

Service Manual



Colour Television TX-21AT1P Z8T Chassis

SPECIFICATIONS

Power Source:	220-240V a.c., 50Hz
Power Consumption:	48W
Stand-by Power Consumption:	0,8W
Aerial Impedance:	75Ω unbalanced, Coaxial Type
Receiving System:	PAL B/G, PAL D/K, PAL-60 SECAM B/G, SECAM D/K M.NTSC (AV) NTSC (AV only)

Receiving Channels:	
VHF E2-E12	VHF H1-H2 (ITALY)
VHF A-H (ITALY)	VHF R1-R2
VHF R3-R5	VHF R6-R12
UHF E21-E69	CATV (S01-S05)
CATV S1-S10 (M1-M10)	CATV S11-S20 (U1-U10)
CATV S21-S41 (HYPERBAND)	

Intermediate Frequency:	
Video/Audio	
Video	38,9MHz
Audio	32,4MHz, 33,4MHz
Colour	34,47MHz (PAL), 34,5MHz (SECAM), 34,65MHz (SECAM)

Terminals:

AV1 IN	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 10kΩ RGB (21 pin) 0,7V p-p 75Ω
AV1 OUT	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 1kΩ

AV FRONT	Audio (RCAx1) 500mV rms 10kΩ Video (RCAx1) 1V p-p 75Ω
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High Voltage:	27kV ± 1kV
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Picture Tube:	A51ERF135X71 51cm
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Audio Output:	1 x 5W RMS, 1 x 10W MPO 8Ω Impedance
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Headphones:	8Ω Impedance
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Accessories supplied :	Remote Control 2 x R6 (UM3) Batteries
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Dimensions:	
Height:	476mm
Width:	524mm
Depth:	473mm

Net weight:	22kg
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Specifications are subject to change without notice.
Weights and dimensions shown are approximate.

NOTE: This Service Manual should be used in conjunction with the Z8 Technical guide.

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SAFETY PRECAUTION

GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the a.c. 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 that 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 a.c. outlet.
5. Potentials as high as 28kV 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 tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazard.

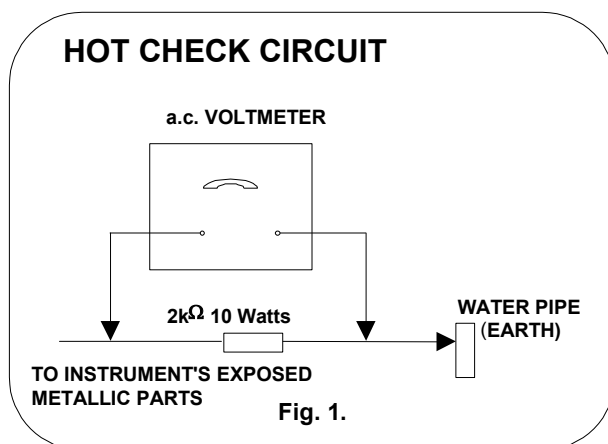
LEAKAGE CURRENT COLD CHECK

1. Unplug the a.c. 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 a.c. plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts 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 a.c. cord directly into the a.c. 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 a.c. voltmeter with high impedance to measure the potential across the resistor.

4. Check each exposed metallic part and check the voltage at each point.
5. Reverse the a.c. plug at the outlet and repeat each of the previous 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.

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 28kV 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: 27kV $\pm$ 1kV.
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

How to remove the rear cover

1. Remove the 5 screws as shown in Fig.2.



Fig.2.

