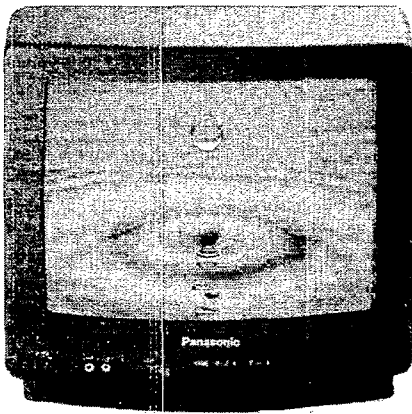


Service Manual



Colour Television TX-14B3T TC-14B3R

This service manual also covers :- TC-14B3R/N
Z-375 Chassis

Specifications

Power Source :	220-240V AC, 50Hz	RCA IN	Video 1V p-p 75Ω
Power Consumption :	39W	RCA IN	Audio 500mV rms, 10KΩ
Standby Power Consumption :	9W	High Voltage :	25.6kV ± 0.5kV (zero beam current)
Aerial Impedance :	75Ω unbalanced, Coaxial Type	Picture Tube :	A34EAC01X06 34 cm V 90° measured diagonally
Receiving System :	PAL-I (UHF), PAL-525/60, NTSC (AV Only)	Audio Output :	
Receiving Channels :	UHF E21 - E69	Speaker	3 W (Music Power) 16 Ω Impedance
Intermediate Frequency :		Headphones	8 Ω Impedance
Video	39.5 MHz	Accessories supplied :	Remote Control 2 x R6 (UM3) Batteries TV Stand AV Cover
Sound	33.5 MHz		
Colour	35.07 MHz		
Video / Audio Terminals :		Dimensions :	
AV1 IN	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 10kΩ RGB (21 pin)	Height :	338 mm
AV1 OUT	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 1kΩ	Width :	366 mm
		Depth :	373mm
		Net Weight :	9.9kg

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

IMPORTANT

This receiver uses a HOT chassis, after service please ensure that the chassis is returned to its correct position.
Particular care being taken to the position of the customer controls.
Failure to do so could endanger customer safety.

Panasonic

Panasonic CS (U.K.) Ltd.
WILLOUGHBY ROAD,
BRACKNELL
BERKS,
RG12 8FT.

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SAFETY PRECAUTIONS

GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the AC outlet.
5. Potentials as high as 27kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture to the chassis before handling the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.
4. Check each exposed Metallic part and check the voltage at each point.
5. Reverse the AC plug at the outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1.4 Vrms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

HOT CHECK CIRCUIT

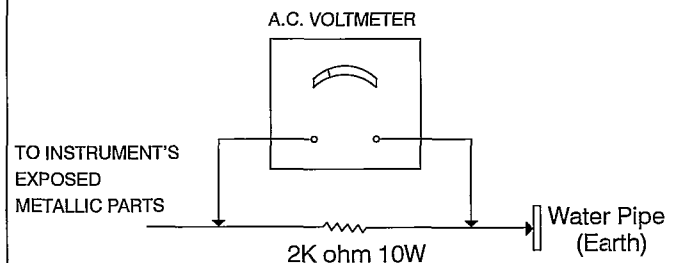


Fig.1

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shaft etc. When the exposed metallic part has a return path to the chassis the reading should be between 4M ohm and 20M ohm. When the exposed metal does not have a return path to the chassis the reading must be infinite.

LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2k Ω 10W resistor in series with an exposed metallic part on the receiver and an earth such as a water pipe.
3. Use an AC voltmeter with high impedance to measure the potential across the resistor.

X-RADIATION WARNING

1. The potential sources of X-Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service ensure that the jig is capable of handling 27kV without causing X-Radiation.

NOTE : It is important to use an accurate periodically calibrated high voltage meter

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate 25.6kV \pm 0.5kV if the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent any X-Radiation possibility, it is essential to use the specified tube.

SERVICE HINTS

DIFFERENCE LIST BETWEEN TC-14B3R/N – TC-14B3R

	TC-14B3R/N	TC-14B3R
1. Operating instruction book :-	TQB8E2445	TQB8E2445-1
2. Rear cover label :-	TZS7ED007	TZS7ED002
3. Microprocessor :-	Common to both models	

Note :- If the microprocessor has to be changed for the TC-14B3R/N, the following will apply :-

Original microprocessor	- NO automatic pin 8 AV switching (21 pin lead) +
New microprocessor	- Pin 8 automatic AV switching

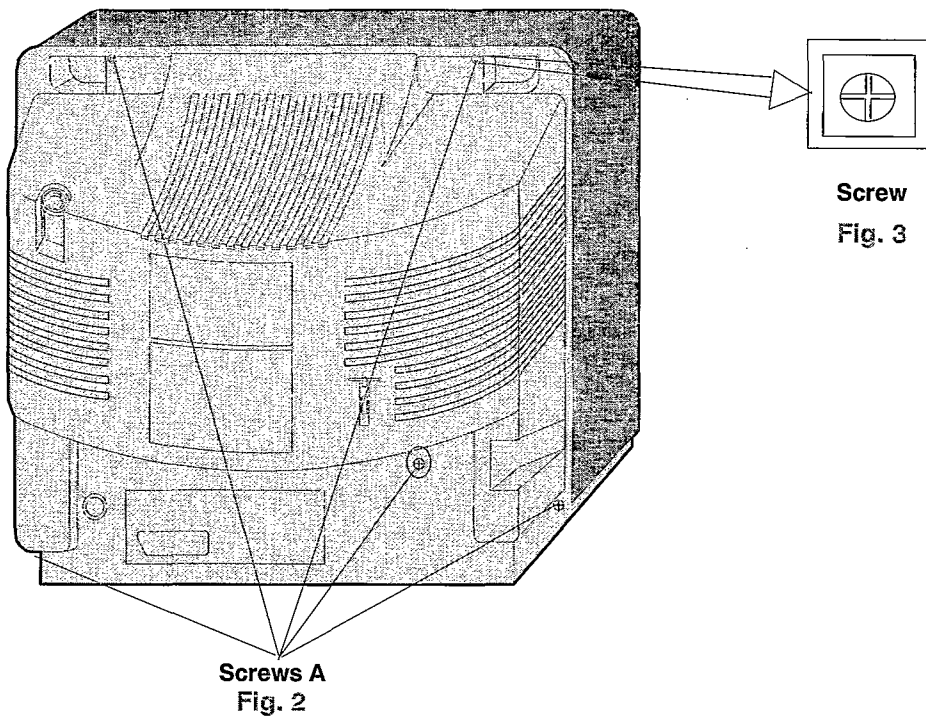
4. When AUTO SETUP has finished on TC-14B3R/N the TV will automatically go into EC mode, the screen will remain blank with EC shown in the top left hand corner of the screen. Press TV/AV button on the remote control and the first available channel will be displayed.

5.	TC-14B3R/N	TC-14B3R
EC mode after auto setup :-	NO	YES

Note :- Some items of Audio/Video equipment will automatically switch AV1 and AV2 into AV mode, the screen will display EC1 or EC2 (EC meaning EURO CONNECTOR)

HOW TO REMOVE THE REAR COVER

1. Remove the 5 screws (A) as shown in Fig.2/Fig.3.



ALIGNMENT SETTINGS

1. Select program position 70 and set the sharpness to minimum.
2. Press the Off Timer button on the remote control and at the same time press the V (down) button on the customer controls at the front of the TV, this will place the TV into Service Mode.
3. Press the Δ / V buttons to step up / down through the functions.
4. Press the + / - buttons to alter the function values.
5. Press the STORE button after each adjustment has been made to store the required values.
6. To exit Service Mode press the Normalisation button.

