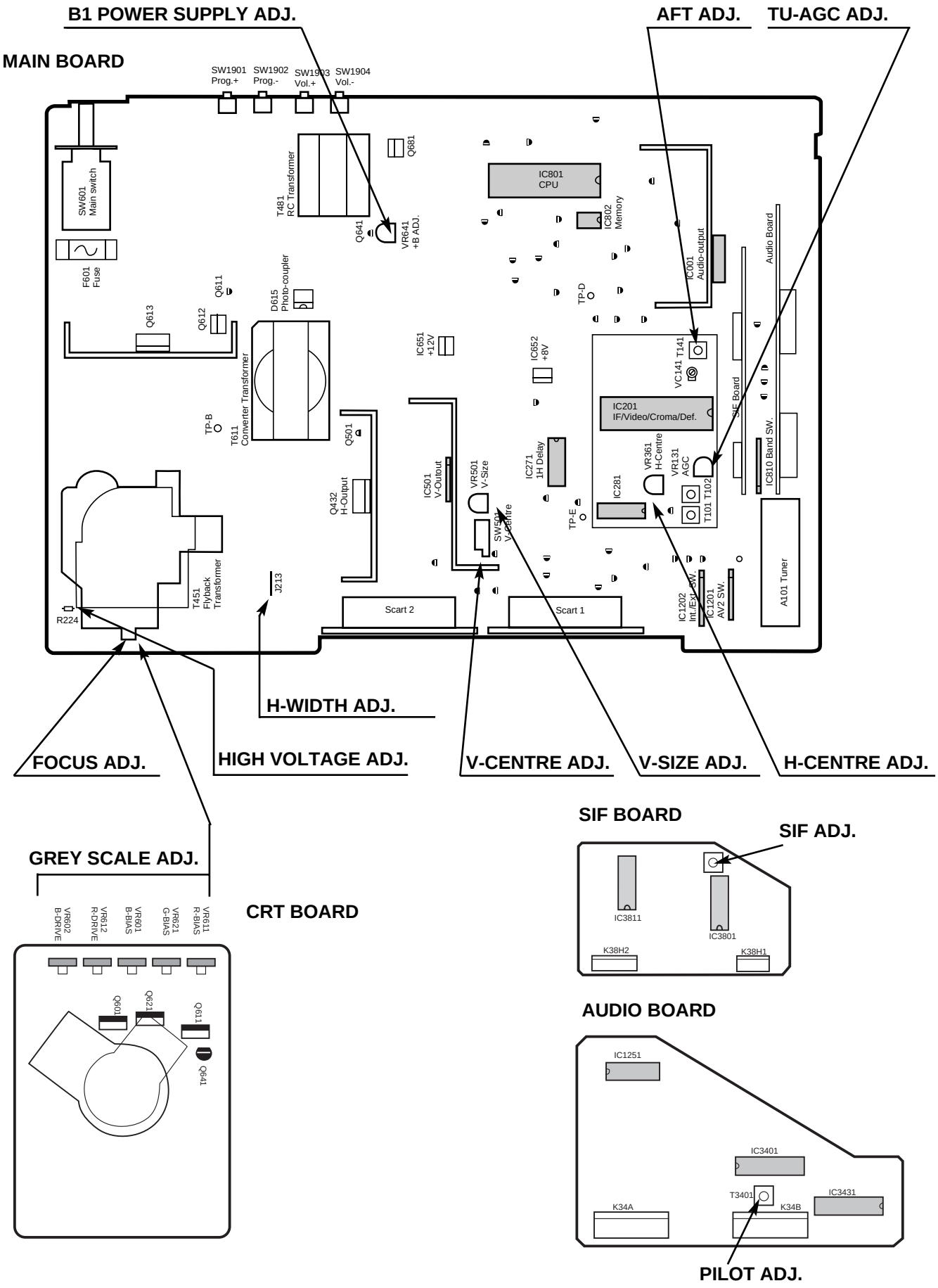
A horizontal oscillation signal is output from pin37 of IC201 and switches the drive transistor Q431. This switching signal is current amplified by the drive transformer T431 and drives the output transistor Q432. When Q432 becomes ON, an amplifying current flows directly to DY through C441 → DY → 0432 → GND, and defection is performed in the last half of the scanning period. Next, when Q432 becomes OFF, the charge that had been stored in DY up to that point releases a resonance current to the resonant capacitors C421/C423 and charges them. The current stored in C421/C423 is then flowed back to DY, and an opposite charge is then stored in DY. This opposite charge then switches the dumper diode in Q432 ON, the resonance state is completed, and an amplifying current is then flowed again directly to DY through the dumper diode. By this means, deflection in the first half of the scanning period is performed, and when Q432 becomes ON at the end of the first half of the scanning period, deflection during the last half is begun, thus completing one cycle.

7. CPU <System and Teletext Control>

Pin description

Pin1: Tuning voltage output
Pin2: Brightness control output (6-bit DAC)
Pin3: Contrast control output (6-bit DAC)
Pin4: Colour control output (6-bit DAC)
Pin5: Sharpness control output(6-bit DAC)
Pin6: Not used (GND)
Pin7: Not used (GND)
Pin8: Power ON/OFF output (H:ON)
Pin9: AFT signal input
Pin10: Option SW1 & Keyboard scan input (DC)
Pin11: Option SW2
Pin12: 50/60Hz switch input (50Hz: Hi)
Pin13: GND
Pin14: TV/AV switch output (TV: Hi)
Pin15: S-VHS switch output (S-VHS: Hi)
Pin16: Option SW3 (2AV: Hi)
Pin17: Function signal input for SCART1
Pin18: Function signal input for SCART2
Pin19: Power LED drive output1
Pin20: Option SW4 & Power LED drive output2
Pin21: Ignore output
Pin22: GND
Pin23: CVBS input0 (Internal)
Pin24: CVBS input1 (Internal/External)
Pin25: Black
Pin26: IREF
Pin27: Odd/Even output
Pin28: GND
Pin29: -
Pin30: V-deflection stop output
Pin31: RGB REF
Pin32: Blue output for OSD
Pin33: Green output for OSD
Pin34: Red output for OSD
Pin35: Blanking output for OSD
Pin36: H-sync. input (Horizontal pulse for OSD)
Pin37: V-sync. input (Vertical pulse for OSD)
Pin38~39: Supply (+5V)
Pin40: OSC GND
Pin41: Oscillator input for CPU
Pin42: Oscillator output for CPU
Pin43: Reset input
Pin44: Supply (+5V)
Pin45: Protect signal input (L:Power circuit defects)
Pin46: Ident. signal input
Pin47: R/C signal input
Pin48: Mute output in no picture
Pin49: I^2C bus SCL (Serial clock)
Pin50: I^2C bus SDA (Serial date)
Pin51: Option SW5 & Band select output1
Pin52: Band select output2

SERVICE CONTROL ADJUSTMENT



F5JGS

B1 POWER SUPPLY ADJUSTMENT

1. Set VR641 to be mechanically centre before pressing the mains ON/OFF switch.
2. Tune the receiver to a PAL circular pattern.
3. Set the brightness and contrast controls to normal.
4. Connect a digital V-meter to test point "TP-B".
5. Using VR641, adjust the voltage to 130 ± 0.5V.

AFT ADJUSTMENT

1. Tune the receiver to the clearest station.
2. Using T141, adjust the AFT to obtain the best picture.

AGC ADJUSTMENT

NOTE: ***Do not attempt this adjustment with a weak signal.***

1. Tune the receiver to the clearest station.
2. Set AGC VR(VR131) in direction which causes snow noise just to appear, then in the opposite direction until the snow noise just disappears.

GREY SCALE ADJUSTMENT

[SCREEN VR ADJUSTMENT]

1. Tune the receiver to the white pattern.
2. Set the brightness and contrast controls to normal.
3. Set VR2602and VR2612 to their mechanical centres.
4. Turn VR2601, VR2611 and VR2621 fully counter-clockwise (anti-clockwise).
5. Set the TV into service mode by pressing the Function button F on the Remote control and the Prog + P▲on the TV front panel. Press the Function button F on the Remote control until “SCREEN” is highlighted. This sets up a horizontal scanning line.
6. Set screen VR so that one colour is just visible.

[BIAS VR ADJUSTMENT]

7. By using VR2601, VR2611 or VR2621, adjust the line until it becomes white.
8. Set screen mode OFF, by pressing the Recall button on the Remote control.

[DRIVE VR ADJUSTMENT]

9. Using VR2602 and VR2612, adjust white balance.

HIGH VOLTAGE & WIDTH ADJUSTMENT

[HIGH VOLTAGE ADJUSTMENT]

1. Tune the receiver to the circular pattern.
2. Set the brightness and contrast controls to **maximum**.
3. Connect a digital V-meter to both terminals of R224, and a high voltage meter to the CRT anode.
4. Confirm high voltage to be 25.0 ± 1 KV at beam current 1.1mA, and less than 28.0 KV at 0 beam current.

[H-WIDTH ADJUSTMENT]

5. If H- width is too wide or narrow, connect or disconnect a lead wire J213**.**
6. Reconfirm high voltage.

H-CENTRE ADJUSTMENT

1. Tune the receiver to a circular pattern.
2. Adjust H-centre by using VR361.

V-CENTRE ADJUSTMENT

1. Tune the receiver to a circular pattern.
2. Adjust V-centre by using SW501.

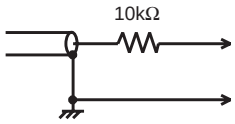
V-SIZE ADJUSTMENT

1. Tune the receiver to a circular pattern.
2. Adjust V-size by using VR501.

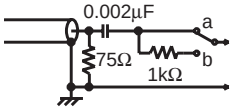
FOCUS ADJUSTMENT

By using FOCUS VR, adjust focus control for good scanning lines.

CIRCUIT ALIGNMENT

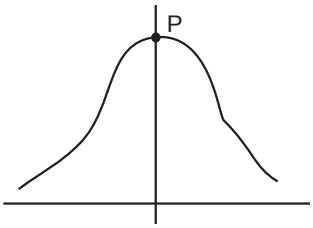


Input probe

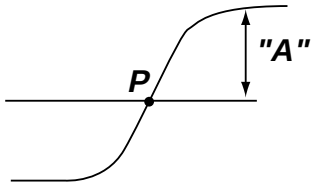


Output probe

VIF alignment

SETTING		Adjustment	Waveform
DC 15.5V AGC voltage (4.3-4.5V) Output probe Input probe Marker frequency Sweep ATT 0dB=176mVrms/75	C644 + IC201-pin48 IC201-pin45 (Side b) IC201-pin7 38.9MHz 20dB	By using T141, adjust "P" to be maximum amplitude.	

SIF alignment

SETTING		Adjustment	Waveform
DC 12V AGC voltage Output probe Input probe Sweep ATT Marker Frequency	IC3801-pin11 IC3801-pin3 IC3801-pin1 (Side b) IC3801-pin12 10dB 38.9MHz	1. Adjust AGC voltage to be "A" = 0.5Vp-p. 2. By using T3801, adjust "P" to be equal centre line.	

Pilot alignment

SETTING		Adjustment	Waveform
Oscilloscope Input sound signal source TV system Deviation Mode	IC3401-pin5 System B/G 27kHz Stereo	By using T3401, adjust amplitude to be maximum.	

INITIALISATION (Important Notice)

When you replace a memory IC (IC802), it is necessary to initialise the IC as following step.

A. Initialisation

Press and hold the **normalisation button** →•← on the remote control handset and press the **programme + button** **P▲** on the TV set.
The IC will be initialised automatically to set the following data.

User control data

Colour	: Centre
Brightness	: Centre
Contrast	: Maximum
Sharpness	: Centre
Text. Bright	: Centre
Bass	: Centre
Treble	: Centre
Balance	: Centre
Volume	: Step 12

Service data		**Manual set data**	
K1	: +000	->	+001
K2	: +000	->	-001
ST ID	: +000		
ATT	: +004		
MAX	: -096	->	-050
MIN	: +010	->	-075

The initialised service data of items K1, K2, MAX and MIN should be modified to the manual set data shown above.
For how to modify, refer to next step.

B. Service Mode

1. To entre the service mode, press and hold the **Function button** F on the remote control handset and press the **programme + button** **P▲** on the TV set.

   The following OSD appears on the screen.