LOCATION OF CONTROLS

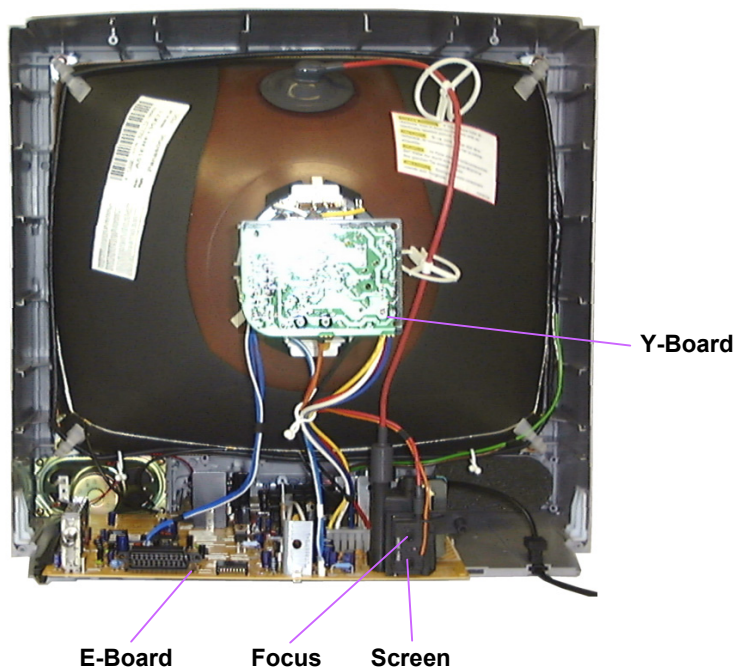


Fig. 3

ADJUSTMENT PROCEDURE

Item / Preparation	Adjustments																																																
+B SET-UP 1. Receive a Greyscale signal. 2. Set the controls : Brightness Minimum Contrast Minimum Volume Minimum	Confirm the following voltages. <table><tr><td>B1</td><td>3,3</td><td>±</td><td>0,3V</td><td>B13</td><td>-16</td><td>±</td><td>1V</td></tr><tr><td>B2</td><td>190</td><td>±</td><td>10V</td><td>B14</td><td>27,5</td><td>±</td><td>1,5V</td></tr><tr><td>B3</td><td>16</td><td>±</td><td>1V</td><td>B15</td><td>28</td><td>±</td><td>1,5V</td></tr><tr><td>B4</td><td>10</td><td>±</td><td>1V</td><td>B16</td><td>13</td><td>±</td><td>1V</td></tr><tr><td>B8</td><td>5</td><td>±</td><td>0,3V</td><td>B17</td><td>8</td><td>±</td><td>1V</td></tr><tr><td>B11</td><td>127</td><td>±</td><td>10V</td><td>B18</td><td>5</td><td>±</td><td>0,3V</td></tr></table>	B1	3,3	±	0,3V	B13	-16	±	1V	B2	190	±	10V	B14	27,5	±	1,5V	B3	16	±	1V	B15	28	±	1,5V	B4	10	±	1V	B16	13	±	1V	B8	5	±	0,3V	B17	8	±	1V	B11	127	±	10V	B18	5	±	0,3V
B1	3,3	±	0,3V	B13	-16	±	1V																																										
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B11	127	±	10V	B18	5	±	0,3V																																										
CUT OFF / Ug2 Test 1. Receive a Greyscale signal. 2. Degauss the tube externally. 3. Set the TV into Service Mode 1. 4. Select Cut off mode.	Set Contrast on maximum, set Brightness on center, switch on AV mode. Enter Service mode. Set Sub-Brightness to 31. Select Ug2 Test. Press "+" and adjust screen Vr till sharp vertical line is visible and LED switches off. Then reduce screen Vr till LED is just switched on.																																																

SELF CHECK

Self-check is used to automatically check the bus lines and hexadecimal code of the TV set. To enter Self-Check mode, press the **STATUS**  button on the remote control and at the same time press the down **(-V)** button on the customer controls at the front of the TV set. To exit Self Check, switch off the TV set at the power button.

OPTION 1 E0

OPTION 2 02

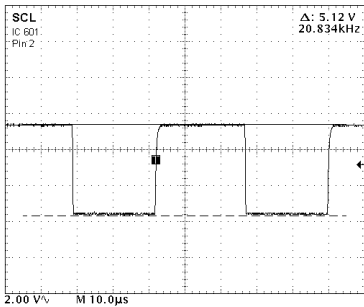
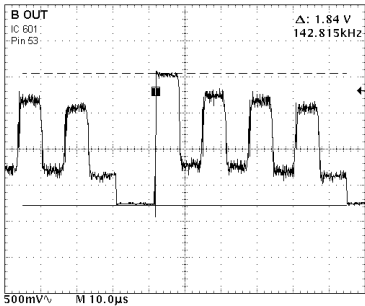
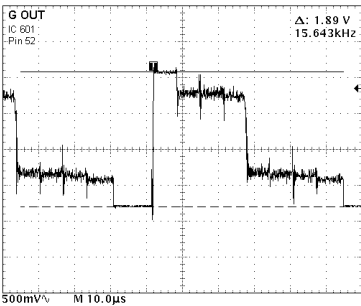
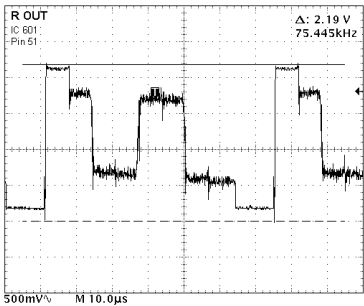
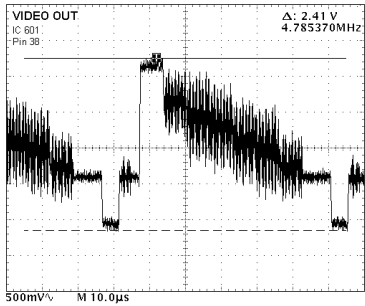
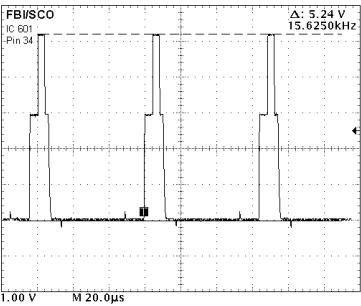
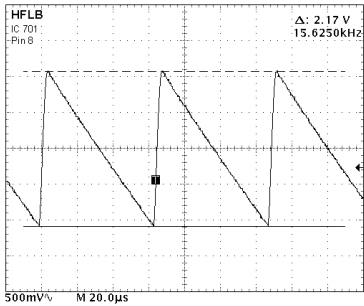
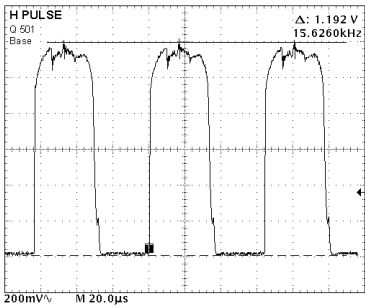
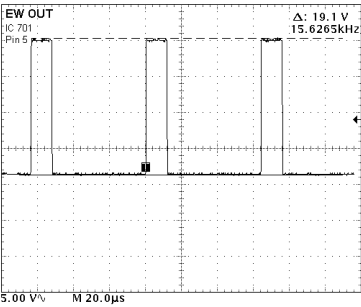
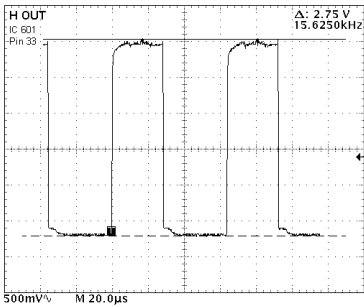
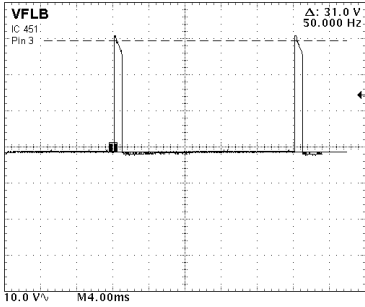
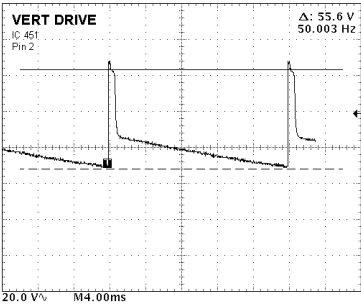
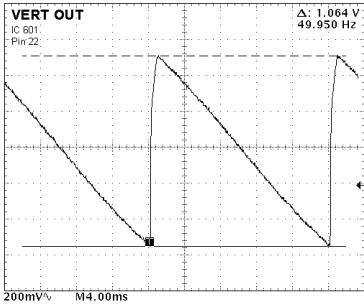
If the CCU ports have been checked and found to be incorrect or not located then " - - " will appear in place of "O.K.".