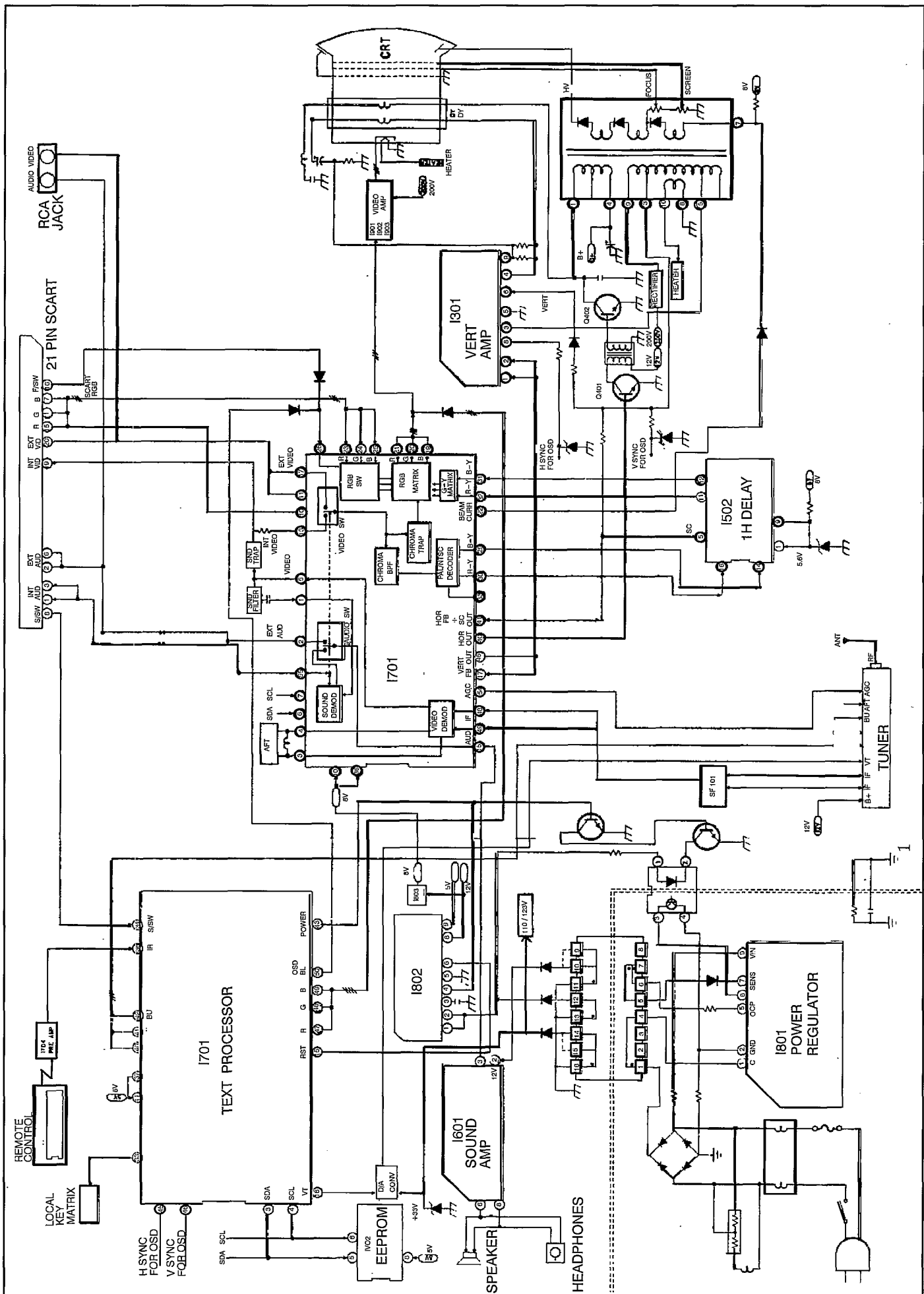
NOTE : The figures used below are nominal and used for representative purposes only

SERVICE ALIGNMENT

ALIGNMENT	SETTING
1. AFT	1. Set a signal generator to :- RF frequency = 38.9Mhz RF output level = $80^{\circ} \pm 5\text{dBuV}$ System = PAL I 2. Connect the signal generator RF output to P101 (tuner IF output) No signal input to tuner. 3. Press (+) button on the remote control and wait until the TV screen displays "AFT OK"
2. V Cent	1. Select V Cent mode 2. Press +/- key on the remote control , the lower half of the screen should be blanked. 3. Shift the centre line across the screen to line up with the mechanical centre marks on each side of the CRT.
3. V Size	* Vertical centre adjustment has to be done in advance of this adjustment. 1. Apply a Philips test pattern. 2. Adjust the upper part of the picture
4. H Cent	1. Apply a Philips test pattern. 2. Adjust the picture for optimum central position.
5. AGC	1. Set a Pattern Generator to RF LEVEL $63^{\circ} \pm 2\text{dBuV}$. 2. Connect an Oscilloscope Probe to P101 (tuner AGC input). 3. Adjust the AGC setting so that it is 1Vdc below its maximum voltage
6. Screen	* Not shown as on screen adjustment. 1. Apply Philips pattern signal, 2. Set the CONTRAST, BRIGHTNESS to MAX, COLOUR to MIN. 3. Set R, G, B levels to CENTRE. 4. Connect an Oscilloscope probe to P906 (CRT cathode) 5. Turn the SCREEN adjuster on the FBT so that the black level is $130 \pm 5\text{Vdc}$
7. R,G,B Bias	1. Set the TV to normal mode 2. Set the R, G, and B levels to centre position 3. Adjust the R, G, or B which ever did not appear on screen to obtain WHITE

NOTE : Press the STR key to store functions the relevant OSD will then turn GREEN for a few seconds.