ADJUST	**DATA**
K1	**+000**
K2	**-006**
ST ID	**+000**
ATT	**+004**
MAX	**-050**
MIN	**-075**
SCREEN	**VOL**
CPU Ver	**1.0**

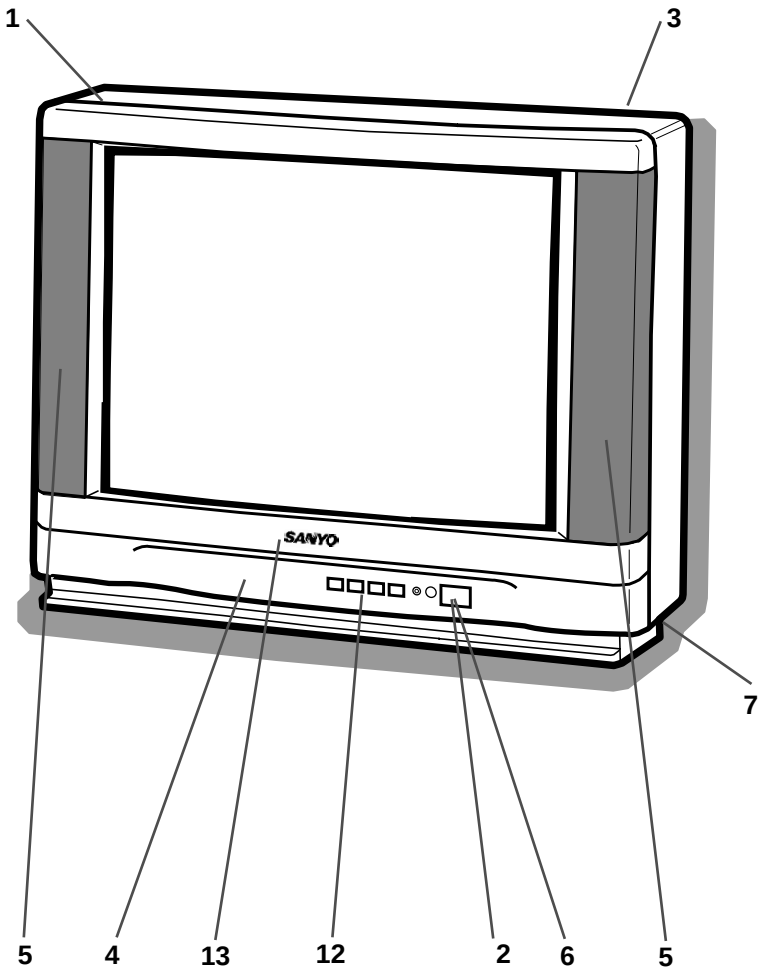
2. Select the desired service item by using the **Function button** F on the remote control handset.
3. Change the data by using the **Level + or - button** − ◢ +.
4. To return to TV mode press the **Recall button** on the remote control handset.

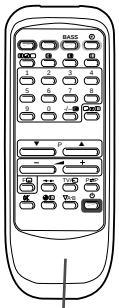
Service mode description

K1, K2 : For adjustment of stereo separation
ST ID : Mode setting for A2 stereo judgement
+000: Fast mode
+001: Normal mode
+002: Fast -> normal mode
ATT : Attenuation of FM sound
To equalise sound levels between FM and Nicam.
MAX : Setting of sensitivity for switching Nicam to FM mode
MIN : Setting of sensitivity for switching FM to Nicam mode.
SCREEN: For screen adjustment
To make one horizontal scanning line.

NOTE:
The items K1, K2, ST ID and ATT are invalid adjustments for a model which does not have an A2 stereo decoder.
The items MAX and MIN are invalid adjustmens for a model which does not have a Nicam decoder.
These items allow modifications to the set data, but there is no effect in performance.

CABINET PARTS LIST FOR MODELS CE21P2-C -01





Item	Part No.	Description
CABINET PARTS		
1	610 273 8834	ASSY,CABINET FR-F5JT
2	610 272 4370	BUTTON POWER-F4GT
3	610 261 6798	CABINET BACK-F2RCV
4	610 272 4417	DEC IND-F4GT
5	610 273 9282	GRILLE SP-F2RA
6	610 261 3032	SPRING-E7GC
7	610 253 2449	HOLDER AC CORD-GBR-D4VA
8	610 224 5721	SPACER CUSHION-B3MY
9	412 009 3003	CRT SCREW 6 X 30
10	411 076 1400	SCREW TPG 4 X 14
11	610 265 4202	HOLDER DEGAUSS COIL-F3SC
12	610 272 4387	BUTTON UNIT-F4GT
13	645 023 4316	BADGE,SANYO*46.2X13.5L45
ACCESSORIES		
14	JXMCC	RC TRANSMITTER
	SKP10182	QUICK GUIDE - F5JGS
	SKP10183	INST MANUAL - F5JGS

CHASSIS ELECTRICAL PARTS LIST

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a ⚠ mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark.

Note: Parts order must contain Service Ref. No., Part No., and descriptions.

Read description in the Capacitor and Resistor as follows:

CAPACITOR

CERAMIC 100P K 50V

- 50V — Rated Voltage
- K — Tolerance Symbols:

  Less than 10PF

  A: Not specified B: ±0.1PF C: ±0.25PF
  D: ±0.5PF F: ±1PF G: ±2PF
  R: ±0.25-0PF S: ±0-0.25PF E: +0-1PF

  More than 10PF

  A: Not specified B: ±0.1% C: ±0.25%
  D: ±0.5% F: ±1% G: ±2%
  H: ±3% J: ±5% K: ±10%
  L: ±15% M: ±20% N: ±30%
  P: +100-0% Q: +30-10% T: +50-10%
  U: +75-10% V: +20-10% W: +100-10%
  X: +40-20% Y: +150-10% Z: +80-20%
- 100P — Rated value: P=pico farad, U=Micro farad
- CERAMIC — Material:

  CERAMIC .....Ceramic
  MT-PAPER .....Metallized Paper
  POLYESTER.....Polyester
  MT-POLYEST .....Metallized Polyester
  POLYPRO.....Polypropylene
  MT-POLYPRO.....Metallized Polypropylene
  COMPO FILM .....Composite film
  MT-COMPO .....Metallized Composite
  STYRENE .....Styrene
  TA-SOLID .....Tantalum Solid
  AL-SOLID .....Aluminium Solid
  ELECT.....Electrolytic
  NP-ELECT.....Non-polarized Electrolytic
  OS-SOLID .....Aluminium Solid with Organic Semiconductive Electrolytic
  DL-ELECT.....Doble Layered Electrolytic

RESISTOR

CARBON 4.7K J A 1/4W

- 1/4W — Rated Wattage
- A — Performance Symbols:

  A: General B: Non flammable Z: Low noise
  Other: Temperature coefficient
- J — Tolerance Symbols:

  A: ±0.05% B: ±0.1% C: ±0.25% D: ±0.5%
  F: ±1% G: ±2% J: ±5% K: ±10%
  M: ±20% P: +5-15%
- 4.7K — Rated value, ohms:

  K: 1,000, M: 1,000,000
- CARBON — Material:

  CARBON .....Carbon
  MT-FILM .....Metal Film
  OXIDE-MT .....Oxide Metal Film
  SOLID .....Composition
  MT-GLAZE .....Metal Glaze
  WIRE WOUND ....Wire Wound
  CERAMIC RES....Ceramic
  FUSIBLE RES ....Fusible

Chassis construction CE21P2-02

ASSY,PWB,MAIN F5JGS 1AA0B10H039A0

TRANSISTOR

Ref. No.	Part No.	Description
Q001	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q1001	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q1002	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q1003	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q1004	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q1005	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q1041	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q1042	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q1043	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP

Ref. No.	Part No.	Description
	405 019 3804	TR 2SC536-G-NP
Q1201	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q1204	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q121	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q151	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q152	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q153	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q154	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q171	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q2001	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q201	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q202	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q203	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q431	405 011 1808	TR 2SC1627-O
	405 011 1907	TR 2SC1627-Y
	405 013 6801	TR 2SC2274-E
	405 013 7006	TR 2SC2274-F
Q432	405 022 6809	TR 2SD1651-CTV-YB
Q501	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q611	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q612	405 058 0208	TR 2SC3807-R-CTV-YA
Q613	405 018 9203	TR 2SC3895-T-CTV-YB
Q641	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q652	405 023 4903	TR 2SD400-D-MP
	405 023 5009	TR 2SD400-E-MP
	405 023 5306	TR 2SD400-F-MP
Q681	405 059 9804	TR 2SD1913-Q-RA
	405 059 9903	TR 2SD1913-R-RA
	405 060 0005	TR 2SD1913-S-RA
Q682	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q801	405 118 4207	TR PH2369
Q835	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q861	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q871	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q872	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q873	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q874	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
Q875	406 007 2106	TR JC546A
	406 007 2007	TR JC546B
	405 019 1909	TR 2SC536-E-NP
	405 019 2708	TR 2SC536-F-NP
	405 019 3804	TR 2SC536-G-NP
INTEGRATED CIRCUIT		
IC001	409 301 4906	IC TDA7263M
IC1202	409 120 3401	IC LA7221
IC201	409 309 6209	IC TDA8361/N3
IC271	409 404 0201	IC U3665M
IC501	409 192 5709	IC LA7833
IC651	409 143 3402	IC AN78M12 LB
	409 365 2900	IC BA178M12T
	409 026 9507	IC L78M12-RA
	409 269 1207	IC L78M12CV
	409 366 1803	IC MC78M12CT
IC652	409 362 7403	IC AN78M08 LB
	409 365 2801	IC BA178M08T
	409 285 5203	IC L78M08-RA
	409 269 1108	IC L78M08CV

Ref. No.	Part No.	Description
	409 366 1704	IC MC78M08CT
IC654	409 367 2809	IC BA178M09T
IC801	410 323 9206	IC SAA5290PS/116
IC802	409 333 3700	IC 24LC02B/P
IC810	409 019 6209	IC LA7910
CAPACITOR		
CL442TMP	403 076 0210	CERAMIC 220P K 500V
C001A	403 068 0419	CERAMIC 0.1U Z 25V
C002	403 070 9803	CERAMIC 0.015U K 50V
C003A	403 068 0419	CERAMIC 0.1U Z 25V
C004B	403 047 3100	ELECT 47U M 25V
C005	403 046 3507	ELECT 33U M 25V
C006	403 046 3507	ELECT 33U M 25V
C007	403 270 3403	MT-POLYEST 0.22U K 63V
	403 237 7901	MT-COMPO 0.22U J 50V
C008	403 270 3403	MT-POLYEST 0.22U K 63V
	403 237 7901	MT-COMPO 0.22U J 50V
C009	403 270 3403	MT-POLYEST 0.22U K 63V
	403 237 7901	MT-COMPO 0.22U J 50V
C010	403 270 3403	MT-POLYEST 0.22U K 63V
	403 237 7901	MT-COMPO 0.22U J 50V
C011	403 045 1504	ELECT 1000U M 25V
C012	403 045 1504	ELECT 1000U M 25V
C015	403 047 3100	ELECT 47U M 25V
C018	403 069 9500	CERAMIC 0.01U Z 50V
C021	403 052 8503	ELECT 1000U M 35V
C100	403 248 1618	ELECT 47U M 16V
C1001	403 069 1702	CERAMIC 1000P K 50V
C1002	403 041 8804	ELECT 10U M 16V
C1003	403 009 5708	CERAMIC 100P J 50V
C1004	403 130 3109	CERAMIC 0.047U K 50V
C1005	403 069 1702	CERAMIC 1000P K 50V
C1006	403 041 8804	ELECT 10U M 16V
C1007	403 009 5708	CERAMIC 100P J 50V
C1008	403 130 3109	CERAMIC 0.047U K 50V
C1009	403 041 8804	ELECT 10U M 16V
C101	403 194 4609	ELECT 470U M 16V
C102	403 248 1618	ELECT 47U M 16V
C1021	403 069 1702	CERAMIC 1000P K 50V
C1022	403 041 8804	ELECT 10U M 16V
C1023	403 009 5708	CERAMIC 100P J 50V
C1024	403 041 9405	ELECT 10U M 16V
C1025	403 069 1702	CERAMIC 1000P K 50V
C1026	403 041 8804	ELECT 10U M 16V
C1027	403 009 5708	CERAMIC 100P J 50V
C1028	403 041 9405	ELECT 10U M 16V
C1029	403 041 8804	ELECT 10U M 16V
C103A	403 069 1712	CERAMIC 1000P K 50V
C1031	403 014 9203	CERAMIC 180P J 50V
C104	403 248 1618	ELECT 47U M 16V
C1041	403 041 8804	ELECT 10U M 16V
C106	403 248 1410	ELECT 1U M 50V
C106TM	403 069 8305	CERAMIC 0.01U Z 50V
C107B	403 069 9510	CERAMIC CHIP 0.01 Z 50V
C108	403 027 1211	CERAMIC 5P J 50V
C109	403 027 1211	CERAMIC 5P J 50V
C110	403 033 4510	CERAMIC 82P J 50V
C114	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C117	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C1201	403 041 8804	ELECT 10U M 16V
C1203	403 069 8305	CERAMIC 0.01U Z 50V
C1205	403 609 5718	CERAMIC 100P J 50V
C121	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C131	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C132	403 069 1702	CERAMIC 1000P K 50V
C133	403 069 9500	CERAMIC 0.01U Z 50V
C134	403 050 6600	ELECT 3.3U M 50V
C135	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C136	403 194 4609	ELECT 470U M 16V
C137	403 068 0409	CERAMIC 0.1U Z 25V