Service Aids

To aid in the service of our current chassis there are a number of Service Aids which have been made available.

- **LUCI** interface kit (Linked Utility Computer Interface)
Part number: TZS6EZ002
This contains interface and cables for connecting TV service connector and a PC as well as diagnostic software. As new models are introduced upgrade software will become available.
- **VICI** (Visual Interactive Computer Information)
These C.D.'s contain multimedia documentation providing quick access to service information.
Part No. TZS7EZ006, TZS7EZ005, TZS8EZ001 & TZS9EZ001
 1. Service Manuals
 2. Instruction Books
 3. Technical Information
- **TASMIN** (Technically Advanced System for Multimedia Interactive Notes)
As well as providing a first step towards more interactive training this product also achieves quick access to Technical Information.

WAVEFORM PATTERN TABLE



CONDITIONS:

Contrast: MAX
Brightness: MID
Colour: MID
Sharpness: MID

ALIGNMENT SETTINGS

To access Service Mode select program position 99 and set sharpness to minimum.

Press **"MUTE"** button on remote control and at the same time press the **"V"** button on the customer controls at the front of the TV, this will place the TV set into Service Mode.

Press **^ / v** buttons to step up / down through the functions.

Press **+ / -** buttons to alter the function values.

Press **"STR"** button on the customer controls at the front of the TV after each adjustment has been made to store the required values.

To exit Service Mode press **"N"** button.

Alignment Function	Setting indication Note: All setting values are approximate	Settings / Special features
1. Cut off (Ug2)	LED ON/OFF	LED to be just ON
2. Vertical slope	V-SLO 029	Optimum setting.
3. Vertical Position	V-POS 035	Optimum setting.
4. Vert. Amplitude	V-AMP 054	Optimum setting.
5. Horizontal Shift	H-CTR 034	Optimum setting.
6. Horizontal Parallelogram	H-PAR 035	Optimum setting.
7. Horizontal Bow	H-BOW 025	Optimum setting.
8. R-Cut	R-CUT 008	Optimum setting.
9. G-Cut	G-CUT 008	Optimum setting.
10. R-Drive	R-DRV 039	Optimum setting.
11. G-Drive	G-DRV 031	Optimum setting.
12. B-Drive	B-DRV 031	Optimum setting.
13. AGC	AGC 028	Optimum setting.
14. Sub Colour	S-COL 015	Optimum setting.
15. Sub Brightness	S-BRI 026	Optimum setting.
16. Horizontal Width	EW-WD 049	Optimum setting.
17. EW Parabola	EW-PR 009	Optimum setting.
18. EW Upper Corners	EW-UC 037	Optimum setting.
19. EW Lower Corners	EW-LC 051	Optimum setting.
20. EW Trapezoid	EW-TP 022	Optimum setting.

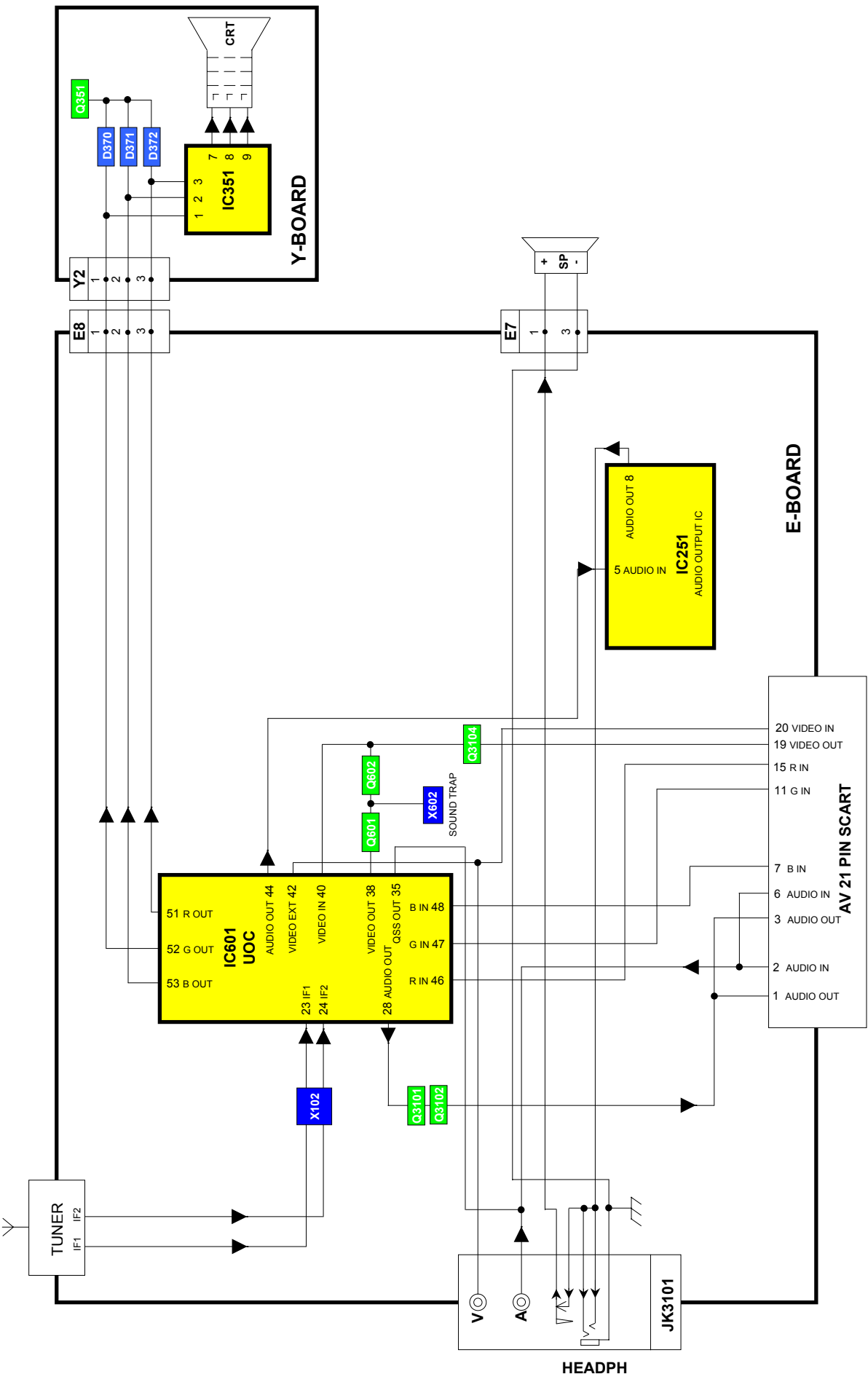
To access Option Bytes input remote code **"FA"** followed by key **5** (14 hex) or to access from Service Mode press **"Status button"** on remote control.