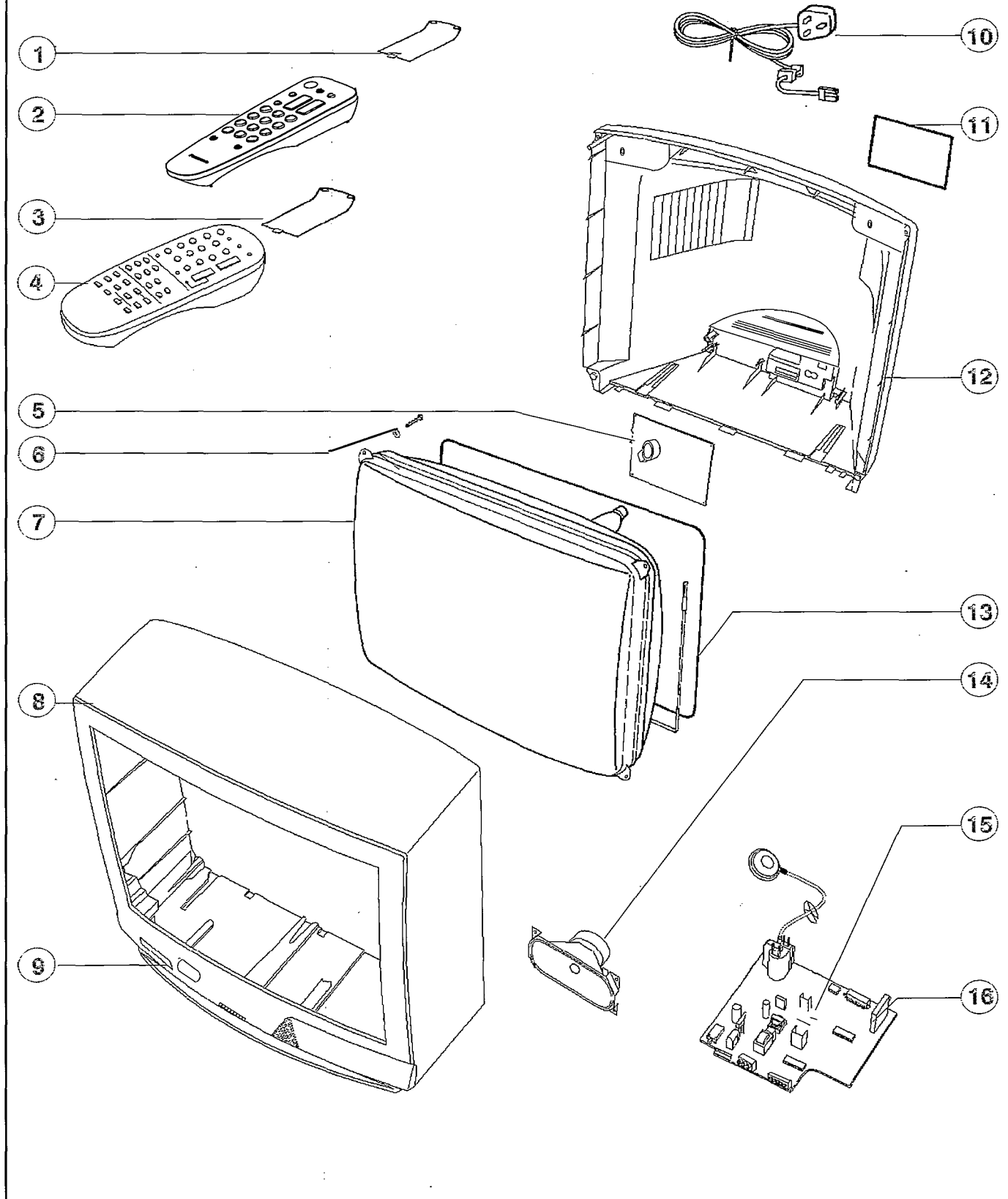
BLOCK DIAGRAM



PARTS LOCATION

NOTE :

The numbers on the exploded view below refer to the miscellaneous section of the Replacement Parts List.



REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by Δ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Ref No.	Part No.	Description
MISCELLANEOUS COMPONENTS		
1)	*****	REFER TO DIFFERENCE LIST
2)	*****	REFER TO DIFFERENCE LIST
3)	*****	REFER TO DIFFERENCE LIST
4)	*****	REFER TO DIFFERENCE LIST
5)	485Y-14B3	Y-P.C.B. Δ
6)	4856013300	CRT FIXING SCREW
7)	A34EAC01X06	C.R.T. Δ
8)	4852064100	CABINET Δ
9)	4854851500	POWERBUTTON
10)	4859905110	POWER CORD Δ
11)	*****	SEE DIFFERENCE LIST
12)	4852147200	REAR COVER Δ
13)	DC-1450	DEGAUSS COIL Δ
14)	4858306810	SPEAKER
15)	*****	REFER TO DIFFERENCE LIST
16)	4859716130	TUNER Δ
	TZS7ED004	LOOP ANTENNA
M541	4855415800	MODEL LABEL
M801	4858041000	OUTER CARTON
	4858183200	CUSHION-SET
F801	5FSCB4022R	FUSE Δ
JH01	4859102130	HEADPHONE SOCKET
	TBM8E1727	PANASONIC BADGE
CAPACITORS		
C102	ECCR1E103J	CERAMIC 25V 10nF
C103	ECEA1ES470	ELECT 25V 47 μ F
C104	ECEA1H100	ELECT 50V 10 μ F
C109	ECEA1H100	ELECT 50V 10 μ F
C110	ECCR1E103J	CERAMIC 25V 10nF
C111	ECQM2A104J	FILM 100V 0.10 μ F
C115	ECEA1H222	ELECT 50V 2.2 μ F
C116	ECCR1E223J	CERAMIC 25V 22nF
C117	ECQM2A473J	FILM 100V 47nF
C118	ECCY1H100J	CERAMIC 50V 10pF
C120	CEXD1H109F	CERAMIC 50V 1 μ F
C301	ECQM2A104J	FILM 100V 0.10 μ F
C302	ECCR1H181J	CERAMIC 50V 180pF
C303	ECCR1H181J	CERAMIC 50V 180pF
C304	ECQM2A104J	FILM 100V 0.10 μ F
C306	CBXF1H104Z	CERAMIC 50V 0.10 μ F
C308	ECEA1ES471	ELECT 25V 470 μ F
C309	ECEA2A470	ELECT 100V 47 μ F
C311	ECQM2A103J	FILM 100V 10nF
C312	ECCR1H102J	CERAMIC 50V 1.0nF
C401	CBZR1C472M	CERAMIC 16V 4.7nF
C402	ECEA1H109	ELECT 50V 2.2 μ F
C403	CBZR1C222M	CERAMIC 16V 2.2nF
C404	ECCR1H181J	CERAMIC 50V 180pF
C406	ECCR1H222J	CERAMIC 50V 2.2nF
C409	ECCR3D471J	CERAMIC 2.0KV 470pF
C410	ECQM3C622J	FILM 1.6KV 6.2nF
C411	ECQM2D514J	FILM 200V 0.51 μ F
C412	ECEA2CS3R3	ELECT 160V 3R3 μ F
C414	ECCR2H471J	CERAMIC 500V 470pF
C415	ECQM2A104J	FILM 100V 0.10 μ F
C416	ECCR2H471J	CERAMIC 500V 470pF
C417	ECEA2ES330	ELECT 250V 33 μ F

Ref No.	Part No.	Description
C418	ECCR1E223J	CERAMIC 25V 22nF
C419	ECEA1CS101	ELECT 16V 100 μ F
C420	ECCR2H470J	CERAMIC 500V 47pF
C421	ECEA2CS101	ELECT 160V 100 μ F
C422	ECCR2H471J	CERAMIC 500V 470pF
C423	ECEA1ES101	ELECT 25V 100 μ F
C424	ECEA1H478	ELECT 50V 0.47 μ F
C425	ECEA1H100	ELECT 50V 10 μ F
C501	CBZF1H104Z	CERAMIC 50V 0.10 μ F
C502	ECEA1H229	ELECT 50V 22 μ F
C503	ECCR1E223J	CERAMIC 25V 22nF
C504	ECCR1E223J	CERAMIC 25V 22nF
C505	ECEA1CS101	ELECT 16V 100 μ F
C506	ECCR1E473J	CERAMIC 25V 47nF
C507	CBZF1H104Z	CERAMIC 50V 0.10 μ F
C508	ECCR1E473J	CERAMIC 25V 47nF
C509	ECQM2A104J	FILM 100V 0.10 μ F
C510	ECQM2A104J	FILM 100V 0.10 μ F
C511	ECQM2A104J	FILM 100V 0.10 μ F
C512	ECEA1H109	ELECT 50V 2.2 μ F
C514	ECCR1H151J	CERAMIC 50V 150pF
C516	CBXF1H104Z	CERAMIC 50V 0.10 μ F
C517	CBZR1C472M	CERAMIC 16V 4.7nF
C518	ECCY1H180J	CERAMIC 50V 18pF
C519	CBZF1H104Z	CERAMIC 50V 0.10 μ F
C520	CBZF1H104Z	CERAMIC 50V 0.10 μ F
C521	ECCR1H102J	CERAMIC 50V 1.0nF
C522	ECCR1H102J	CERAMIC 50V 1.0nF
C523	ECCR1E223J	CERAMIC 25V 22nF
C524	CBZF1H104Z	CERAMIC 50V 0.10 μ F
C525	ECEA1CS470	ELECT 16V 47 μ F
C526	ECQM2A104J	FILM 100V 0.10 μ F
C527	ECQM1H224J	FILM 50V 220nF
C528	ECCR1E103J	CERAMIC 25V 10nF
C529	ECEA1CS470	ELECT 16V 47 μ F
C530	ECEA1H109	ELECT 50V 2.2 μ F
C531	ECCR1E473J	CERAMIC 25V 47nF
C532	ECCR1H102J	CERAMIC 50V 1.0nF
C533	ECCR1H102J	CERAMIC 50V 1.0nF
C604	ECCR1H221J	CERAMIC 50V 220pF
C605	ECCY1H560J	CERAMIC 50V 56pF
C606	ECCY1H680J	CERAMIC 50V 68pF
C607	CEXD1H100F	CERAMIC 50V 10pF
C609	ECCR1H181J	CERAMIC 50V 180pF
C610	ECEA1H229	ELECT 50V 22 μ F
C611	ECEA1H100	ELECT 50V 10 μ F
C612	CBZR1C392M	CERAMIC 16V 3.9nF
C613	ECCR1E223J	CERAMIC 25V 22nF
C614	ECCR1E223J	CERAMIC 25V 22nF
C615	ECEA1ES471	ELECT 25V 470 μ F
C616	ECCR1H102J	CERAMIC 50V 1.0nF
C617	ECCR1E103J	CERAMIC 25V 10nF
C618	ECCR1H102J	CERAMIC 50V 1.0nF
C619	ECCR1E103J	CERAMIC 25V 10nF
C620	CEXD1H229F	CERAMIC 50V 22 μ F
C621	CEXD1H229F	CERAMIC 50V 22 μ F
C622	CEXD1H229F	CERAMIC 50V 22 μ F
C623	ECEA1ES470	ELECT 25V 47 μ F
C624	ECCR1E103J	CERAMIC 25V 10nF
C625	ECCR1E103J	CERAMIC 25V 10nF
C626	ECCR1E103J	CERAMIC 25V 10nF
C631	ECCR1H102J	CERAMIC 50V 1.0nF
C632	ECCR1H102J	CERAMIC 50V 1.0nF