Ref. No.	Part No.	Description
	403 070 2606	CERAMIC 0.1U Z 50V
C138	403 069 9500	CERAMIC 0.01U Z 50V
C141	403 028 4409	CERAMIC 56P J 50V
C142	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C143	403 027 1201	CERAMIC 5P C 50V
C146	403 010 8517	CERAMIC 12P C 50V
C151	403 024 2102	CERAMIC 39P J 50V
C162	403 068 2512	CERAMIC 0.22U Z 25V
C171	403 270 2901	MT-POLYEST 0.1U K 63V
	403 237 8007	MT-COMPO 0.1U J 50V
C1901	403 069 1702	CERAMIC 1000P K 50V
C200	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C2001	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C2002	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C2003	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C201	403 014 3409	CERAMIC 18P J 50V
C202	403 270 2901	MT-POLYEST 0.1U K 63V
	403 237 8007	MT-COMPO 0.1U J 50V
C203	403 073 9107	CERAMIC 4700P K 50V
C204	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C205	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C206	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C207	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C208	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C209	403 069 1702	CERAMIC 1000P K 50V
C212	403 248 2813	ELECT 2.2U M 50V
C215	403 270 3908	MT-POLYEST 0.47U K 63V
	403 256 0808	MT-COMPO 0.47U J 50V
C222	404 045 6605	NP-ELECT 2.2U M 50V
C226	403 138 1602	ELECT 1U M 100V
C231	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C232	403 014 9203	CERAMIC 180P J 50V
C233	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C234	403 013 3004	CERAMIC 150P J 50V
C235	403 008 7406	CERAMIC 10P D 50V
C271	403 069 1702	CERAMIC 1000P K 50V
C272	403 069 1702	CERAMIC 1000P K 50V
C273	403 069 9500	CERAMIC 0.01U Z 50V
C274	403 041 8804	ELECT 10U M 16V
C351	403 270 2901	MT-POLYEST 0.1U K 63V
	403 237 8007	MT-COMPO 0.1U J 50V
C352	403 270 3809	MT-POLYEST 0.047U K 63V
	403 225 2703	MT-COMPO 0.047U J 50V
C353	403 073 9107	CERAMIC 4700P K 50V
C354	403 248 1410	ELECT 1U M 50V
C361	403 072 5605	CERAMIC 2700P K 50V
C362	403 069 9500	CERAMIC 0.01U Z 50V
C363	403 195 8804	ELECT 100U M 16V
⚠ C421	CMXAA3Y912ADN	MT-POLYPRO 9100P
C425	403 165 7024	CERAMIC 470P K 3K
	403 287 3601	CERAMIC 330P K 3K
	403 232 3007	CERAMIC 330P K 3K
C430	403 075 7101	CERAMIC 1000P K 500V
C432	403 075 7101	CERAMIC 1000P K 500V
C433	403 076 3102	CERAMIC 3900P K 500V
C434	403 229 1207	ELECT 47U M 35V
C437	403 066 6106	MT-POLYEST 0.47U J 250V
C438	403 057 0601	POLYESTER 0.01U K 50V
	403 179 3801	POLYESTER 0.01U K 50V
⚠ C441	403 299 2817	POLYPRO 0.33U J 200V
C445	403 049 4204	ELECT 10U M 50V

Ref. No.	Part No.	Description
C481	403 076 1405	CERAMIC 2700P K 500V
C482	403 159 7409	MT-POLYEST 0.1U K 250V
C501	403 054 1502	ELECT 470U M 35V
C502	403 053 2104	ELECT 220U M 35V
C503	403 024 2102	CERAMIC 39P J 50V
C504	403 069 9500	CERAMIC 0.01U Z 50V
C505	403 075 7101	CERAMIC 1000P K 500V
C506	403 183 7901	MT-POLYEST 0.1U K 100V
	403 256 4806	MT-COMPO 0.1U J 100V
C511	403 188 1201	MT-POLYEST 0.15U K 100V
	403 313 7603	MT-COMPO 0.15U J 100V
C512	403 148 0404	ELECT 1000U M 25V
C513	403 049 4204	ELECT 10U M 50V
C514	403 049 4204	ELECT 10U M 50V
C600	403 076 4000	CERAMIC 4700P K 500V
⚠ C601	404 060 7205	MT-POLYEST 0.1U M 250V
⚠ C602	404 060 7205	MT-POLYEST 0.1U M 250V
C603	403 076 7100	CERAMIC 1000P M 1K
C604	403 076 7100	CERAMIC 1000P M 1K
C605	403 076 7100	CERAMIC 1000P M 1K
C606	403 076 7100	CERAMIC 1000P M 1K
C607	404 047 1707	ELECT 220U M 400V
	404 069 5905	ELECT 220U M 400V
C613	403 061 8303	POLYESTER 4700P K 50V
	403 179 1104	POLYESTER 4700P K 50V
C614	403 270 2901	MT-POLYEST 0.1U K 63V
	403 237 8007	MT-COMPO 0.1U J 50V
C615	403 058 2604	POLYESTER 0.015U J 50V
	403 179 3207	POLYESTER 0.015U J 50V
C616	403 165 8407	CERAMIC 680P K 2K
	403 232 2109	CERAMIC 680P K 2K
C617	403 179 1718	POLYESTER 0.033U J 50V
⚠ C631	404 060 6505	CERAMIC 2200P M 400V
	404 071 4200	CERAMIC 2200P M 400V
	404 060 6604	CERAMIC 2200P M 400V
⚠ C632	404 044 2806	CERAMIC 470P K 400V
	404 071 4606	CERAMIC 470P K 400V
	404 060 6901	CERAMIC 470P M 400V
C640	403 069 8305	CERAMIC 0.01U Z 50V
C641	403 165 9305	CERAMIC 680P K 1K
	403 262 4401	CERAMIC 680P K 1K
C642A	404 055 9801	ELECT 220U M 200V
C643	403 148 2002	ELECT 470U M 35V
C644	403 148 0701	ELECT 2200U M 25V
C645	403 158 1309	ELECT 2200U M 35V
C647	403 069 9500	CERAMIC 0.01U Z 50V
C651	403 148 0305	ELECT 470U M 16V
C652	403 069 9500	CERAMIC 0.01U Z 50V
C653	403 248 1618	ELECT 47U M 16V
C655	403 126 4400	ELECT 100U M 10V
C661	403 051 0607	ELECT 4.7U M 50V
C681	403 190 4702	ELECT 1000U M 25V
C682	403 069 9500	CERAMIC 0.01U Z 50V
C683	403 147 9606	ELECT 1000U M 10V
C684	403 050 6600	ELECT 3.3U M 50V
C802	403 270 2901	MT-POLYEST 0.1U K 63V
	403 237 8007	MT-COMPO 0.1U J 50V
C812	403 248 1410	ELECT 1U M 50V
C814	403 248 1410	ELECT 1U M 50V
C816	403 051 0607	ELECT 4.7U M 50V
C818	403 051 0607	ELECT 4.7U M 50V
C841	403 069 9500	CERAMIC 0.01U Z 50V
C860	403 022 8205	CERAMIC 33P J 50V
C861	403 179 1213	POLYESTER 4700P J 50V
C871	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C872	403 248 1618	ELECT 47U M 16V
C873	403 018 0503	CERAMIC 22P J 50V
C874	403 018 0503	CERAMIC 22P J 50V
C875	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V

Ref. No.	Part No.	Description
C878	403 073 9107	CERAMIC 4700P K 50V
C879	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C881	403 069 9510	CERAMIC 0.01U Z 50V
C882	403 041 8804	ELECT 10U M 16V
C883	403 018 0503	CERAMIC 22P J 50V
C884	403 018 0503	CERAMIC 22P J 50V
C892	403 069 9510	CERAMIC 0.01U Z 50V
RESISTOR		
R001	401 037 5400	MT-GLAZE 1K JA 1/10W
R002	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R003	401 037 5400	MT-GLAZE 1K JA 1/10W
R004	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R005	401 019 9600	CARBON 47 JA 1/4W
R006	401 014 4105	CARBON 1.5K JA 1/4W
R007	401 019 9600	CARBON 47 JA 1/4W
R008	401 014 4105	CARBON 1.5K JA 1/4W
R009	401 010 1504	CARBON 4.7 JA 1/2W
R010	401 010 1504	CARBON 4.7 JA 1/2W
R013	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R014	401 025 7409	CARBON 220 JA 1/6W
R015	401 037 5400	MT-GLAZE 1K JA 1/10W
R016	401 038 6505	MT-GLAZE 47K JA 1/10W
R017	401 037 5608	MT-GLAZE 10K JA 1/10W
R100	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1001	401 038 7601	MT-GLAZE 560 JA 1/10W
R1002	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1003	401 038 7601	MT-GLAZE 560 JA 1/10W
R1004	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1005	401 027 6608	CARBON 75 JA 1/6W
R1006	401 038 5300	MT-GLAZE 39K JA 1/10W
R1007	401 038 3702	MT-GLAZE 33K JA 1/10W
R1008	401 027 6608	CARBON 75 JA 1/6W
R1009	401 027 6608	CARBON 75 JA 1/6W
R101	401 038 6218	MT-GLAZE 47 JA 1/10W
R1010	401 027 6608	CARBON 75 JA 1/6W
R1011	401 037 5202	MT-GLAZE 100 JA 1/10W
R1012	401 027 6608	CARBON 75 JA 1/6W
R1013	401 024 6700	CARBON 100 JA 1/6W
R1014	401 027 6608	CARBON 75 JA 1/6W
R1015	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R1016	401 019 1000	CARBON 390 JA 1/4W
R1017	401 024 7400	CARBON 10K JA 1/6W
R1018	401 038 3504	MT-GLAZE 330 JA 1/10W
R1021	401 038 7601	MT-GLAZE 560 JA 1/10W
R1022	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1023	401 038 7601	MT-GLAZE 560 JA 1/10W
R1024	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1025	401 038 5300	MT-GLAZE 39K JA 1/10W
R1026	401 038 3702	MT-GLAZE 33K JA 1/10W
R1027	401 027 6608	CARBON 75 JA 1/6W
R1028	401 027 6608	CARBON 75 JA 1/6W
R1029	401 025 1308	CARBON 150 JA 1/6W
R1031	401 038 0612	MT-GLAZE 220 JA 1/10W
R1032	401 038 0612	MT-GLAZE 220 JA 1/10W
R1033	401 038 0612	MT-GLAZE 220 JA 1/10W
R1041	401 038 2200	MT-GLAZE 27K JA 1/10W
R1042	401 037 5608	MT-GLAZE 10K JA 1/10W
R1043	401 039 0304	MT-GLAZE 820 JA 1/10W
R1044	401 039 0304	MT-GLAZE 820 JA 1/10W
R1045	401 037 5400	MT-GLAZE 1K JA 1/10W
R1046	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1047	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R1051	401 037 8104	MT-GLAZE 150K JA 1/10W
R1052	401 037 5707	MT-GLAZE 100K JA 1/10W
R1053	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R1054	401 037 8104	MT-GLAZE 150K JA 1/10W
R1055	401 037 5707	MT-GLAZE 100K JA 1/10W
R1056	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R108	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R110	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
R1200	401 022 1905	CARBON 680 JA 1/4W

Ref. No.	Part No.	Description
R1201	401 038 6505	MT-GLAZE 47K JA 1/10W
R1203	401 037 5608	MT-GLAZE 10K JA 1/10W
R1204	401 038 2200	MT-GLAZE 27K JA 1/10W
R1205	401 038 2200	MT-GLAZE 27K JA 1/10W
R1206	401 038 6505	MT-GLAZE 47K JA 1/10W
R1207	401 024 7400	CARBON 10K JA 1/6W
R121	401 027 0309	CARBON 47K JA 1/6W
R133	401 037 9101	MT-GLAZE 180 JA 1/10W
R134	401 039 0413	MT-GLAZE 8.2K JA 1/10W
R135	401 038 0810	MT-GLAZE 22K JA 1/10W
R137	401 037 5202	MT-GLAZE 100 JA 1/10W
R138	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R141	401 038 9209	MT-GLAZE 6.8K JA 1/10W
R150	401 024 7004	CARBON 1K JA 1/6W
R151	401 022 1905	CARBON 680 JA 1/4W
R152	401 025 3807	CARBON 180 JA 1/6W
R153	401 037 5400	MT-GLAZE 1K JA 1/10W
R154	401 038 7611	MT-GLAZE 560 JA 1/10W
R155	401 037 5400	MT-GLAZE 1K JA 1/10W
R156	401 037 5400	MT-GLAZE 1K JA 1/10W
R157	401 039 0908	MT-GLAZE 910 JA 1/10W
R158	401 037 5400	MT-GLAZE 1K JA 1/10W
R159	401 022 1905	CARBON 680 JA 1/4W
R163	401 038 6505	MT-GLAZE 47K JA 1/10W
R171	401 038 6307	MT-GLAZE 470 JA 1/10W
R172	401 025 7409	CARBON 220 JA 1/6W
R173	401 025 7409	CARBON 220 JA 1/6W
R1900	401 038 7809	MT-GLAZE 56K JA 1/10W
R1901	401 037 8005	MT-GLAZE 15K JA 1/10W
R1901A	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1902	401 039 0403	MT-GLAZE 8.2K JA 1/10W
R1902A	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1903	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R1903A	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1904	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R1905	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1906	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R1907	401 037 5608	MT-GLAZE 10K JA 1/10W
R1908	401 038 3504	MT-GLAZE 330 JA 1/10W
R1909	401 037 7909	MT-GLAZE 1.5K JA 1/10W
R1911	401 038 6307	MT-GLAZE 470 JA 1/10W
R1921	401 037 6615	MT-GLAZE 120 JA 1/10W
R1922	401 038 5013	MT-GLAZE 390 JA 1/10W
R1924	401 027 5502	CARBON 6.8K JA 1/6W
R2001	401 038 2200	MT-GLAZE 27K JA 1/10W
R2002	401 037 5608	MT-GLAZE 10K JA 1/10W
R2004	401 037 7800	MT-GLAZE 150 JA 1/10W
R2005	401 013 6447	CARBON 12K JA 1/4W
R201	401 038 6505	MT-GLAZE 47K JA 1/10W
R202	401 037 5707	MT-GLAZE 100K JA 1/10W
R203	401 024 6720	CARBON 100 JA 1/6W
R204	401 024 6720	CARBON 100 JA 1/6W
R205	401 024 6720	CARBON 100 JA 1/6W
R206	401 037 5202	MT-GLAZE 100 JA 1/10W
R207	401 037 5202	MT-GLAZE 100 JA 1/10W
R208	401 037 5202	MT-GLAZE 100 JA 1/10W
R211	401 038 0800	MT-GLAZE 22K JA 1/10W
R212	401 017 1844	CARBON 2.7K JA 1/4W
R213	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R214	401 037 5202	MT-GLAZE 100 JA 1/10W
R215	401 038 3702	MT-GLAZE 33K JA 1/10W
R216	401 025 8208	CARBON 22K JA 1/6W
R217	401 025 8208	CARBON 22K JA 1/6W
R218	401 038 7809	MT-GLAZE 56K JA 1/10W
R223	401 014 6109	CARBON 150K JA 1/4W
R224	401 024 7004	CARBON 1K JA 1/6W
R226	401 026 7408	CARBON 39K JA 1/6W
R227	401 024 7400	CARBON 10K JA 1/6W
R231	401 037 7800	MT-GLAZE 150 JA 1/10W
R232	401 037 7800	MT-GLAZE 150 JA 1/10W
R271	401 024 6700	CARBON 100 JA 1/6W
R272	401 024 9008	CARBON 120 JA 1/6W
R351	401 024 6700	CARBON 100 JA 1/6W