(numerical keys 0-7 to change value, TV/AV button to store on remote control):

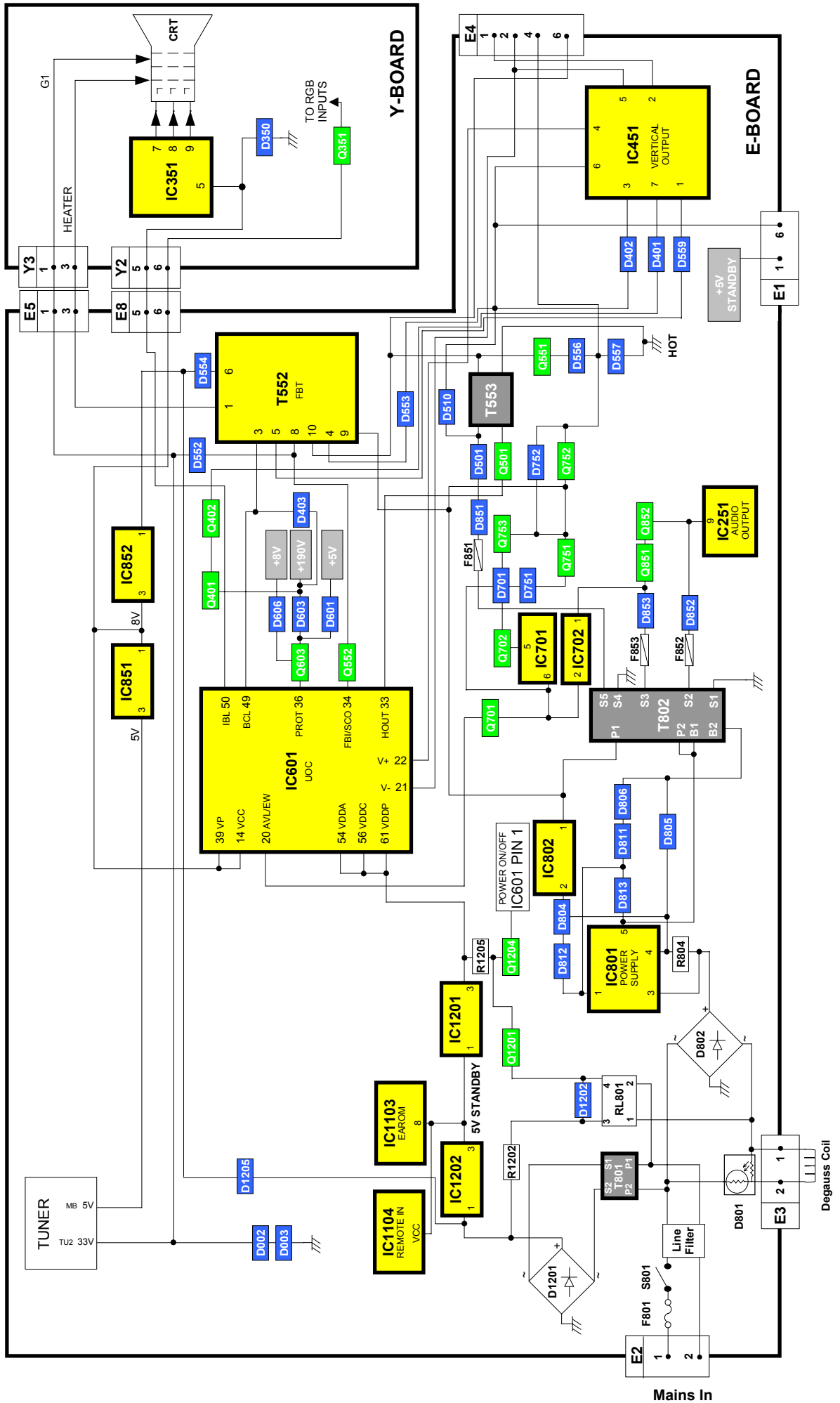
Option Byte 1		Option Byte Table		
Bit No.	Value	Functions		
0	0	French model	0 1	NO YES
1	0	Irish model	0 1	NO YES
2	0	NICAM	0 1	NO YES
3	0	A2 Stereo	0 1	NO YES
4	0	Tuner manufacturer	0 1	MACO ALPS
5	1	E-W circuit	0 1	NO YES
6	1	Q-link	0 1	NO YES
7	1	TOP TEXT	0 1	YES NO