TX-14B3T / TC-14B3R / TC-14B3R/N

Ref No.	Part No.	Description
C633	ECCR1H102J	CERAMIC 50V 1.0nF
C634	ECCR1H102J	CERAMIC 50V 1.0nF
C635	ECCR1E103J	CERAMIC 25V 10nF
C636	ECCR1H102J	CERAMIC 50V 1.0nF
C637	ECCR1H102J	CERAMIC 50V 1.0nF
C638	CExD1H229F	CERAMIC 50V 22μF
C639	ECCR1H101J	CERAMIC 50V 100pF
C640	ECCR1H101J	CERAMIC 50V 100pF
C641	ECCR1H101J	CERAMIC 50V 100pF
C642	ECEA1CS470	ELECT 16V 47μF
C702	ECEA1CS470	ELECT 16V 47μF
C703	ECCY1H240J	CERAMIC 50V 24pF
C704	ECCY1H240J	CERAMIC 50V 24pF
C705	ECCR1E103J	CERAMIC 25V 10nF
C706	ECEA1H100	ELECT 50V 10μF
C709	ECCR1H102J	CERAMIC 50V 1.0nF
C710	ECQM2A104J	FILM 100V 0.10μF
C711	ECQM2A104J	FILM 100V 0.10μF
C712	ECEA1H470	ELECT 50V 47μF
C713	ECCR1H223J	CERAMIC 50V 22nF
C720	ECCR1E103J	CERAMIC 25V 10nF
C721	ECEA1CS470	ELECT 16V 47μF
C722	ECCY1H390J	CERAMIC 50V 39pF
C723	ECCY1H360J	CERAMIC 50V 36pF
C724	ECCR1E103J	CERAMIC 25V 10nF
C725	ECEA1CS470	ELECT 16V 47μF
C726	ECEA1CS471	ELECT 16V 470μF
C727	ECCR1H102J	CERAMIC 50V 1.0nF
C801	CL1JB3474K	CERAMIC 1KV 0.47μF
C802	CL1JB3474K	CERAMIC 1KV 0.47μF
C803	CCXE2H472P	CERAMIC 500V 4.7nF
C804	CCXE2H472P	CERAMIC 500V 4.7nF
C805	CEYM2G121T	CERAMIC 400V 120pF
C806	CCYR3D471K	CERAMIC 2.0KV 470pF
C807	ECEA1ES221	ELECT 25V 220μF
C808	ECEA2A100	ELECT 100V 10μF
C809	ECEA1CS101	ELECT 16V 100μF
C810	ECCR1H102J	CERAMIC 50V 1.0nF
C811	ECEA1ES221	ELECT 25V 220μF
C812	CH1FFE472M	CERAMIC 400V 4.7nF
C817	CCYR3D681K	CERAMIC 2.0KV 680pF
C818	ECEA2CS101	ELECT 160V 100μF
C821	ECEA1ES471	ELECT 25V 470μF
C823	ECEA1ES102	ELECT 25V 1000μF
C824	ECEA1ES101	ELECT 25V 100μF
C825	ECCR1E103J	CERAMIC 25V 10nF
C826	ECEA1CS470	ELECT 16V 47μF
C827	ECCR1E103J	CERAMIC 25V 10nF
C829	ECCR1E103J	CERAMIC 25V 10nF
C830	ECEA1CS101	ELECT 16V 100μF
C831	ECCR1H223J	CERAMIC 50V 22nF
C832	ECCR1E103J	CERAMIC 25V 10nF
C835	CBZF1H104Z	CERAMIC 50V 0.10μF
C904	ECQM2E104K	FILM 250V 0.10μF
C905	ECQM2E104K	FILM 250V 0.10μF
C906	ECQM2E104K	FILM 250V 0.10μF
C907	ECCR1H561J	CERAMIC 50V 560pF
C908	ECCR1H561J	CERAMIC 50V 560pF
C909	ECCR1H561J	CERAMIC 50V 560pF
C911	CCYB3D472K	CERAMIC 2.0KV 4.7nF
C912	ECEA1ES101	ELECT 25V 100μF

Ref No.	Part No.	Description
DIODES		
D101	1N4148	DIODE
D401	BYV95C	DIODE
D402	BYV95C	DIODE
D403	BYV95C	DIODE
D404	1N4148	DIODE
D405	1N4148	DIODE
D406	1N4148	DIODE
D409	BY228	DIODE
D420	BYV95C	DIODE
D421	UZ5R1BM	DIODE
D501	UZ5R1BM	DIODE
D502	UZ5R1BM	DIODE
D503	UZ5R1BM	DIODE
D504	UZ5R1BM	DIODE
D505	UZ5R1BM	DIODE
D506	UZ5R1BM	DIODE
D507	UZ5R1BM	DIODE
D508	UZ5R6BM	DIODE
D509	1N4148	DIODE
D510	1N4148	DIODE
D511	UZ6R2BM	DIODE
D512	UZ6R2BM	DIODE
D513	UZ6R2BM	DIODE
D601	UZ5R1BM	DIODE
D602	UZ5R1BM	DIODE
D701	1N4148	DIODE
D702	1N4148	DIODE
D703	1N4148	DIODE
D704	1N4148	DIODE
D705	UZ6R2BM	DIODE
D706	KLR114L	DIODE
D707	UZ6R2BM	DIODE
D708	UZ6R2BM	DIODE
D709	UZ6R2BM	DIODE
D801	IS1888	DIODE
D802	IS1888	DIODE
D803	IS1888	DIODE
D804	IS1888	DIODE
D805	BYV95C	DIODE
D806	BYV95C	DIODE
D807	BYV95C	DIODE
D808	BYV95C	DIODE
D811	BYV95C	DIODE
D812	BYV95C	DIODE
D813	BYV95C	DIODE
D901	1N4148	DIODE
D902	UZ6R2BM	DIODE
D903	1N4148	DIODE
D904	1N4148	DIODE
D905	1N4148	DIODE
INTEGRATED CIRCUITS		
I301	TDA8356	IC VERTICALOUT
I501	TDA8374A	IC VIDEO PROCESSOR
I502	TDA4665-V4	IC 1H DELAY LINE
I601	TDA7056	IC AUDIO AMPLIFIER
I702	UPC574J	IC REGULATOR
I704	TFMW5380	IC IR RECEIVER
I801	STR-S5707	IC POWER SUPPLY
I802	TDA8138	IC RESET
I803	KA7808	IC REGULATOR
I804	LTV-817C	IC PHOTO COUPLER
I901	TDA6106Q	IC RED VIDEO AMP
I903	TDA6106Q	IC BLUE VIDEO AMP
I902	TDA6106Q	IC GREEN VIDEO AMP