Ref. No.	Part No.	Description
R353	401 038 0909	MT-GLAZE 220K JA 1/10W
R356	401 037 5202	MT-GLAZE 100 JA 1/10W
R357	401 037 8005	MT-GLAZE 15K JA 1/10W
R361	401 038 5409	MT-GLAZE 390K JA 1/10W
R363	401 038 0800	MT-GLAZE 22K JA 1/10W
R364	401 037 5202	MT-GLAZE 100 JA 1/10W
R365	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R431	401 038 3504	MT-GLAZE 330 JA 1/10W
R432	401 038 3504	MT-GLAZE 330 JA 1/10W
R433	401 010 3102	CARBON 470 JA 1/2W
⚠ R434	401 067 9201	OXIDE-MT 390 JA 2W
⚠ R435A	402 069 8704	WIRE WOUND 8.2 KA 7W
	402 076 0609	WIRE WOUND 8.2 KA 7W
R436	401 014 5241	CARBON 15K JA 1/4W
⚠ R441	401 058 3706	OXIDE-MT 1K JA 1W
R447	401 026 9907	CARBON 4.7K JA 1/6W
R448	401 009 5803	CARBON 330 JA 1/2W
⚠ R451	401 064 5701	OXIDE-MT 1.8 JA 2W
R481	401 025 4903	CARBON 180K JA 1/6W
R482	401 027 2600	CARBON 5.6K JA 1/6W
R501	401 026 9907	CARBON 4.7K JA 1/6W
⚠ R502	402 051 8705	FUSIBLE RES 4.7 J- 1/2W
R504	401 027 3003	CARBON 56K JA 1/6W
R506	401 019 1941	CARBON 3K9 JA 1/4W
R507	401 025 1328	CARBON 150 JA 1/6W
R508	401 026 4328	CARBON 3K3 JA 1/6W
⚠ R509	401 057 9105	OXIDE-MT 1.2 JA 1W
⚠ R511	401 060 2704	OXIDE-MT 220 JA 1W
⚠ R513	401 059 3903	OXIDE-MT 1.5K JA 1W
⚠ R602	402 072 4403	WIRE WOUND 3.9 KA 7W
R611	401 027 2600	CARBON 5.6K JA 1/6W
R615	401 025 8208	CARBON 22K JA 1/6W
R617	401 024 9305	CARBON 1.2K JA 1/6W
R619	401 016 1508	CARBON 22 JA 1/4W
R620	401 007 5805	CARBON 120K JA 1/2W
R621	401 007 5805	CARBON 120K JA 1/2W
R622	401 014 5201	CARBON 15K JA 1/4W
R623	401 025 7805	CARBON 2.2K JA 1/6W
⚠ R624	401 068 6902	OXIDE-MT 56 JA 2W
⚠ R625	401 067 8204	OXIDE-MT 39 JA 2W
R626	401 016 3304	CARBON 2.2K GA 1/4W
⚠ R631	402 000 8305	SOLID 5.6M KA 1/2W
⚠ R632	402 000 8305	SOLID 5.6M KA 1/2W
R641	401 012 8105	CARBON 100K JA 1/4W
R642	401 026 9907	CARBON 4.7K JA 1/6W
R643	401 014 6109	CARBON 150K JA 1/4W
R644	401 010 4307	CARBON 47K JA 1/2W
R645	401 025 8208	CARBON 22K JA 1/6W
⚠ R646	402 067 3305	WIRE WOUND 4.7 KA 5W
	402 075 5704	WIRE WOUND 4.7 KA 5W
⚠ R652	401 065 1801	OXIDE-MT 12 JA 2W
⚠ R653	401 067 8204	OXIDE-MT 39 JA 2W
⚠ R655	401 067 4206	OXIDE-MT 33 JA 2W
R656	401 026 9620	CARBON 470 JA 1/6W
⚠ R661	401 068 4700	OXIDE-MT 4.7K JA 2W
⚠ R662	401 068 0207	OXIDE-MT 3.9K JA 2W
R681	401 008 1608	CARBON 1.8K JA 1/2W
⚠ R682	401 069 1708	OXIDE-MT 68 JA 2W
R684	401 027 8602	CARBON 8.2K JA 1/6W
R685	401 025 8208	CARBON 22K JA 1/6W
R800	401 026 9907	CARBON 4.7K JA 1/6W
R801	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R802	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R803	401 037 9408	MT-GLAZE 180K JA 1/10W
R804	401 024 7400	CARBON 10K JA 1/6W
R806	401 024 7400	CARBON 10K JA 1/6W
R807	401 024 7400	CARBON 10K JA 1/6W

Ref. No.	Part No.	Description
R808	401 019 1901	CARBON 3.9K JA 1/4W
R811	401 025 7805	CARBON 2.2K JA 1/6W
R812	401 038 5102	MT-GLAZE 3.9K JA 1/10W
R813	401 026 4605	CARBON 33K JA 1/6W
R815	401 024 6700	CARBON 100 JA 1/6W
R816	401 037 5608	MT-GLAZE 10K JA 1/10W
R817A	401 039 0413	MT-GLAZE 8.2K JA 1/10W
R818	401 038 9308	MT-GLAZE 68K JA 1/10W
R819	401 025 7805	CARBON 2.2K JA 1/6W
R820	401 037 5608	MT-GLAZE 10K JA 1/10W
R821	401 038 0800	MT-GLAZE 22K JA 1/10W
R822	401 038 6505	MT-GLAZE 47K JA 1/10W
R823	401 016 3304	CARBON 2.2K GA 1/4W
R824	401 038 5102	MT-GLAZE 3.9K JA 1/10W
R825	401 038 3603	MT-GLAZE 3.3K JA 1/10W
R838	401 037 8005	MT-GLAZE 15K JA 1/10W
R839	401 026 4605	CARBON 33K JA 1/6W
R840	401 026 9600	CARBON 470 JA 1/6W
R841	401 038 0800	MT-GLAZE 22K JA 1/10W
R842	401 026 9907	CARBON 4.7K JA 1/6W
R843	401 037 5608	MT-GLAZE 10K JA 1/10W
R844	401 038 5102	MT-GLAZE 3.9K JA 1/10W
R845	401 037 5608	MT-GLAZE 10K JA 1/10W
R846	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R847	401 037 5608	MT-GLAZE 10K JA 1/10W
R848	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R851	401 037 5400	MT-GLAZE 1K JA 1/10W
R852	401 037 5400	MT-GLAZE 1K JA 1/10W
R853	401 038 0800	MT-GLAZE 22K JA 1/10W
R861	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R862	401 038 0800	MT-GLAZE 22K JA 1/10W
R863	401 038 0800	MT-GLAZE 22K JA 1/10W
R864	401 037 6714	MT-GLAZE 1.2K JA 1/10W
R865	401 038 0711	MT-GLAZE 2.2K JA 1/10W
R866	401 038 0711	MT-GLAZE 2.2K JA 1/10W
R867	401 038 0711	MT-GLAZE 2.2K JA 1/10W
R868	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R869	401 038 2200	MT-GLAZE 27K JA 1/10W
R870A	401 025 8208	CARBON 22K JA 1/6W
R871	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R872	401 038 3702	MT-GLAZE 33K JA 1/10W
R873	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R874	401 037 5608	MT-GLAZE 10K JA 1/10W
R875	401 038 7700	MT-GLAZE 5.6K JA 1/10W
R876	401 037 5608	MT-GLAZE 10K JA 1/10W
R877	401 039 0403	MT-GLAZE 8.2K JA 1/10W
R878	401 037 7909	MT-GLAZE 1.5K JA 1/10W
R879	401 037 5608	MT-GLAZE 10K JA 1/10W
R880	401 038 6505	MT-GLAZE 47K JA 1/10W
R884	401 037 7800	MT-GLAZE 150 JA 1/10W
R885	401 038 5102	MT-GLAZE 3.9K JA 1/10W
R886	401 037 7800	MT-GLAZE 150 JA 1/10W
R887	401 038 5102	MT-GLAZE 3.9K JA 1/10W
R888	401 037 5202	MT-GLAZE 100 JA 1/10W
R889	401 037 5202	MT-GLAZE 100 JA 1/10W
R891	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R892	401 038 6406	MT-GLAZE 4.7K JA 1/10W
R893	401 037 5400	MT-GLAZE 1K JA 1/10W
R894	401 037 5400	MT-GLAZE 1K JA 1/10W
R895	401 037 6704	MT-GLAZE 1.2K JA 1/10W
R896	401 038 6505	MT-GLAZE 47K JA 1/10W
R897	401 012 5748	CARBON 1K JA 1/4W
R898	401 012 5748	CARBON 1K JA 1/4W

VARIABLE RESISTOR

VR131	645 003 5531	VR,SEMI,10K N
VR361	645 003 5531	VR,SEMI,10K N
VR501	645 003 5531	VR,SEMI,100 N
VR641	645 003 5531	VR,SEMI,2.2K N

TRANSFORMER

T101	610 037 4508	S COIL
T141	610 037 4522	S COIL
T431	610 000 1053	DRIVE TRANS
	610 000 1060	DRIVE TRANS
⚠ T451	645 035 5295	TRANS,FLYBACK
⚠ T611	645 015 7646	TRANS,POWER,PULSE
⚠ T681	610 033 3758	POWER TRANS
	610 240 4722	POWER TRANS

COIL

L1002	645 033 2722	BEAD CORE TAIYO YUDEN 52M
L1003	645 001 4567	INDUCTOR,10U K
L1004	645 001 4567	INDUCTOR,10U K
L1005	645 001 4567	INDUCTOR,10U K
L1006	645 001 4567	INDUCTOR,10U K
L101	645 001 4567	INDUCTOR,10U K
L102	645 008 2863	INDUCTOR,4.7U K
L1022	645 033 2722	BEAD CORE TAIYO YUDEN 52M
L1023	645 001 4567	INDUCTOR,10U K
L1024	645 001 4567	INDUCTOR,10U K
L1025	645 001 4567	INDUCTOR,10U K
L1026	645 001 4567	INDUCTOR,10U K
L1027	645 008 2863	INDUCTOR,4.7U K
L141	645 001 4550	PEAKING COIL 10UH
L151	645 008 2924	INDUCTOR,8.2U K
L152	645 003 9782	INDUCTOR,22U K
L201	645 001 4567	INDUCTOR,10U K
L202	645 001 4567	INDUCTOR,10U K
L203	645 001 4567	INDUCTOR,10U K
L231	645 008 2863	INDUCTOR,4.7U K
L232	645 008 2863	INDUCTOR,4.7U K
L431	645 008 5628	INDUCTOR,1U M
L432	645 033 2722	BEAD CORE TAIYO YUDEN 52M
L441A	610 000 0605	LINEARITY COIL
L442	610 219 0342	COIL
L501	645 008 5642	INDUCTOR,3.3U K
⚠ L601	645 012 3337	LINE FILTER
L607	610 237 1000	PIPE CORE
L608	610 237 1000	PIPE CORE
L641	645 033 2722	BEAD CORE TAIYO YUDEN 52M
L642	645 033 2722	BEAD CORE TAIYO YUDEN 52M
L643	645 033 2722	BEAD CORE TAIYO YUDEN 52M
L871	645 008 0203	INDUCTOR,5.6U K
L881	645 001 4697	INDUCTOR,1.5U M

DIODE

D1005	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1007	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1008	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1010	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1011	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1021	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1022	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1023	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1024	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1026	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1027	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D1201	407 053 6803	ZENER DIODE MTZ5.6C
	407 057 0104	ZENER DIODE RD5.6EB3
	407 151 8501	ZENER DIODE UZ-5.6BCC
D135	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC

Ref. No.	Part No.	Description
D1901-1	610 269 4710	HOLDER LED A-G2CA
D1901A	407 120 9706	LED LN28RPL
D1903	407 063 8309	ZENER DIODE MTZJ11C
D1905	407 012 4406	DIODE 1SS133
D201	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D202	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D203	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D210	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D221	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D222	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D271	407 053 6407	ZENER DIODE MTZ5.1C
	407 056 8200	ZENER DIODE RD5.1EB3
	407 163 8209	ZENER DIODE UZ-5.1BCC
D361	407 063 8309	ZENER DIODE MTZJ11C
	407 158 3400	ZENER DIODE UZ-11BSC
D431	407 053 8708	ZENER DIODE MTZ9.1A
	407 053 8807	ZENER DIODE MTZ9.1B
	407 057 9602	ZENER DIODE RD9.1EB1
	407 057 9701	ZENER DIODE RD9.1EB2
	407 163 9909	ZENER DIODE UZ-9.1BCA
	407 162 2703	ZENER DIODE UZ-9.1BCB
D432	407 005 7308	DIODE EM01Z
D439	407 006 4108	DIODE ERB44-04
D442	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D445	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D446	407 151 9003	ZENER DIODE UZ-7.5BCC
	407 151 9102	ZENER DIODE UZ-8.2BCA
D481	407 007 7405	DIODE EU1
D482	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D501	407 005 7308	DIODE EM01Z
	408 009 9008	DIODE BYD33D
D502	407 118 2207	ZENER DIODE 1Z75
D603	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
D604	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
D605	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
D606	407 006 6300	DIODE ERC05-10B
	407 009 6901	DIODE RM11C
D614	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
⚠ D615	407 105 8700	PHOTO COUPLE PC113B
	408 009 8407	PHOTO COUPLE CNY17F-3OPT6
D616	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D617	407 007 6606	DIODE ES1
	407 007 6903	DIODE ES1Z
	408 009 9008	DIODE BYD33D
D618	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D619	407 053 3000	ZENER DIODE MTZ11C
	407 054 1807	ZENER DIODE RD11EB3
D641	407 007 7712	DIODE EU2A
D642	407 007 7603	DIODE EU2
	407 007 7801	DIODE EU2Z
⚠ D643	407 166 2303	DIODE ERC91-02L
⚠ D644	407 166 2303	DIODE ERC91-02L
D645	407 053 7206	ZENER DIODE MTZ6.2C
	407 053 7503	ZENER DIODE MTZ6.8A
	407 057 2801	ZENER DIODE RD6.2EB3
	407 057 4003	ZENER DIODE RD6.8EB1
	407 151 8600	ZENER DIODE UZ-6.2BCC
	407 164 9908	ZENER DIODE UZ-6.8BCA
D647	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D652	407 053 6803	ZENER DIODE MTZ5.6C
	407 057 0104	ZENER DIODE RD5.6EB3
	407 151 8501	ZENER DIODE UZ-5.6BCC
D654	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D655	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D661	409 013 0104	IC HZT33
	409 026 8005	IC L5630
	409 057 5103	IC UPC574J
D681	407 005 7308	DIODE EM01Z
D682	407 053 6803	ZENER DIODE MTZ5.6C
	407 057 0104	ZENER DIODE RD5.6EB3
	407 151 8501	ZENER DIODE UZ-5.6BCC
D683	407 005 7308	DIODE EM01Z
D684	408 007 8607	DIODE 1N4148
	407 013 1206	DIODE 1S1555
D685	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D831	407 005 4505	DIODE DS442X
	407 013 1008	DIODE 1S1553
	407 013 4306	DIODE 1S2076A
	407 013 6508	DIODE 1S2471
D861	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D871	407 012 4406	DIODE 1SS133
	407 012 5809	DIODE 1SS176
D872	407 055 7907	ZENER DIODE RD3.6EL
MISCELLANEOUS		
⚠ F601	423 022 2102	FUSE 250V 4A
A101	645 023 4118	TUNER,U/V
A1901	645 007 1546	UNIT,REMOCON RECEIVER
	610 224 5806	RC PREAMP 409-1L
TP-A	645 008 4058	TERMINAL,PLUG
TP-B	645 008 4058	TERMINAL,PLUG
TP-D	645 008 4058	TERMINAL,PLUG
TP-E	645 008 4058	TERMINAL,PLUG
J025	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
J130	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
J151	401 037 5816	MT-GLAZE 1M JA 1/10W
J194	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
K10B	645 004 2911	PLUG,5P
K1001	645 005 5867	SOCKET,RGB 21P
	610 234 3779	SOCKET 21P
K1001Z	610 261 2813	MOUNTING-BRKT F2WV
K1002	645 005 5867	SOCKET,RGB 21P
	610 234 3779	SOCKET 21P
K1002Z	610 261 2813	MOUNTING-BRKT F2WV
⚠ PS601	408 003 6805	THERMISTOR 902P44E180MR14
	408 015 1904	THERMISTOR PA3A5180B270
SW1901	610 011 2698	SWITCH,PUSH
SW1902	610 011 2698	SWITCH,PUSH
SW1903	610 011 2698	SWITCH,PUSH
SW1904	610 011 2698	SWITCH,PUSH
SW501	610 011 2728	SWITCH,LEVER 1P-3T
⚠ SW601	645 024 0607	PUSH SW POWER SDDFC3
X131	421 002 2609	SAW F TSF5315

Ref. No.	Part No.	Description
	421 003 3902	SAW F TSF5315U
X151	610 015 2854	TRAP,CERAMIC 5.5MHZ
X152	610 015 3011	TRAP,CERAMIC 6.5MHZ
X201	645 025 2631	CRYSTAL OSCILL 4.43MHz
X871	645 015 8339	OSC,CRYSTAL 12MHZ
YO7	645 008 4058	TERMINAL PLUG
ASSY,PWB,SIF F2RT	**1AA0B10E230BA**	
TRANSISTOR		
Q3801	405 015 9701	TR 2SC2814-F4-TA
	405 015 9909	TR 2SC2814-F5-TA
INTEGRATED CIRCUIT		
IC3801	409 290 4307	IC TDA2545A/V4
IC3811	409 376 6300	IC TDA9821/V1
CAPACITOR		
C3802	403 069 9500	CERAMIC 0.01U Z 50V
C3803	403 069 9500	CERAMIC 0.01U Z 50V
C3804	403 073 9107	CERAMIC 4700P K 50V
C3805	403 166 8000	MT-POLYEST 0.33U J 63V
	403 260 2904	MT-COMPO 0.33U J 50V
C3806	403 028 4102	CERAMIC 56P J 50V
C3807	403 041 8804	ELECT 10U M 16V
C3808	403 069 9500	CERAMIC 0.01U Z 50V
C3811	403 041 8804	ELECT 10U M 16V
C3812	403 069 9500	CERAMIC 0.01U Z 50V
C3813	403 049 9803	ELECT 2.2U M 50V
C3814	403 049 9803	ELECT 2.2U M 50V
C3815	403 049 9803	ELECT 2.2U M 50V
RESISTOR		
R3802	401 037 5202	MT-GLAZE 100 JA 1/10W
R3803	401 037 5608	MT-GLAZE 10K JA 1/10W
R3804	401 037 9200	MT-GLAZE 1.8K JA 1/10W
R3805	401 038 3504	MT-GLAZE 330 JA 1/10W
R3806	401 038 7502	MT-GLAZE 56 JA 1/10W
R3811	401 038 7601	MT-GLAZE 560 JA 1/10W
R3814	401 038 7601	MT-GLAZE 560 JA 1/10W
R3815	401 038 2200	MT-GLAZE 27K JA 1/10W
R3845	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R3846	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R3848	401 037 5014	MT-GLAZE 0.000 ZA 1/10W
TRANSFORMER		
T3801	610 037 4522	S COIL
MISCELLANEOUS		
K38H1	610 012 4561	TERMINAL 4P
K38H2	610 012 4561	TERMINAL 4P
X3801	421 006 2902	SAW F OFWG9251M
X3811	645 003 2806	CERAMIC FILTER
X3814	645 006 3022	CERAMIC FILTER 5.742MHZ
ASSY,PWB,AUDIO F2RT	**1AA0B10E230BB**	
TRANSISTOR		
Q1251	405 109 4407	TR BC848-B
	405 015 8704	TR 2SC2812-L6-TA
Q1252	405 109 4407	TR BC848-B
	405 015 8704	TR 2SC2812-L6-TA
Q3431	405 109 4407	TR BC848-B
	405 015 8704	TR 2SC2812-L6-TA
Q3432	405 109 4407	TR BC848-B
	405 015 8704	TR 2SC2812-L6-TA
Q3482	405 109 4407	TR BC848-B
	405 015 8704	TR 2SC2812-L6-TA
Q3484	405 109 4407	TR BC848-B
	405 015 8704	TR 2SC2812-L6-TA
INTEGRATED CIRCUIT		
IC1251	409 009 2501	IC HD14052BP
	409 120 7607	IC MN4052B
	409 051 2801	IC TC4052BP
	409 059 2209	IC UPD4052BC
IC3401	409 371 6206	IC TDA9840/V2
IC3431	409 316 4601	IC TDA8424
CAPACITOR		
C1251	403 041 8804	ELECT 10U M 16V
C3401	403 041 8804	ELECT 10U M 16V
C3402	403 069 5601	CERAMIC 0.01U K 50V
C3403	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C3404	403 310 5008	CERAMIC 3300P G 25V
C3405	403 042 2405	ELECT 100U M 16V
C3406	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
C3407	403 026 2803	CERAMIC 47P J 50V
C3408	403 049 9803	ELECT 2.2U M 50V
C3409	403 049 9803	ELECT 2.2U M 50V
C3411	403 069 5601	CERAMIC 0.01U K 50V
C3412	403 069 5601	CERAMIC 0.01U K 50V
C3421	403 069 9500	CERAMIC 0.01U Z 50V
C3422	403 041 8804	ELECT 10U M 16V
C3431	403 049 0008	ELECT 1U M 50V
C3432	403 042 2405	ELECT 100U M 16V
C3433	403 049 0008	ELECT 1U M 50V
C3434	403 068 0409	CERAMIC 0.1U Z 25V
	403 070 2606	CERAMIC 0.1U Z 50V
C3435	403 068 3202	CERAMIC 0.033U K 25V
	403 073 1200	CERAMIC 0.033U K 50V
C3436	403 074 7607	CERAMIC 5600P K 50V
C3437	403 074 7607	CERAMIC 5600P K 50V
C3438	403 068 3202	CERAMIC 0.033U K 25V
	403 073 1200	CERAMIC 0.033U K 50V
RESISTOR		
R1251	401 038 2101	MT-GLAZE 2.7K JA 1/10W
R1252	401 038 9209	MT-GLAZE 6.8K JA 1/10W
R1253	401 039 0502	MT-GLAZE 82K JA 1/10W
R1254	401 039 0502	MT-GLAZE 82K JA 1/10W
R1256	401 039 0512	MT-GLAZE 82K JA 1/10W
R1257	401 038 6307	MT-GLAZE 470 JA 1/10W
R1258	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R1262	401 039 0502	MT-GLAZE 82K JA 1/10W
R1263	401 039 0512	MT-GLAZE 82K JA 1/10W
R1264	401 039 0502	MT-GLAZE 82K JA 1/10W
R1265	401 038 6307	MT-GLAZE 470 JA 1/10W
R1266	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R3401	401 037 5202	MT-GLAZE 100 JA 1/10W
R3402	401 037 5202	MT-GLAZE 100 JA 1/10W
R3403	401 038 3108	MT-GLAZE 30K JA 1/10W
R3431	401 037 5202	MT-GLAZE 100 JA 1/10W
R3432	401 037 5202	MT-GLAZE 100 JA 1/10W
R3433	401 037 5202	MT-GLAZE 100 JA 1/10W
R3434	401 037 7909	MT-GLAZE 1.5K JA 1/10W
R3435	401 037 5202	MT-GLAZE 100 JA 1/10W
R3436	401 037 7909	MT-GLAZE 1.5K JA 1/10W
R3477	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R3479	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R3481	401 038 0701	MT-GLAZE 2.2K JA 1/10W
R3482	401 038 0701	MT-GLAZE 2.2K JA 1/10W
TRANSFORMER		
T3401	645 015 7943	COIL,FERRITE 2.5M
COIL		
L3451	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
MISCELLANEOUS		
KA	645 005 8592	SOCKET,10P
KB	645 005 8592	SOCKET,10P
KDY-1	645 008 4058	TERMINAL PLUG
KDY-3	645 008 4058	TERMINAL PLUG
KDY-5	645 008 4058	TERMINAL PLUG

Ref. No.	Part No.	Description
KDY-6	645 008 4058	TERMINAL PLUG
⚠ KE-1	645 008 4058	TERMINAL PLUG
KE-2	645 008 4058	TERMINAL PLUG
⚠ KF-1	645 008 4058	TERMINAL PLUG
KF-2	645 008 4058	TERMINAL PLUG
KL	645 004 2881	PLUG,2P
KP	645 008 7288	HOUSING PLUG 5P
KQ	645 004 2898	HOUSING PLUG 3P
KR-1	645 008 4058	TERMINAL PLUG
KR-2	645 008 4058	TERMINAL PLUG
X3401	645 016 6662	OSC,CRYSTAL 10MHZ
Y01	645 008 4058	TERMINAL PLUG
Y02	645 008 4058	TERMINAL PLUG
Y04	645 008 4058	TERMINAL PLUG
Y05	645 008 4058	TERMINAL PLUG
Y06	645 008 4058	TERMINAL PLUG
Y08	645 008 4058	TERMINAL PLUG
Y09	645 008 4058	TERMINAL PLUG
Y10	645 008 4058	TERMINAL PLUG
Y11	645 008 4058	TERMINAL PLUG
Y12	645 008 4058	TERMINAL PLUG
Y13	645 008 4058	TERMINAL PLUG
Y14	645 008 4058	TERMINAL PLUG
Y15	645 008 4058	TERMINAL PLUG

ASSY,PWB,CRT F3SS 1AA0B10H03700

TRANSISTOR

Q701	405 041 6507	TR 2SC2621-D-RA
	405 041 6705	TR 2SC2621-E-RA
	405 066 9903	TR 2SC2688(1)-K
	405 067 0008	TR 2SC2688(1)-L
	405 067 0107	TR 2SC2688(1)-M
Q711	405 041 6507	TR 2SC2621-D-RA
	405 041 6705	TR 2SC2621-E-RA
	405 066 9903	TR 2SC2688(1)-K
	405 067 0008	TR 2SC2688(1)-L
	405 067 0107	TR 2SC2688(1)-M
Q721	405 041 6507	TR 2SC2621-D-RA
	405 041 6705	TR 2SC2621-E-RA
	405 066 9903	TR 2SC2688(1)-K
	405 067 0008	TR 2SC2688(1)-L
	405 067 0107	TR 2SC2688(1)-M
Q740	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP
Q751	406 007 1901	TR JC556A
	406 007 1802	TR JC556B
	405 004 4205	TR 2SA608-E-CTV-NP
	405 004 4809	TR 2SA608-F-CTV-NP
	405 028 7909	TR 2SA608-G-CTV-NP