Option Byte 2		Option Byte Table		
Bit No.	Value	Functions		
0	0	Sound AI	0 1	NO YES
1	1	CATS	0 1	YES NO
2	--	--	--	--
3	--	--	--	--
4	--	--	--	--
5	--	--	--	--
6	--	--	--	--
7	--	--	--	--

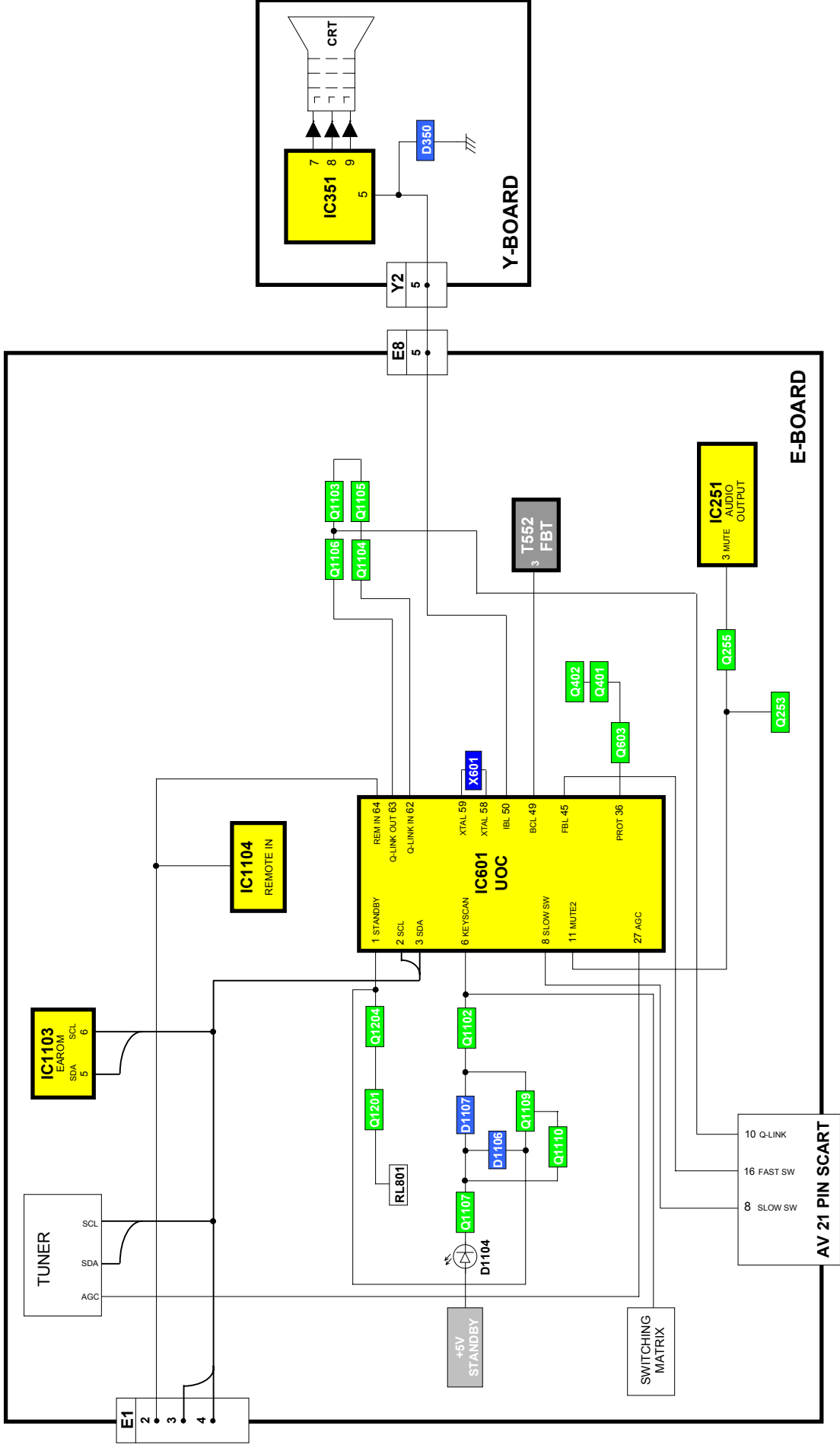
VIDEO & MONO AUDIO BLOCK DIAGRAM



POWER SUPPLY & DEFLECTION BLOCK DIAGRAM



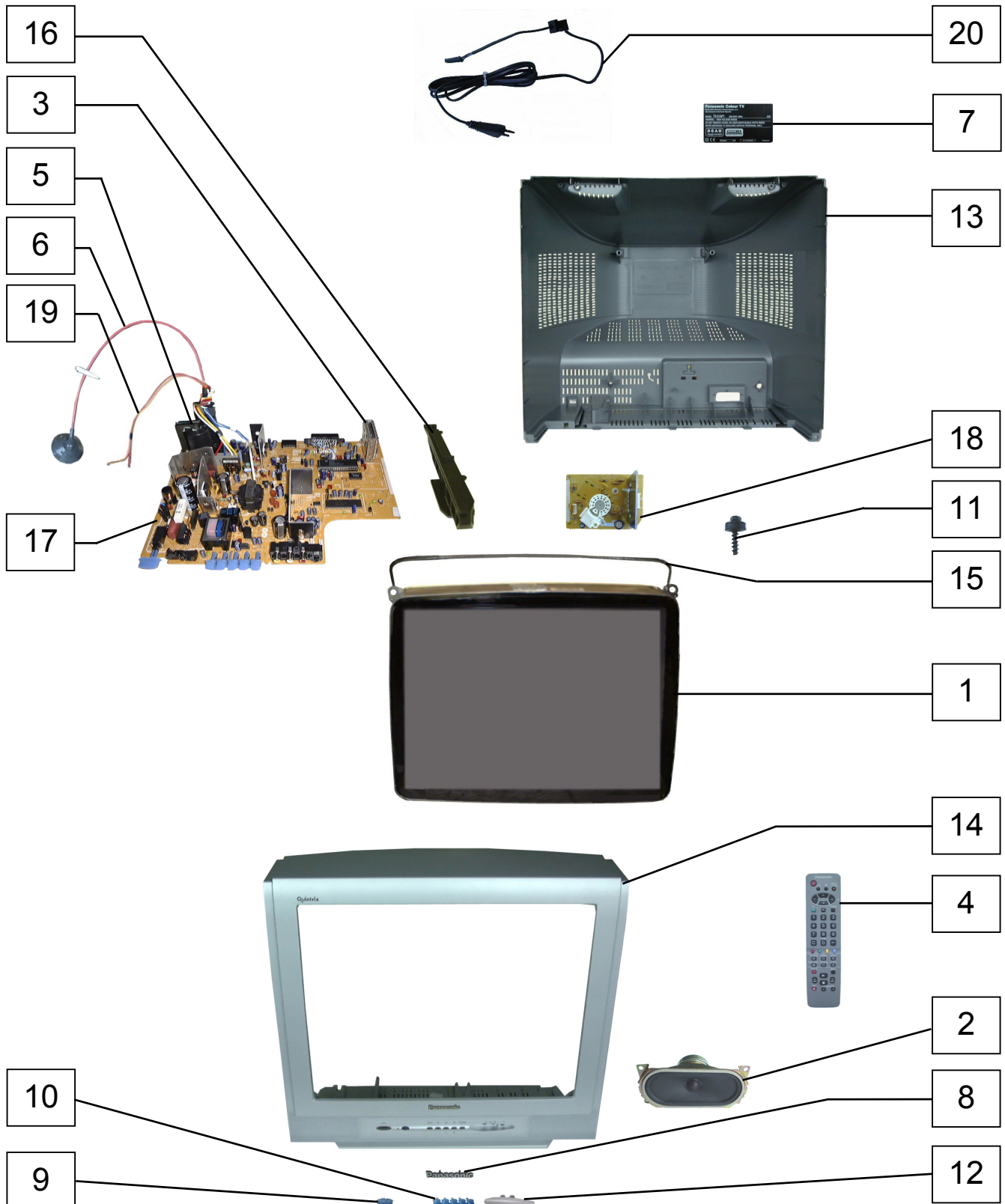
CONTROL BLOCK DIAGRAM



PARTS LOCATION

NOTE:

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



REPLACEMENT PARTS LIST

Important Safety Notice

Components Identified by  mark have special characteristics important for safety.
* When replacing any of these components, use only manufacturers specified parts.
In case of ordering these spare parts, please always add the complete Model-Type number to your order.

Cct Ref	Parts Number	Description	
EXPLODED VIEW			
1	A51ERF135X71	C.R.T.	
2	EASG12D552A2	SPEAKER	
3	ENV57D37G3	TUNER	
4	EUR511310	REMOTE CONTROL	
5	KFT3AB398F	F.B.T.	
6	KFT7CM450F	ANODE LEAD	
7	TBM0E0201	MODEL LABEL	
8	TBM0E3001	PANASONIC BADGE	
9	TBX0E80100	POWER BUTTON	
10	TBX0E80200-1	5-KEY BUTTON	