Ref No.	Part No.	Description
COILS		
LP01	5MC0000100	COIL
LP04	5MC0000100	COIL
L101	TRF-1201B	COIL
L103	PZ100K04	COIL
L104	TRF-A001	COIL
L301	PZ100K04	COIL
L302	PZ100K04	COIL
L401	PZ109M02	PEAKING COIL
L405	58H0000016	COIL
L406	AZ-9004Y	COIL
L501	PZ569K02	PEAKING COIL
L601	PZ100K04	COIL
L602	PZ100K04	COIL
L604	PZ829K02	PEAKING COIL
L605	PZ100K04	COIL
L606	PZ100K04	COIL
L607	PZ100K04	COIL
L608	TRF-1015C	COIL
L609	PZ100K04	COIL
L610	TRF-1015C	COIL
L701	PZ689K02	COIL
L801	LF-20A1	FILTER
L804	5MC0000100	COIL
L805	PZ100K04	COIL

TRANSISTORS

Q301	KTC3198Y	TRANSISTOR
Q401	2SD2499	TRANSISTOR
Q402	2SD1207	TRANSISTOR
Q501	KTC3198Y	TRANSISTOR
Q502	KTC3198Y	TRANSISTOR
Q503	KTC3198Y	TRANSISTOR
Q504	KTA1266Y	TRANSISTOR
Q505	KTC3198Y	TRANSISTOR
Q601	KTC3198Y	TRANSISTOR
Q602	KTC3198Y	TRANSISTOR
Q603	KTC3198Y	TRANSISTOR
Q604	KTC3198Y	TRANSISTOR
Q701	KTA1266Y	TRANSISTOR
Q704	KTC3202Y	TRANSISTOR
Q707	KTC3198Y	TRANSISTOR
Q710	KTA1266Y	TRANSISTOR
Q711	BS170	CRYSTAL
Q801	KTC3198Y	TRANSISTOR
Q802	KTC3198Y	TRANSISTOR
Q803	KTC3198Y	TRANSISTOR
Q804	KTC3198Y	TRANSISTOR
Q901	KTA1266Y	TRANSISTOR

Ref No.	Part No.	Description
RESISTORS		
R106	ERD25TJ682	CARBON 0.25W 5% 6K8Ω
R107	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R108	ERD25TJ122	CARBON 0.25W 5% 1K2Ω
R109	ERD25TJ183	CARBON 0.25W 5% 18KΩ
R110	ERD25TJ182	CARBON 0.25W 5% 1K8Ω
R111	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R112	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R301	ERD25TJ393	CARBON 0.25W 5% 39KΩ
R302	ERD25TJ182	CARBON 0.25W 5% 1K8Ω
R304	ERD25TJ189	CARBON 0.25W 5% 1.8Ω
R305	ERD25TJ189	CARBON 0.25W 5% 1.8Ω
R307	ERG2AJ271	METAL 2W 5% 270Ω ▲
R308	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R309	ERD25TJ223	CARBON 0.25W 5% 22KΩ
R310	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R311	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R312	ERD25TJ479	CARBON 0.25W 5% 4.7MΩ
R401	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R402	ERD25TJ303	CARBON 0.25W 5% 30KΩ
R403	ERD25TJ479	CARBON 0.25W 5% 4.7MΩ
R404	ERD25TJ152	CARBON 0.25W 5% 1K5Ω
R405	ERD25TJ101	CARBON 0.25W 5% 100Ω
R406	ERD25TJ272	CARBON 0.25W 5% 2K7Ω
R408	ERG2AJ561	METAL 2W 5% 560Ω ▲
R409	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R410	ERD50TJ399	CARBON 0.5W 5% 3.9Ω
R413	ERD25TJ823	CARBON 0.25W 5% 82KΩ
R414	ERD25TJ273	CARBON 0.25W 5% 27KΩ
R415	ERF1ZJ478	WIRE 1W 5% 0.47Ω
R416	ERD25TJ303	CARBON 0.25W 5% 30KΩ
R417	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R418	ERD25TJ124	CARBON 0.25W 5% 120KΩ
R501	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R502	ERD25TJ101	CARBON 0.25W 5% 100Ω
R503	ERD25TJ101	CARBON 0.25W 5% 100Ω
R504	ERD25TJ331	CARBON 0.25W 5% 330Ω
R505	ERD25TJ470	CARBON 0.25W 5% 47Ω
R506	ERD25TJ101	CARBON 0.25W 5% 100Ω
R507	ERD25TJ109	CARBON 0.25W 5% 1Ω
R508	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R509	ERD25TJ121	CARBON 0.25W 5% 120Ω
R510	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R511	ERD25TJ101	CARBON 0.25W 5% 100Ω
R512	ERD25TJ101	CARBON 0.25W 5% 100Ω
R513	ERD25TJ101	CARBON 0.25W 5% 100Ω
R514	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R515	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R516	ERD25TJ564	CARBON 0.25W 5% 560KΩ
R518	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R519	ERD25TJ470	CARBON 0.25W 5% 47Ω
R520	ERD25TJ394	CARBON 0.25W 5% 390KΩ
R521	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R524	ERD25TJ303	CARBON 0.25W 5% 30KΩ
R525	ERD25TJ121	CARBON 0.25W 5% 120Ω
R526	ERD25TJ100	CARBON 0.25W 5% 10Ω
R527	ERD25TJ750	CARBON 0.25W 5% 75Ω
R528	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R529	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R530	ERD25TJ750	CARBON 0.25W 5% 75Ω
R531	ERD25TJ750	CARBON 0.25W 5% 75Ω
R532	ERD25TJ750	CARBON 0.25W 5% 75Ω
R533	ERD25TJ750	CARBON 0.25W 5% 75Ω
R534	ERD25TJ750	CARBON 0.25W 5% 75Ω
R535	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R536	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R537	ERD25TJ101	CARBON 0.25W 5% 100Ω
R538	ERD25TJ101	CARBON 0.25W 5% 100Ω
R539	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R540	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R541	ERD25TJ151	CARBON 0.25W 5% 150Ω

TX-14B3T / TC-14B3R / TC-14B3R/N

Ref No.	Part No.	Description
R542	ERD25TJ151	CARBON 0.25W 5% 150Ω
R543	ERD25TJ151	CARBON 0.25W 5% 150Ω
R601	ERD25TJ471	CARBON 0.25W 5% 470Ω
R602	ERD25TJ561	CARBON 0.25W 5% 560Ω
R603	ERD25TJ681	CARBON 0.25W 5% 680Ω
R604	ERD25TJ562	CARBON 0.25W 5% 5K6Ω
R605	ERD25TJ270	CARBON 0.25W 5% 27Ω
R606	ERD25TJ391	CARBON 0.25W 5% 390Ω
R607	ERD25TJ622	CARBON 0.25W 5% 6K2Ω
R608	ERD25TJ751	CARBON 0.25W 5% 750Ω
R609	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R610	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R612	ERD25TJ153	CARBON 0.25W 5% 15KΩ
R613	ERD25TJ153	CARBON 0.25W 5% 15KΩ
R614	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R615	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R616	ERD25TJ221	CARBON 0.25W 5% 220Ω
R617	ERD25TJ682	CARBON 0.25W 5% 6K8Ω
R618	ERD25TJ222	CARBON 0.25W 5% 2K2Ω
R619	ERD25TJ471	CARBON 0.25W 5% 470Ω
R620	ERD25TJ221	CARBON 0.25W 5% 220Ω
R621	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R622	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R623	ERD25TJ221	CARBON 0.25W 5% 220Ω
R624	ERD25TJ303	CARBON 0.25W 5% 30KΩ
R639	ERD25TJ222	CARBON 0.25W 5% 2K2Ω
R701	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R702	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R703	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R704	ERD25TJ101	CARBON 0.25W 5% 100Ω
R705	ERD25TJ101	CARBON 0.25W 5% 100Ω
R706	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R707	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R708	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R709	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R710	ERD25TJ100	CARBON 0.25W 5% 10Ω
R711	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R715	ERD25TJ912	CARBON 0.25W 5% 9K1Ω
R716	ERD25TJ823	CARBON 0.25W 5% 82KΩ
R717	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R718	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R719	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R720	ERG2AJ562	METAL 2W 5% 5.6KΩ ▲
R727	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R728	ERD25TJ100	CARBON 0.25W 5% 10Ω
R731	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R734	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R735	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R738	ERD25TJ202	CARBON 0.25W 5% 2KΩ
R739	ERD25TJ202	CARBON 0.25W 5% 2KΩ
R740	ERD25TJ202	CARBON 0.25W 5% 2KΩ
R741	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R743	ERD25TJ101	CARBON 0.25W 5% 100Ω
R744	ERD25TJ101	CARBON 0.25W 5% 100Ω
R745	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R746	ERD25TJ272	CARBON 0.25W 5% 2K7Ω
R748	ERD25TJ622	CARBON 0.25W 5% 6K2Ω
R749	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R750	ERD25TJ101	CARBON 0.25W 5% 100Ω
R751	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R753	ERD25TJ202	CARBON 0.25W 5% 2KΩ
R754	ERG2AJ562	METAL 2W 5% 5.6KΩ ▲
R755	ERD25TJ109	CARBON 0.25W 5% 10MΩ
R756	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R757	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R759	ERD25TJ391	CARBON 0.25W 5% 390Ω
R760	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R761	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R762	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R801	ERPCC180M290	THERMISTOR ▲
R802	RX10B339JN	RESISTOR 10W 1% 3.3Ω
R803	ERG2AJ683	METAL 2W 5% 68KΩ