CAPACITOR

C701	403 073 2910	CERAMIC	390P K	50V
C711	403 073 2910	CERAMIC	390P K	50V
C721	403 073 2910	CERAMIC	390P K	50V
C731	403 077 2728	CERAMIC	1000P P	2K
C735	403 055 8401	ELECT	22U M	250V
	403 260 0405	ELECT	22U M	250V
C751	403 248 1608	ELECT	47U M	16V

RESISTOR

R701	401 026 3925	CARBON	330	JA	1/6W
R702	401 026 7022	CARBON	3K9	JA	1/6W
R703	401 025 4220	CARBON	1K8	JA	1/6W
⚠ R704	401 065 4604	OXIDE-MT	12K	JA	2W
R705	401 009 6602	CARBON	3.3K	JA	1/2W
R711	401 026 3925	CARBON	330	JA	1/6W
R712	401 026 7022	CARBON	3K9	JA	1/6W
R713	401 026 1020	CARBON	2K7	JA	1/6W
⚠ R714	401 065 4604	OXIDE-MT	12K	JA	2W
R715	401 009 6602	CARBON	3.3K	JA	1/2W
R721	401 026 3925	CARBON	330	JA	1/6W
R722	401 026 7022	CARBON	3K9	JA	1/6W
R723	401 025 4220	CARBON	1K8	JA	1/6W
⚠ R724	401 065 4604	OXIDE-MT	12K	JA	2W
R725	401 009 6602	CARBON	3.3K	JA	1/2W
R727	401 026 9620	CARBON	470	JA	1/6W
R741	401 026 9927	CARBON	4K7	JA	1/6W
R742	401 026 4328	CARBON	3K3	JA	1/6W
R744	401 026 0627	CARBON	270	JA	1/6W
R752	401 024 7430	CARBON	10K	JA	1/6W
R753	401 024 7430	CARBON	10K	JA	1/6W

VARIABLE RESISTOR

VR701	645 003 5722	VR,SEMI,4.7K N
VR702	645 003 5647	VR,SEMI,1K N
VR711	645 003 5722	VR,SEMI,4.7K N
VR712	645 003 5647	VR,SEMI,1K N
VR721	645 003 5722	VR,SEMI,4.7K N

COIL

L701	645 007 9856	PEAKING COIL 220UH K
L711	645 007 9856	PEAKING COIL 220UH K
L721	645 007 9856	PEAKING COIL 220UH K

DIODE

D701	407 012 4416	DIODE 1SS133-T-77
D711	407 012 4416	DIODE 1SS133-T-77
D721	407 012 4416	DIODE 1SS133-T-77
D751	407 012 4416	DIODE 1SS133-T-77

MISCELLANEOUS

K7M	645 008 4058	TERMINAL,PLUG
K7P	645 004 2911	PLUG,5P
K7Q	645 004 2898	PLUG,3P
⚠ K701	645 031 7699	CRT SKT. HPS-014103

OUT OF CIRCUIT - F5JGS

PICTURE TUBE(SAMSUNG)

⚠ Q901	414 010 0408	CRT A51EER131X28 21"SAMS

COIL

⚠ L901	645 034 1267	DEGAUSS COIL 21" 42T*.425

MISCELLANEOUS

SP901	610 232 3986	SPEAKER
	610 228 7202	SPEAKER
SP902	610 232 3986	SPEAKER
	610 228 7202	SPEAKER
⚠ W901	645 012 7632	EURO PLUG +2P HOUSE @ 2.1
W902	610 251 5824	GROUNDING CONNECTOR E7PC

All information in this manual is correct at the start of production. Sanyo reserves the right to modify components and procedures in order to comply with their continuous improvement policy.

Sanyo Industries (UK) Ltd
Printed in UK

ASSY,PWB,MAIN F5JGS
1AA0B10H039A0

ASSY,PWB,SIF F2RT
1AA0B10E230BA

COLOUR TELEVISION

SANYO

CHASSIS SERIES **EB4**

Model Number: **21P2/CE21P2-C**

SERVICE REF.NO. **CE21P2-C-02**

The service Precaution:
The area enclosed by this line (▰▰▰) is directly connected with AC mains voltage. When servicing the area, connect an isolating transformer between TV receiver and AC line to eliminate hazard of electric shock.

Product safety notice:
Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a mark ⚠ in this circuit diagram show components whose values have special significance to product safety. It is particularly recommended that only parts specified on the part service manual be used for components replacement pointed out by the mark.

PRECAUZIONE DI SERVIZIO
L'area inclusa in questa linea (▰▰▰) è collegata direttamente con la tensione della rete CA quando si serve l'area collegare un trasformatore isolante tra il ricevitore TV e la linea CA per eliminare il pericolo di scossa elettrica.

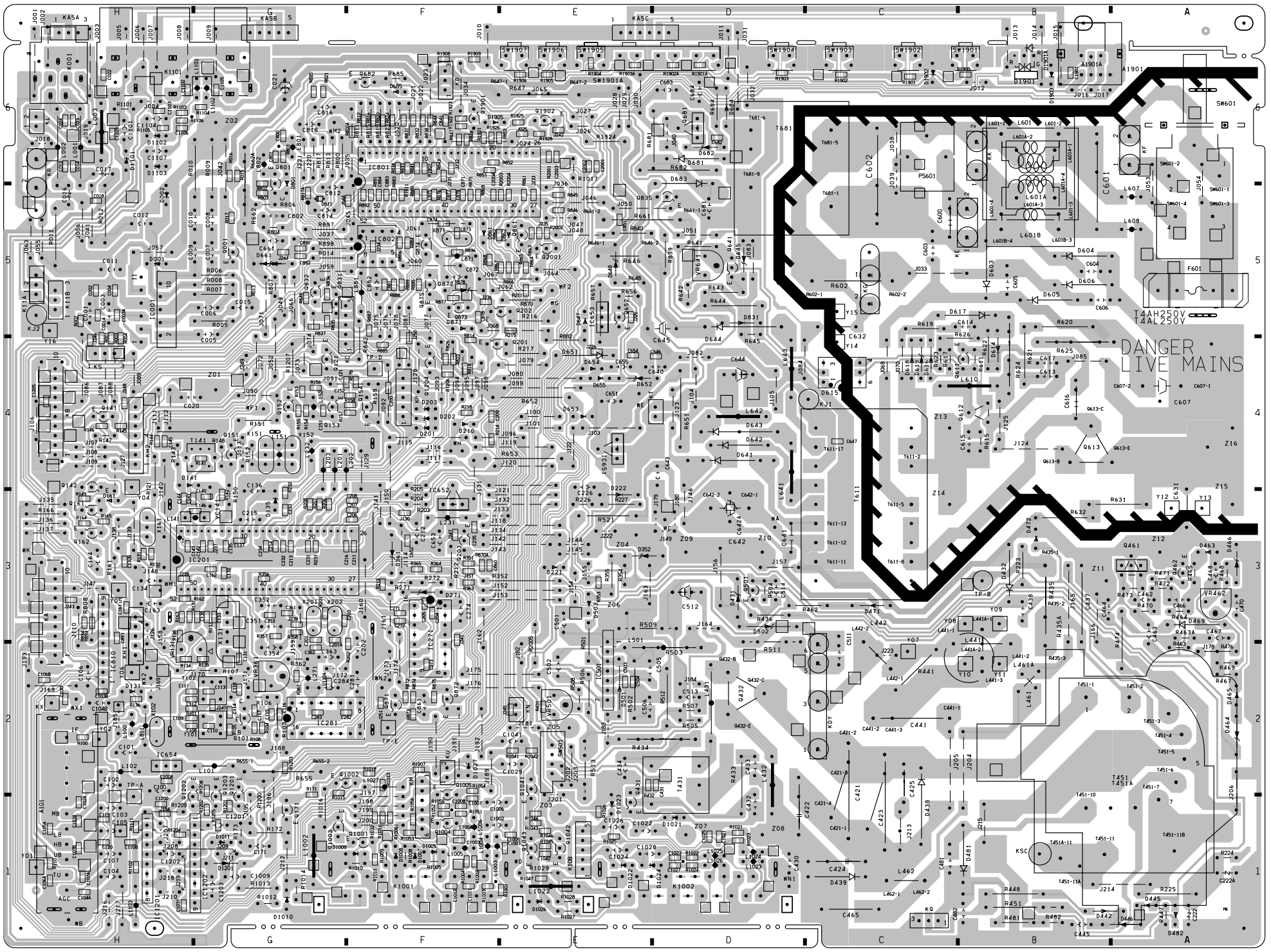
NOTIZIE SULLA SICUREZZA DI FUNZIONAMENTO
Ogni sostituzione di componenti va fatta tenendo conto della sicurezza di funzionamento. I componenti indicati sollo schema con il simbolo ⚠ hanno particolare importanza per il sicuro funzionamento del TV.
I suddetti componenti devono essere sostituti esclusivamente con quelli indicati nell'elenco.

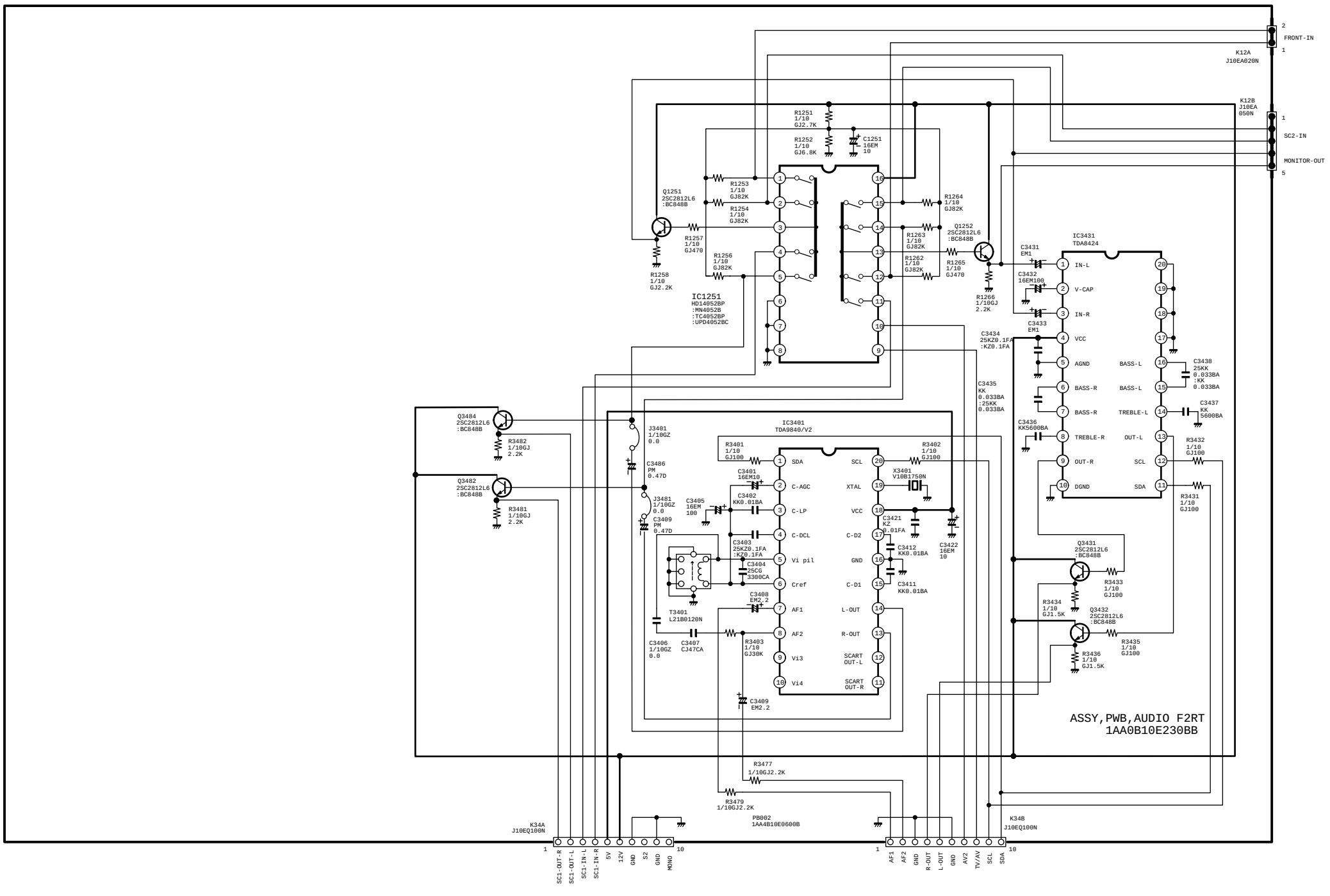
Note sul diagramma di circuito :
1. Tutte i valori di resistenza sono in ohm, K=1,000, M=1,000,000.
2. Tutte le resistenze nominali watt sono di 1/6 a meno che sia specificato altrimenti.
3. Eccetto per i condensatori elettrolitici, tutti i valori di capacitanza di meno di sono espressi in µF, e di piu di 1 sono in pF. I varoli di capacitanza elettrolitici sono in µF.
4. Tutti volt di capacitanza nominali sono di 50V a meno cha sia indicato altrimenti.
5. Tutti valori di induttanza sono in µH.
6. I valori letti del voltaggio presi con un "VTVM" proven gono dal punto indicato sulla massa del chassis, i valori di voltaggio presi usando un segnale di barre colore sono con tutti i controlli alle loro posizioni normali ed il commutatore AFC in posizione "OFF". Il voltaggio puo variare con l'intensita del segnale.
7. Le forme di onda furono prese con il segnale di barre colore e i controlli regolati oppure le forme di onda di immagine normale furono prese usando un oscillatore a larga banda ed una sonda bassa capasità.
8. Rispetto a quando indicato su questo schema possono essere state introdotte delle modifiche.
9. ■ I diodo 1S1555 possono essere sostitutti con 1S2473, 1S2076 oppure DS472 a meno che sia specificato altrimenti.
   ■ I transistori possono essere sostitutti con 2SC536(Q,R,S), 2SC1740(Q,R,S), 2SC945A(Q,R,P) oppure 2SC1815(G,O,Y) a meno che sia specificato altrimenti.
   ■ Il transistore 2SA608(E,F) puo essere sostituito con 2SA933(Q,R), 2SA564(QA,RA), oppure 2SA1015(O,Y) a meno che sia specificato altrimenti.