11	THT1065R	CRT FIXING SCREW	
12	TKP0E10401	AV COVER	
13	TKU0E0101-1	BACK COVER	
14	TKY0E0102-1	CABINET	
15	TLK8E05133	DEGAUSS COIL	
16	TMZ8E011	CHASSIS RAIL RIGHT	
17	TNP8EE011GG	E P.C.B.	
18	TNP8EY015AE	Y P.C.B.	
19	TXAJTF01BZAG	FOCUS LEAD ASSY	
20	TXASX01BYCG	AC CORD	
MISCELLANEOUS COMPONENTS			
.	R6RC/2P	BATTERY	
.	TKP0E10201	LED TUBE	
.	TKP0E10301	SMOKED PANEL	
.	TMK0E703	SPEAKER BLINDING SHEET	
.	TMM16520	RUBBER CAP	
.	TPC0E41101	CARTON	
.	TPD0E0009	BOTTOM CUSHION	
.	TPD0E0010	TOP CUSHION	
.	TPD0E1002	SUB CUSHION	
CKN1	TMM8E17938	PCB SPACER	
POE3	TMW8E015-3	LED HOLDER	
INSTRUCTION BOOKS			
.	TQB8E3578MN	BULGARIAN, ROMANIAN	
.	TQB8E3578PQ	POLISH, HUNGARIAN	
.	TQB8E3578RU	CZECH, ENGLISH	
.	TQB8E3578W	SLOVAKIAN	
I.C.s			
IC251	TDA7253	AUDIO OUTPUT	
IC351	TDA6107Q	RGB OUTPUT	
IC451	LA7840	VERTICAL OUTPUT	
IC601	TDA9363V905M	MICRO PROCESSOR	
IC701	TEA2031A	E/W CORRECTION	
IC702	AN78L20	20V REGULATOR	
IC801	STRF6523LF51	POWER SUPPLY	
IC802	SE120NLF4	ERROR IC	
IC851	AN78M05LB1	5V REGULATOR	
IC852	BA08T	REGULATOR	
IC1103	PK1/2TP/Z	EAROM 24C16API2.7	