Ref No.	Part No.	Description
R804	ERF2ZJ568	WIRE 2W 5% 0.56Ω
R805	ERG1AJ300	METAL 1W 5% 30Ω ▲
R806	ERD25TJ101	CARBON 0.25W 5% 100Ω
R807	ERD25TJ242	CARBON 0.25W 5% 2K4Ω
R808	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R809	ERD25TJ222	CARBON 0.25W 5% 2K2Ω
R810	ERD25TJ220	CARBON 0.25W 5% 22Ω
R811	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R812	ERC2ZJ565	SOLID 2W 5% 5.6MΩ
R813	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R814	ERD25TJ242	CARBON 0.25W 5% 2K4Ω
R815	ERD50TJ104	CARBON 0.5W 5% 100KΩ
R816	ERD50TJ104	CARBON 0.5W 5% 100KΩ
R817	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R818	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R819	ERG2AJ620	METAL 2W 5% 62Ω ▲
R820	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R901	ERD25TJ302	CARBON 0.25W 5% 3KΩ
R902	ERD25TJ302	CARBON 0.25W 5% 3KΩ
R903	ERD25TJ302	CARBON 0.25W 5% 3KΩ
R904	ERD25TJ202	CARBON 0.25W 5% 2KΩ
R905	ERD25TJ202	CARBON 0.25W 5% 2KΩ
R906	ERD25TJ202	CARBON 0.25W 5% 2KΩ
R907	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R908	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R909	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R911	ERC2ZJ152	SOLID 2W 5% 1.5KΩ
R912	ERC2ZJ152	SOLID 2W 5% 1.5KΩ
R913	ERC2ZJ152	SOLID 2W 5% 1.5KΩ
R914	ERD25TJ103	CARBON 0.25W 5% 10KΩ

SWITCHES

SW701	5S50101090	SWITCH
SW702	5S50101090	SWITCH
SW703	5S50101090	SWITCH
SW704	5S50101090	SWITCH
SW705	5S50101090	SWITCH
SW801	5S40101143	SWITCH

TRANSFORMERS

T401	TD-10A2	LINE DRIVER
T402	50H0000177	F.B.T. ▲
T802	50M0000099	CHOPPER TRANSFORMER ▲

FILTERS

X501	E4R4336E	CRYSTAL
X701	5XE18R000E	CRYSTAL
X701	5XE20R000E	CRYSTAL
Z501	EFC-S6ROME3	FILTER
Z601	5PXF5H6R0M	FILTER
SF101	J1952M	SAW FILTER

TX-14B3T / TC-14B3R / TC-14B3R/N

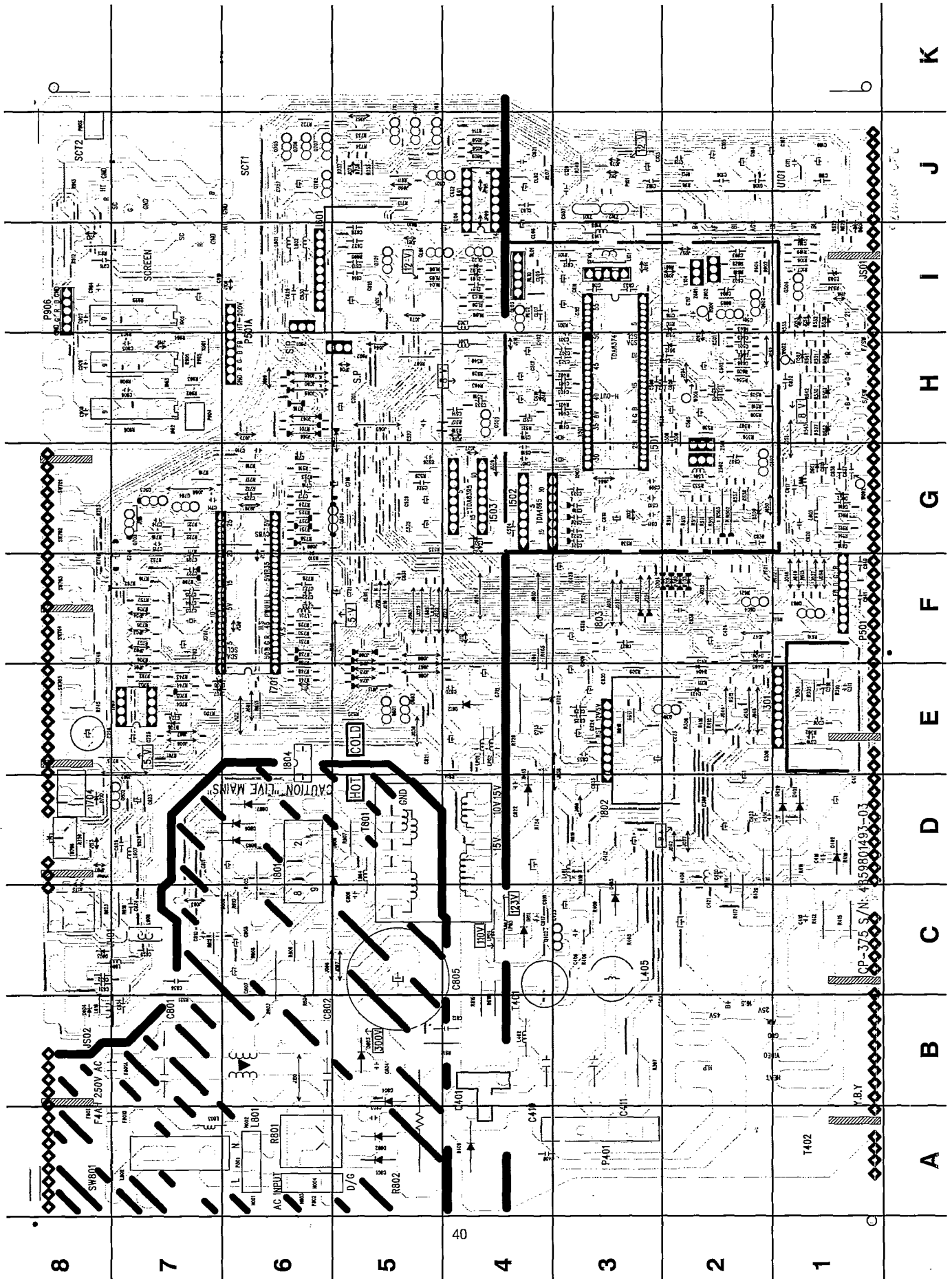
Ref No.	Part No.	Description
DIFFERENCES FOR MODEL TX-14B3T		
MISCELLANEOUS COMPONENTS		
3)	UR51EC769	BATTERY COVER (REMOTE)
4)	EUR51851	REMOTE CONTROL
11)	TZS7ED001	REAR COVER LABEL
15)	485E-TX14B3T	E-P.C.B
	TQB8E2446-1	INSTRUCTION BOOK
CAPACITORS		
C714	ECQM1H333J	FILM 50V 33nF
C715	ECQM1H224J	FILM 50V 220nF
C716	ECQM1H333J	FILM 50V 33nF
C717	ECCR1E103J	CERAMIC 25V 10nF
C718	ECEA1CS470	ELECT 16V 47μF
C719	ECQM1H334J	FILM 50V 330nF