Circuit diagram notes :
1. All resistance values are in ohms, K=1,000, M=1,000,000.
2. All resistance rated wattages are 1/6W unless otherwise noted.
3. Excepting electrolytic capacitors, all capacitance values of less than 1 are expressed in µF and more than 1 are pF.
4. All capacitance rated voltages are 50V unless otherwise noted.
5. All inductance values are in µH.
6. Voltage readings taken a digital voltmeter are from point indicated chassis ground. Voltage readings taken by using a colour bar signal are with all controls at normal position. Some voltages may vary with signal strength.
7. Waveforms were taken with colour bar and controls adjusted for normal picture. Waveforms were taken by using a wide band oscilloscope and a low capacity probe.

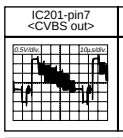
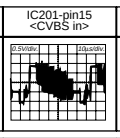
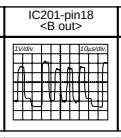
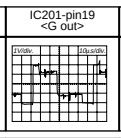
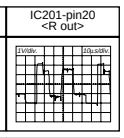
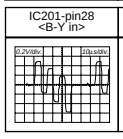
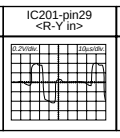
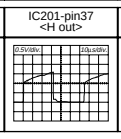
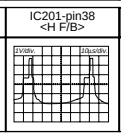
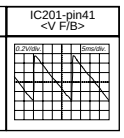
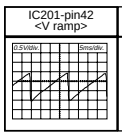
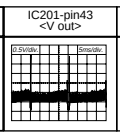
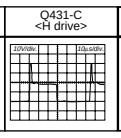
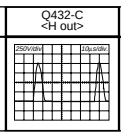
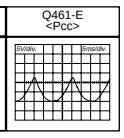
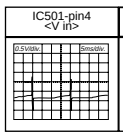
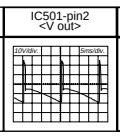
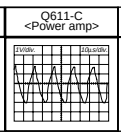
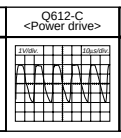
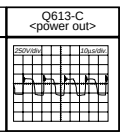
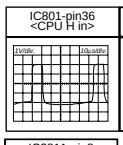
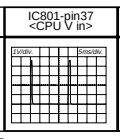
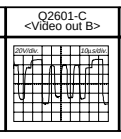
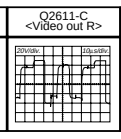
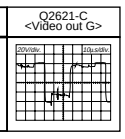
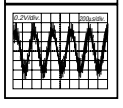
Main Board /Pannello Principal

Circuit side/Lato del Circuito





Waveforms on ICs and Transistors

IC201-pin7 <CVBS out>	IC201-pin15 <CVBS in>	IC201-pin18 <B out>	IC201-pin19 <G out>	IC201-pin20 <R out>
				
IC201-pin28 <B-Y in>	**IC201-pin29 <R-Y in>**	**IC201-pin37 <H out>**	**IC201-pin38 <H F/B>**	**IC201-pin41 <V F/B>**
				
IC201-pin42 <V ramp>	**IC201-pin43 <V out>**	**Q431-C <H drive>**	**Q432-C <H out>**	**Q461-E <Pcc>**
				
IC501-pin4 <V in>	**IC501-pin2 <V out>**	**Q611-C <Power amp>**	**Q612-C <Power drive>**	**Q613-C <power out>**
				
IC801-pin36 <CPU H in>	**IC801-pin37 <CPU V in>**	**Q2601-C <Video out B>**	**Q2611-C <Video out R>**	**Q2621-C <Video out G>**
				
IC3811-pin8 <Sound out>				
				

Voltage on ICs

IC001

1	1.6V	**2**	1.6V	**3**	15.5V	**4**	1.6V	**5**	1.6V	**6**	0V	**7**	-	**8**	13.8V	**9**	28.6V
10	14.0V	**11**	0V														

IC201

1	3.1V	2	6.0V	3	6.0V	4	6.1V	5	0V	6	4.0V	7	3.1V	8	1.6V	9	0V
10	8.0V	11	0V	12	3.6V	13	4.4V	14	3.2V	15	3.9V	16	0V	17	3.4V	18	2.5V
19	2.5V	20	2.5V	21	0.2V	22	3.4V	23	3.4V	24	3.4V	25	2.9V	26	1.6V	27	5.9V
28	4.0V	29	4.0V	30	1.5V	31	1.5V	32	0V	33	4.9V	34	3.5V	35	2.6V	36	8.0V
37	0.9V	38	0.7V	39	3.0V	40	4.0V	41	2.5V	42	0V	43	0.8V	44	4.1V	45	4.1V
46	4.1V	47	7.0V	48	3.1V	49	1.6V	50	3.6V	51	4.3V	52	6.7V				

IC271

1	5.3V	2	0V	3	0V	4	0V	5	0.7V	6	0V	7	0V	8	0V	9	5.2V
10	0V	11	3.1V	12	3.1V	13	0V	14	1.3V	15	0V	16	1.3V				

IC501

1	0V	2	13.4V	3	25.3V	4	0.7V	5	0.7V	6	25.2V	7	2.1V				

IC651 **IC652**

1	14.5V	2	0V	3	11.9V			1	10.5V	2	0V	3	8.0V				

IC801

1	0.6V	2	2.4V	3	3.7V	4	1.8V	5	2.1V	6	0V	7	0V	8	0V	9	2.6V
10	0.5V	11	2.5V	12	0V	13	0V	14	3.7V	15	0V	16	0V	17	0V	18	0V
19	0V	20	0V	21	0V	22	0V	23	2.2V	24	0.2V	25	2.0V	26	2.3V	27	0V
28	0V	29	5.0V	30	5.0V	31	5.0V	32	0V	33	0V	34	0V	35	0V	36	0.8V
37	0.2V	38	4.9V	39	4.9V	40	0V	41	2.1V	42	2.4V	43	0V	44	4.9V	45	4.7V
46	5.4V	47	5.0V	48	0V	49	4.8V	50	4.8V	51	0V	52	2.9V				

IC802

1	0V	2	0V	3	0V	4	0V	5	4.8V	6	4.8V	7	0V	8	5.0V		

IC810

1	0V	2	11.6V	3	2.0V	4	0V	5	0V	6	11.3V	7	2.2V	8	0V	9	11.7V

IC1201

1	11.8V	2	7.8V	3	0V	4	7.1V	5	0V	6	0V	7	7.7V	8	0V		

IC1202

1	3.0V	2	2.0V	3	6.0V	4	0V	5	0V	6	2.7V	7	0V	8	1.7V	9	5.7V

IC1251

1	8.4V	2	8.4V	3	5.0V	4	8.4V	5	0V	6	0V	7	0V	8	0V	9	0V
10	11.9V	11	5.0V	12	8.4V	13	8.4V	14	8.4V	15	8.4V	16	11.9V				

IC3401

1	4.8V	2	3.4V	3	2.7V	4	2.5V	5	2.5V	6	2.5V	7	2.5V	8	2.5V	9	2.5V
10	2.5V	11	2.5V	12	2.5V	13	2.5V	14	2.5V	15	2.5V	16	0V	17	2.5V	18	5.1V
19	3.3V	20	4.8V														

IC3431

1	5.8V	2	11.7V	3	5.8V	4	11.8V	5	0V	6	0V	7	5.8V	8	5.8V	9	5.8V
10	0V	11	4.8V	12	4.8V	13	5.8V	14	5.8V	15	5.8V	16	5.8V	17	0V	18	0V
19	0V	20	0V														

IC3451

1	0V	2	0.3V	3	5.1V	4	0V	5	2.5V	6	0.4V	7	2.5V	8	2.5V	9	0V
10	0V	11	2.5V	12	0V	13	0V	14	0V	15	2.5V	16	2.5V	17	0.4V	18	4.6V
19	0V	20	2.3V	21	2.5V	22	2.5V	23	2.4V	24	0V	25	2.5V	26	5.0V	27	2.4V
28	2.3V	29	2.3V	30	2.3V	31	2.3V	32	0.3V	33	2.3V	34	2.5V	35	2.3V	36	4.7V
37	0V	38	4.8V	39	2.0V	40	3.4V	41	2.4V	42	0V	43	2.0V	44	0V	45	2.4V
46	4.8V	47	4.7V	48	2.0V	49	4.8V	50	0V	51	4.0V	52	0V				

IC3801

1	4.5V	2	4.6V	3	6.0V	4	0V	5	0V	6	0V	7	0V	8	5.3V	9	5.3V
10	0V	11	11.9V	12	5.9V	13	0V	14	0V	15	4.5V	16	4.5V				

IC3811

1	2.5V	2	0V	3	0V	4	0V	5	0V	6	0V	7	2.2V	8	2.2V	9	2.2V
10	2.2V	11	2.6V	12	4.3V	13	0V	14	5.1V	15	2.5V	16	0V				

Voltage on Transistors

Q001		Q121		Q151		Q152		Q153		Q154		Q171		Q201		Q202	
E	0V	E	2.8V	E	3.8V	E	3.2V	E	9.3V	E	3.1V	E	2.5V	E	0V	E	0V
C	15.5V	C	8.0V	C	0V	C	8.7V	C	2.3V	C	0V	C	11.8V	C	0V	C	0.4V
B	0.1V	B	3.3V	B	3.2V	B	0V	B	8.7V	B	2.4V	B	3.1V	B	0.8V	B	0V

Q203		Q431		Q432		Q461		Q462		Q501		Q611		Q612		Q613	
E	0V	E	0V	E	0V	E	12.9V	E	0V	E	0V	E	10.8V	E	0V	E	0V
C	6.0V	C	10.8V	C	--	C	0V	C	12.9V	C	4.7V	C	-1.4V	C	-1.1V	C	--
B	0V	B	0.3V	B	0V	B	13.5V	B	0.5V	B	0V	B	10.5V	B	-1.4V	B	-1.1V

Q641		Q652		Q681		Q682		Q801		Q835		Q861		Q871		Q872	
E	6.3V	E	5.2V	E	5.0V	E	5.0V	E	0V	E	0V	E	5.0V	E	0V	E	0V
C	29.5V	C	8.3V	C	7.8V	C	0.1V	C	2.0V	C	29.4V	C	2.5V	C	6.3V	C	0.2V
B	6.7V	B	5.8V	B	5.7V	B	5.6V	B	0.6V	B	0V	B	5.0V	B	0.1V	B	0.6V

Q873		Q874		Q875		Q1001		Q1002		Q1003		Q1004		Q1005		Q1201	
E	0V	E	4.9V	E	0V	E	0.6V	E	0.1V	E	0V	E	5.0V	E	5.0V	E	0V
C	0V	C	4.9V	C	4.7V	C	0V	C	11.8V	C	0.6V	C	11.9V	C	11.9V	C	0V
B	0.8V	B	5.6V	B	0V	B	0V	B	0.6V	B	0V	B	5.6V	B	5.6V	B	0.6V

Q1202		Q1203		Q1204		Q1041		Q1042		Q1043		Q1251		Q1252		Q1901	
E	0V	E	0V	E	0V	E	2.4V	E	10.0V	E	3.4V	E	7.7V	E	7.9V	E	1.8V
C	0V	C	0V	C	11.9V	C	9.4V	C	4.0V	C	11.9V	C	11.9V	C	11.9V	C	5.0V
B	0V	B	0V	B	0V	B	3.0V	B	9.4V	B	4.0V	B	8.4V	B	8.4V	B	0.2V

Q1902		Q2001		Q2601		Q2611		Q2621		Q2640		Q2651		Q3431		Q3432	
E	0V	E	0V	E	1.8V	E	1.8V	E	1.9V	E	1.5V	E	11.8V	E	5.2V	E	5.2V
C	5.0V	C	13.2V	C	134.3V	C	137.1V	C	143.8V	C	0V	C	0V	C	11.9V	C	11.9V
B	0.0V	B	0V	B	2.3V	B	2.2V	B	2.2V	B	0.9V	B	11.9V	B	5.9V	B	5.9V

Q3481		Q3482		Q3483		Q3484		Q3801		Q3802	
E	1.9V	E	7.7V	E	1.9V	E	7.7V	E	0.7V	E	5.2V
C	8.4V	C	11.9V	C	8.4V	C	11.9V	C	6.1V	C	11.9V
B	2.5V	B	8.4V	B	2.5V	B	8.4V	B	1.4V	B	5.9V

8. This circuit diagram covers a basic or representative chassis only. There may be some components or partial circuit differences between the actual chassis and the circuit diagram.
9. ■ Diode 1S1555 may be replaced with 1S2473, 1S2076 or DS472 unless otherwise noted.
   ■ Transistor 2SC536(Q,R,S), 2SC1740(Q,R,S), 2SC945A(Q,R,P) or 2SC1815(G,O,Y) unless otherwise noted.
   ■ Transistor 2SA608(E,F) may be replaced with 2SA933(Q,R), 2SA564(QA,RA), or 2SA1015(O,Y) unless otherwise noted.