Cct Ref	Parts Number	Description	
IC1104	RPM-6937	LED RECEIVER	
IC1201	BA033T	3.3V REGULATOR	
IC1202	BA05T	REGULATOR	
FUSES			
F801	19181/3.15	FUSE	
F801-2	EYF52BC	FUSE HOLDER	
F801-1	EYF52BC	FUSE HOLDER	
F851	TR5-T500	FUSE	
F852	TR5-T1000	FUSE	
F853	TR5-T500	FUSE	
DIODES			
D002	MTZJT-7716A	DIODE	
D003	MTZJT-7716A	DIODE	
D260	MA29W-ATA	DIODE	
D261	MTZJT-7739C	DIODE	
D262	MTZJT-7739C	DIODE	
D350	MTZJT-777.5B	DIODE	
D351	1SR124-4AT82	DIODE	
D352	1SR124-4AT82	DIODE	
D353	1SR124-4AT82	DIODE	
D370	1SS133T-77	DIODE	
D371	1SS133T-77	DIODE	
D372	1SS133T-77	DIODE	
D401	1SS133T-77	DIODE	
D402	ERA15-02V3	DIODE	
D403	MTZJT-7733B	DIODE	
D501	1SR124-4AT82	DIODE	
D502	MTZJT-778.2A	DIODE	
D510	1SR124-4AT82	DIODE	
D551	1SS133T-77	DIODE	
D552	1SR124-4AT82	DIODE	
D553	EU02V0	DIODE	
D554	EU02V0	DIODE	
D555	1SS133T-77	DIODE	
D556	TVSRH2FV1	DIODE	
D557	TVSRU2AMLFA1	DIODE	
D559	1SR124-4AT82	DIODE	
D601	MTZJT-775.1A	DIODE	
D603	1SS133T-77	DIODE	
D606	1SS133T-77	DIODE	
D701	SFH617A-20P6	PHOTO COUPLER	
D702	1SS133T-77	DIODE	
D703	1SS133T-77	DIODE	
D704	MTZJT-775.6C	DIODE	
D705	MA29T-BTA	DIODE	
D706	MTZJT-774.3B	DIODE	
D751	MA4051MTA	DIODE	
D752	AU02V0	DIODE	
D753	MTZJT-7730D	DIODE	
D754	MTZJT-7727D	DIODE	
D755	1SS133T-77	DIODE	

Cct Ref	Parts Number	Description
D801	59209T80B110	THERMISTOR
D802	RBV-408	DIODE
D803	AU01V0	DIODE
D804	SFH617A-20P6	PHOTO COUPLER
D805	1SR124-4AT82	DIODE
D806	1SR124-4AT82	DIODE
D807	MTZJT-7720D	DIODE
D808	RU3LFA1	DIODE
D809	R2KNLFA1	DIODE
D810	1SS133T-77	DIODE
D811	1SR124-4AT82	DIODE
D812	1SS133T-77	DIODE
D813	MTZJT-7720D	DIODE
D814	MTZJT-773.9A	DIODE
D851	TVSRU3AMLFA5	DIODE
D852	TVSRU3AMLFA5	DIODE
D853	1SR124-4AT82	DIODE
D1101	MTZJT-776.2A	DIODE
D1104	SLR-56VR3F	LED
D1106	1SS133T-77	DIODE
D1107	1SS133T-77	DIODE
D1201	TVSS1WBS20	DIODE
D1202	1SS133T-77	DIODE
D1205	1SS133T-77	DIODE
D3101	MTZJT-775.1A	DIODE
TRANSISTORS		
Q253	BC857B	TRANSISTOR
Q255	BC847B	TRANSISTOR
Q351	BC857B	TRANSISTOR
Q401	BC847B	TRANSISTOR
Q402	BC847B	TRANSISTOR
Q501	2SD2398	TRANSISTOR
Q551	BU4506DFRB	TRANSISTOR
Q552	BC847B	TRANSISTOR
Q601	BC847B	TRANSISTOR
Q602	BC847B	TRANSISTOR
Q603	BC857B	TRANSISTOR
Q701	BC857B	TRANSISTOR
Q702	BC847B	TRANSISTOR
Q751	BC847B	TRANSISTOR
Q752	2SK2538000LB	TRANSISTOR
Q753	BC557B/126	TRANSISTOR
Q851	BC557B/126	TRANSISTOR
Q852	2SA684R	TRANSISTOR
Q1102	BC847B	TRANSISTOR
Q1103	BC847B	TRANSISTOR
Q1104	BC847B	TRANSISTOR
Q1105	BC847B	TRANSISTOR
Q1106	BC847B	TRANSISTOR
Q1107	BC847B	TRANSISTOR
Q1109	BC847B	TRANSISTOR
Q1110	BC847B	TRANSISTOR
Q1201	BC847B	TRANSISTOR
Q1204	BC847B	TRANSISTOR
Q3101	BC847B	TRANSISTOR
Q3102	BC847B	TRANSISTOR
Q3104	2SC1318TA	TRANSISTOR
TRANSFORMERS		
T553	ETH19Z192AZ	TRANSFORMER
T801	ETP35KAN619U	TRANSFORMER
T802	ETS33KD1B6AC	TRANSFORMER
COILS		
L001	TALV35VB100K	COIL
L501	ELH5L4139	COIL
L502	ELC08D682E	COIL

Cct Ref	Parts Number	Description
L601	TALV35VB100K	COIL
L602	TALV35VB100K	COIL
L604	EXCELD35V	COIL
L751	ELC18B102L	COIL
L752	ELC10D822E	COIL
L753	EXCELSA35T	COIL
L802	EXCELSA35T	COIL
L803	EXCELD35V	COIL
L851	EXCELSA35T	COIL
L852	EXCELSA35T	COIL
L853	EXCELSA35T	COIL
L1101	TALV35VB331K	COIL
L3101	TLT100K991R	COIL
L3102	TLT100K991R	COIL
L3103	EXCELSA35T	COIL
L3104	EXCELSA35T	COIL
L3105	TALV35VB100K	COIL
L3107	EXCELD35V	COIL
FILTERS		
L108	EFCV4045A4	CERAMIC FILTER
L801	ELF15N005A	LINE FILTER
X102	K2955-M100	SAW FILTR
X602	EFCT5M7MW5N	CERAMIC FILTER
X603	EFCS6R5MW5	CERAMIC FILTER
CRYSTALS		
X601	TSSA010	CRYSTAL
RESISTORS		
C654	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA1	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA2	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA3	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA5	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA6	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA7	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA9	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA10	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA11	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA12	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA15	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA16	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA18	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA19	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA20	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA21	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA22	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA23	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA27	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA28	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA29	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA30	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA31	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA32	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA33	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA34	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA36	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA37	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA38	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA40	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA41	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA42	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA43	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JA44	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JA46	ERJ8GEY0R00V	S.M.CARB 0.125 0 Ω
JS3104	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω
JS3105	ERJ6GEY0R00V	S.M.CARB 0.1W 0 Ω