Ref No.	Part No.	Description
RESISTORS		
R721	ERD25TJ682	CARBON 0.25W 5% 6K8Ω
R722	ERD25TJ822	CARBON 0.25W 5% 8K2Ω
R723	ERD25TJ682	CARBON 0.25W 5% 6K8Ω
R724	ERD25TJ100	CARBON 0.25W 5% 10Ω
R725	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R729	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R730	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R732	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R733	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R736	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R737	ERD25TJ473	CARBON 0.25W 5% 47KΩ
TRANSISTORS		
Q705	KTC3198Y	TRANSISTOR
Q706	KTC3198Y	TRANSISTOR
Q708	KTA1266Y	TRANSISTOR
Q709	KTA1266Y	TRANSISTOR
INTEGRATED CIRCUITS		
I701	M5255M2	IC MICROPROCESSOR
I703	X24C8-14B3T	EAROM

Ref No.	Part No.	Description
DIFFERENCES FOR MODEL TC-14B3R		
MISCELLANEOUS COMPONENTS		
1)	UR50RC1112	BATTERY COVER (REMOTE)
2)	EUR501302	REMOTE CONTROL
11)	TZS7ED002	REAR COVER LABEL
15)	485E-TC14B3R	E-P.C.B
	TQB8E2445-1	INSTRUCTION BOOK
INTEGRATED CIRCUITS		
I701	M370M2	IC MICROPROCESSOR
I703	X24C8-14B3R	EAROM

Ref No.	Part No.	Description

CONDUCTOR VIEWS



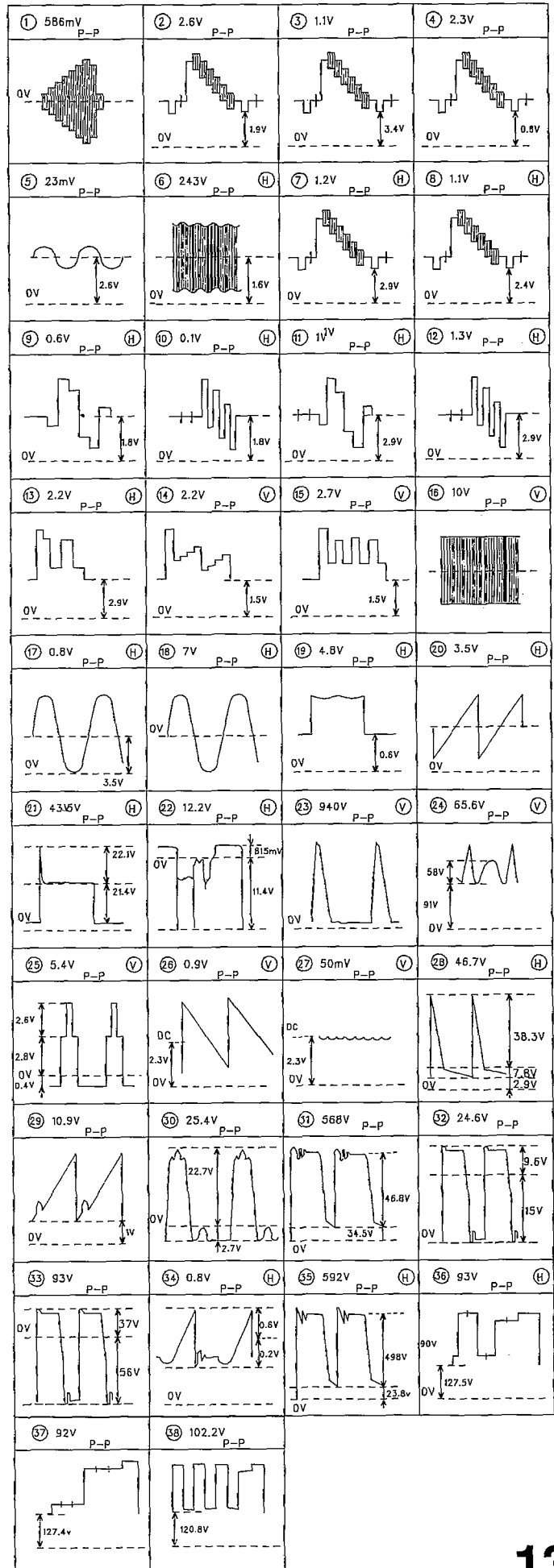
CONDUCTOR VIEW TABLE

DIODES	
D401	D1
D402	D1
D403	C3
D405	F2
D406	F2
D409	A4
D420	D1
D501	I1
D502	H1
D503	H1
D504	H1
D505	I1
D506	I1
D507	H1
D509	G2
D512	H2
D601	G1
D602	G1
D701	F2
D702	F2
D703	F2
D704	F2
D705	E1
D706	D8
D707	E7
D708	E7
D801	A5
D802	A5
D803	B5
D804	B5
D806	D6
D807	D6
D812	E4

TRANSISTORS	
Q401	B4
Q402	C3
Q501	I2
Q502	I2
Q503	H4
Q504	I1
Q505	G7
Q601	J5
Q602	I2
Q603	F1
Q604	F2
Q701	I5
Q704	G7
Q707	J5
Q705	J6
Q706	J6
Q708	J5
Q709	J5
Q710	J5
Q801	E5
Q802	D7
Q803	E5
Q804	G5

IC	
I501	H3
I502	G4
I601	I6
I701	F6
I703	E7
I704	D8
I801	D6
I802	E3
I803	F3
I804	E6
I901	I7
I903	H7
I902	H7




WAVEFORM TABLE



SCHEMATIC DIAGRAM FOR MODELS TX-14B3T / TC-14B3R / TC-14B3R/N (Z-375 CHASSIS)