Expression of capacitance and resistance in circuit diagram.

Capacitance (Example)

1000 C M 2000 D

- D — Characteristic
- 2000 — Capacitance value (220pF)
- M — Tolerance (±20%)
- C — Kind(Ceramic)
- 1000 — Rated voltage (1,000V)

J= ± 5%
K= ± 10%
M= ± 20%

T, A, U, D : Electrolytic
C, K, B : Ceramic
F : Mylar film
M, N : Polypropylene
Z : Metallized paper

Resistance (Example)

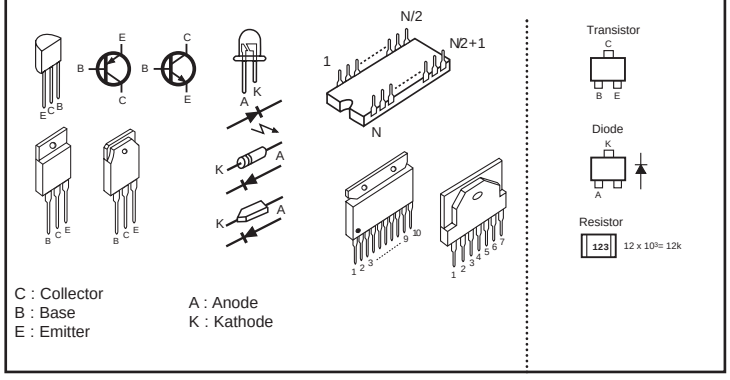
1/2 N J 1.2

- 1.2 — Resistance value (1.2Ω)
- J — Tolerance (±5%)
- N — Kind (M.carbon)
- 1/2 — Rated wattage(1/2W)

D : Carbon
N : Metallized carbon
S : Oxide metallized
W : Wire wounding
C : Solid

Terminal guide

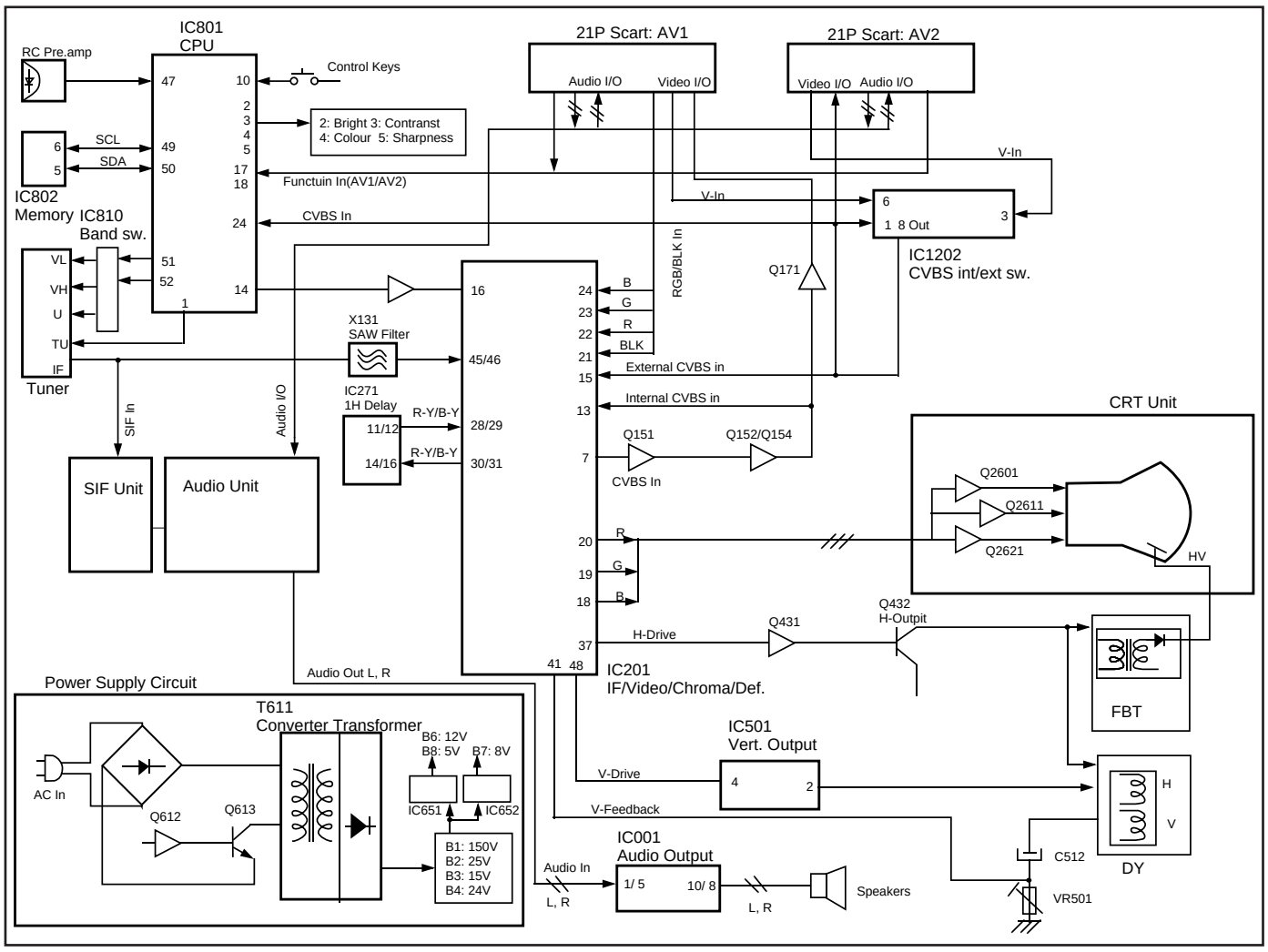
Chip Components



C : Collector
B : Base
E : Emitter

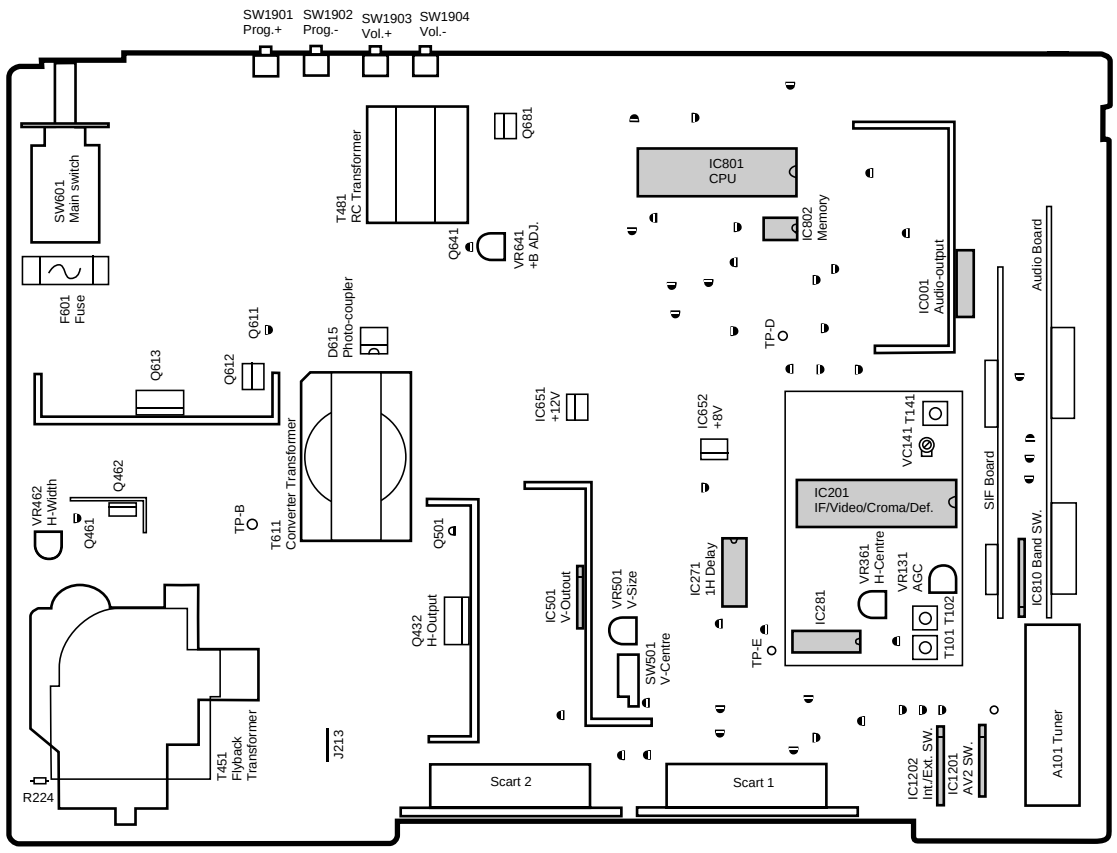
A : Anode
K : Kathode

GENERAL BLOCK DIAGRAM FOR EB4 CHASSIS



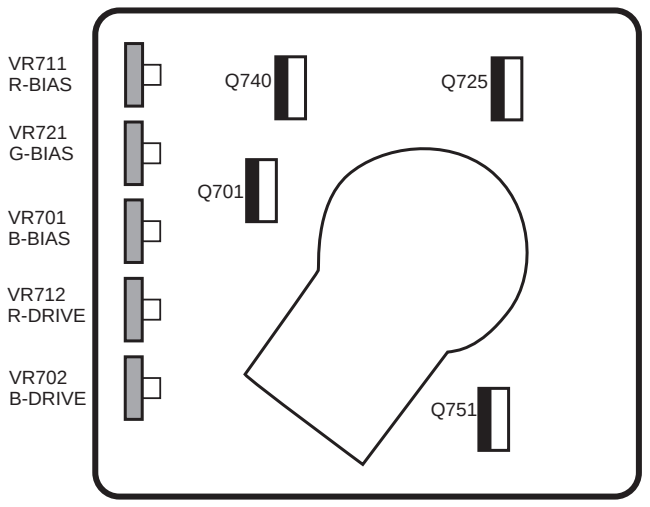
Main Board /Pannello Principal

Component Location/Lato del Componente

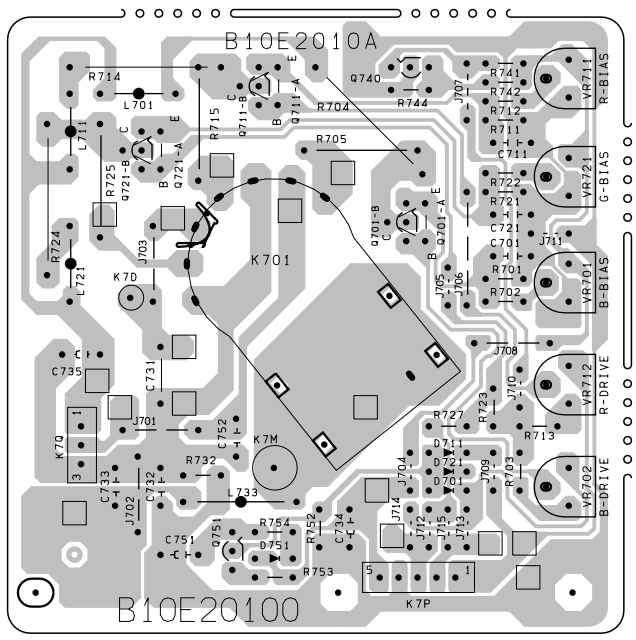


CRT Board /Pannello Cinescopio

Component Location/Lato del Componente

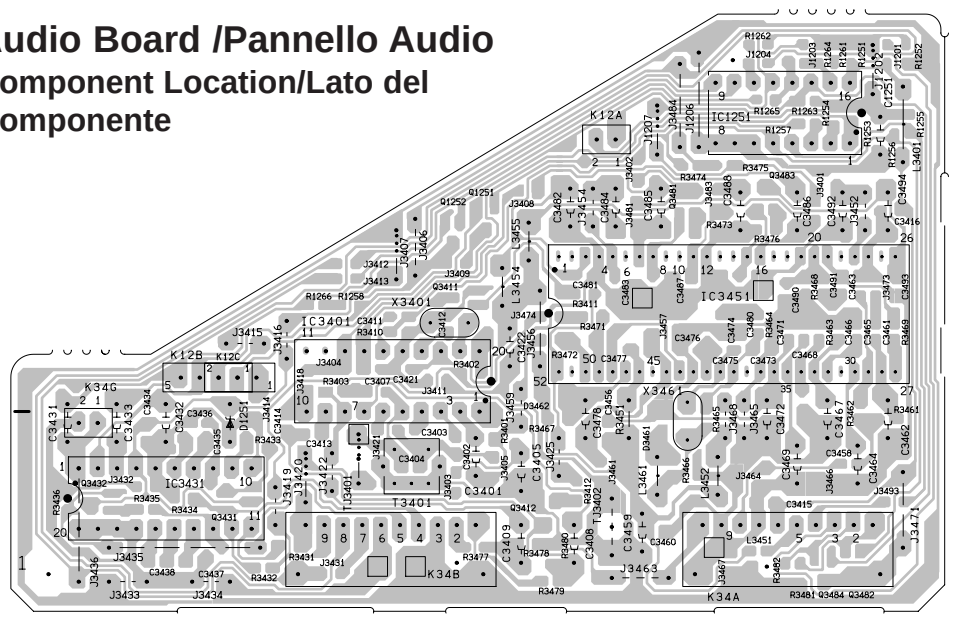


Circuit side/Lato del Circuito



Audio Board /Pannello Audio

Component Location/Lato del Componente



Circuit side/Lato del Circuito