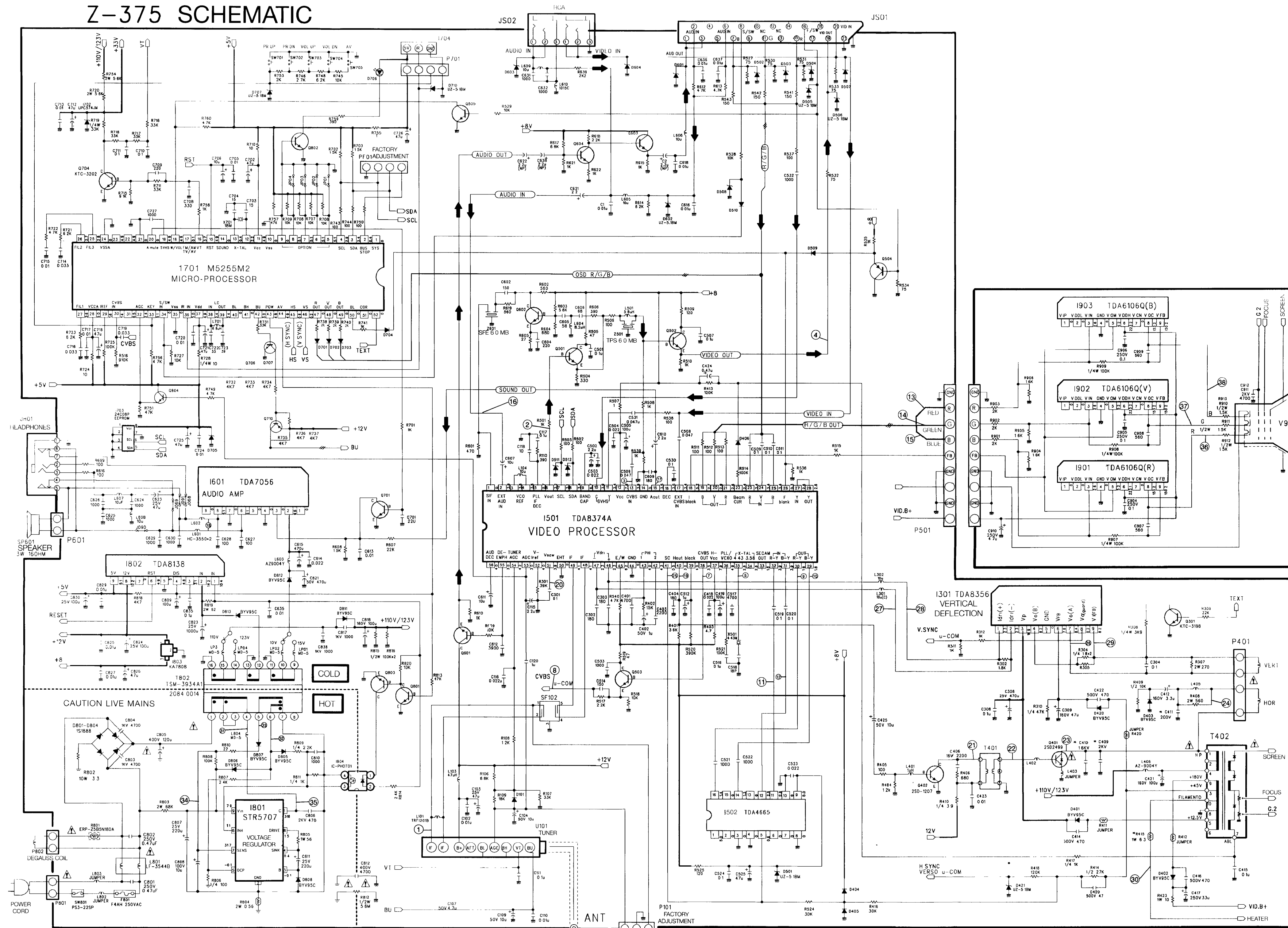
IMPORTANT SAFETY NOTICE

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

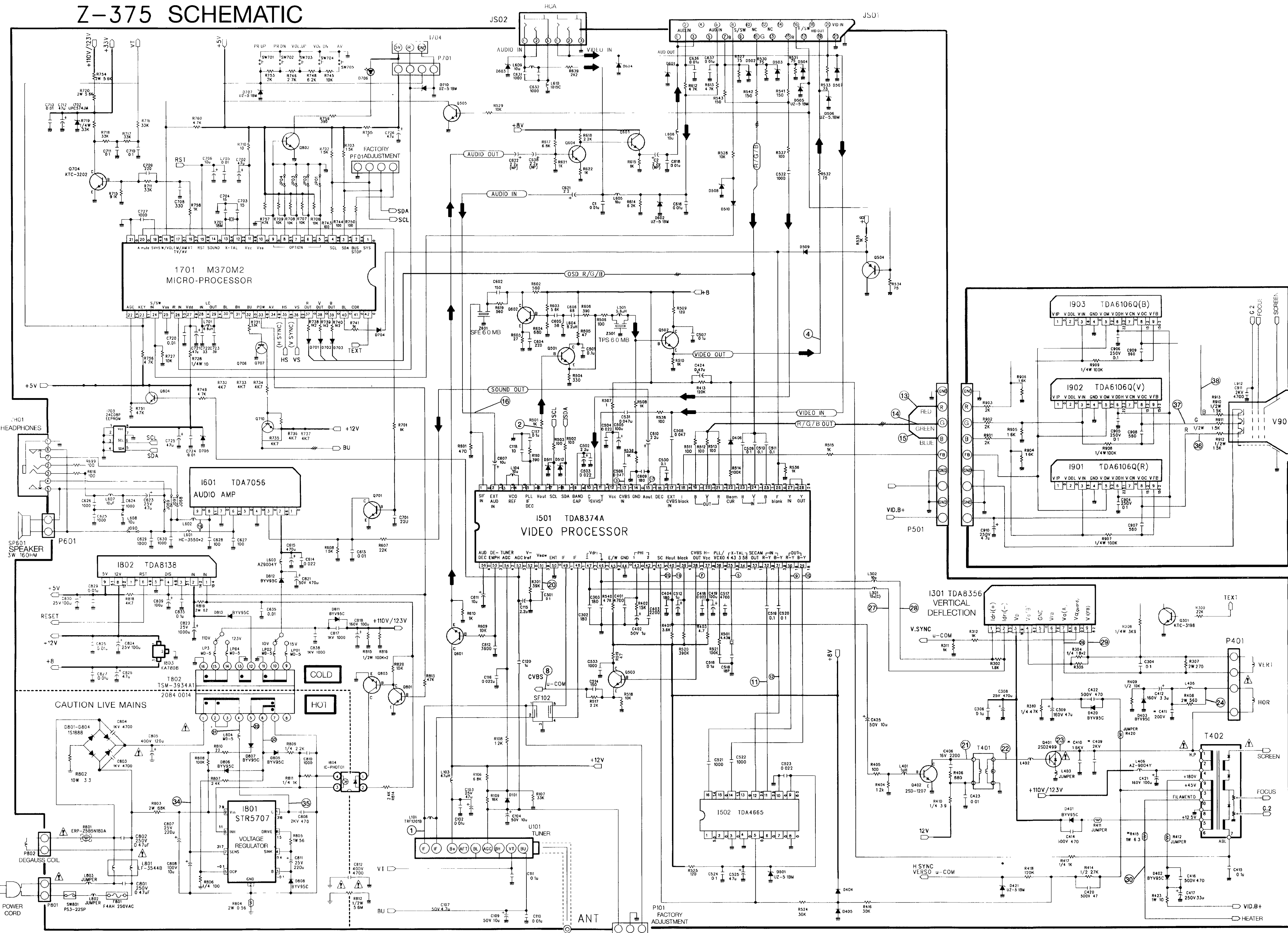
1. **RESISTOR**
All resistors are carbon 1/4W resistor, unless marked. Unit of resistance is OHM (Ω) (K=1,000, M=1,000,000).
2. **CAPACITOR**
All capacitors are ceramic 50V capacitors, unless marked as follows: Unit of capacitance is μ F, unless otherwise stated.
3. **COIL**
Unit of inductance is μ H, unless otherwise stated.
4. **TEST POINT**
 Test Point position
5. **EARTH SYMBOL**
 Chassis Earth (COLD)  Line Earth (HOT)
6. **VOLTAGE MEASUREMENT**
Voltage is measured by a DC voltmeter. Measurement conditions are as follows:
Power source AC 220 / 240V, 50Hz
Receiving Signal Colour Bar signal (RF)
All customer controls Maximum position
7. This schematic diagram is the latest at the time of printing and is subject to change without notice.

Remarks:

1. Care must be taken when servicing this receiver, as it uses a HOT chassis. The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions. All circuits except the Audio, Video input circuits are HOT.
2. **Precautions**
 - a. Do not touch the HOT part, or the HOT and COLD parts of the chassis, at the same time, as you are liable to a shock hazard.
 - b. Do not short-circuit the HOT and COLD circuits as electrical components may be damaged.
 - c. Do not connect an instrument, such as an oscilloscope, to the HOT and COLD circuits simultaneously, as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
 - d. Make sure to disconnect the power plug before removing the chassis.



Z-375 SCHEMATIC



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