Cct Ref	Parts Number	Description			
JSE1	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE2	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE5	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE6	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE12	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE13	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE15	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE17	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE26	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE29	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE30	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE33	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE37	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE43	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JSE44	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
JYA	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
R001	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R002	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R003	ERJ6GEYJ153V	S.M.CARB	0.1W 5%	15K Ω	
R004	ERG2SJS273H	METAL	2W 5%	27K Ω	
R005	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
R006	ERJ6GEYJ273V	S.M.CARB	0.1W 5%	27K Ω	
R007	ERJ6GEYJ302V	S.M.CARB	0.1W 5%	3K Ω	
R008	ERJ6GEYJ681V	S.M.CARB	0.1W 5%	680 Ω	
R110	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
R241	ERJ6GEYJ102V	S.M.CARB	0.1W 5%	1K Ω	
R254	ERJ6GEYJ221V	S.M.CARB	0.1W 5%	220 Ω	
R256	ERJ6GEYJ471V	S.M.CARB	0.1W 5%	470 Ω	
R262	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R263	ERJ6GEYJ272V	S.M.CARB	0.1W 5%	2K7 Ω	
R264	ERJ6GEYJ512V	S.M.CARB	0.1W 5%	5K1 Ω	
R266	ERDS2TJ2R2T	CARBON	0.25W 5%	2R2 Ω	
R268	ERJ6GEYJ203V	S.M.CARB	0.1W 5%	20K Ω	
R351	ERDS1TJ182T	CARBON	0.5W 5%	1K8 Ω	
R352	ERDS1TJ182T	CARBON	0.5W 5%	1K8 Ω	
R353	ERDS1TJ182T	CARBON	0.5W 5%	1K8 Ω	
R357	ERDS1TJ102T	CARBON	0.5W 5%	1K Ω	
R358	ERDS1TJ102T	CARBON	0.5W 5%	1K Ω	
R359	ERDS1TJ102T	CARBON	0.5W 5%	1K Ω	
R360	ERG2SJS470H	METAL	2W 5%	47 Ω	
R370	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R371	ERJ6GEYJ391V	S.M.CARB	0.1W 5%	390 Ω	
R401	ERJ6GEYJ473V	S.M.CARB	0.1W 5%	47K Ω	
R402	ERJ6GEYJ332V	S.M.CARB	0.1W 5%	3K3 Ω	
R403	ERJ6ENF2701V	S.M.CARB	0.1W 1%	2K7 Ω	
R404	ERJ6ENF2701V	S.M.CARB	0.1W 1%	2K7 Ω	
R405	ERJ6ENF2701V	S.M.CARB	0.1W 1%	2K7 Ω	
R406	ERJ6GEYJ1R0V	S.M.CARB	0.1W 5%	1 Ω	
R407	ERDS1TJ331T	CARBON	0.5W 5%	330 Ω	
R409	ERJ6GEYJ473V	S.M.CARB	0.1W 5%	47K Ω	
R410	ERJ6GEYJ683V	S.M.CARB	0.1W 5%	68K Ω	
R411	ERJ6GEYJ821V	S.M.CARB	0.1W 5%	820 Ω	
R415	ERJ6ENF2701V	S.M.CARB	0.1W 1%	2K7 Ω	
R416	ERDS2TJ1R8T	CARBON	0.25W 5%	1R8 Ω	
R417	ERDS2TJ1R5T	CARBON	0.25W 5%	1R5 Ω	
R501	ERJ6GEYJ391V	S.M.CARB	0.1W 5%	390 Ω	
R502	ERDS2TJ272T	CARBON	0.25W 5%	2K7 Ω	
R503	ERG3SJS470H	METAL	3W 5%	47 Ω	
R504	ERG2ANJP471H	METAL	2W 5%	470 Ω	
R507	ERJ6GEYJ122V	S.M.CARB	0.1W 5%	1K2 Ω	
R553	ERJ6GEYJ273V	S.M.CARB	0.1W 5%	27K Ω	
R554	ERJ6GEYJ102V	S.M.CARB	0.1W 5%	1K Ω	
R555	ERJ6GEYJ123V	S.M.CARB	0.1W 5%	12K Ω	
R556	ERDS2TJ103T	CARBON	0.25W 5%	10K Ω	
R557	ERDS1TJ274T	CARBON	0.5W 5%	270K Ω	
R558	ERDS2TJ153T	CARBON	0.25W 5%	15K Ω	

Cct Ref	Parts Number	Description			
R559	ERQ1ABJP3R0S	METAL	1W 5%	3 Ω	
R560	ERQ1CJP102S	FUSIBLE	1W 5%	1K Ω	
R561	ERQ12AJ101E	FUSIBLE	0.5W 5%	100 Ω	
R601	ERJ6GEYJ153V	S.M.CARB	0.1W 5%	15K Ω	
R602	ERJ6ENF3001V	S.M.CARB	0.1W 1%	3K Ω	
R603	ERJ6ENF3902V	S.M.CARB	0.1W 5%	39 Ω	
R604	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R605	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R606	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R607	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R608	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R609	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R610	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R611	ERJ6GEYJ102V	S.M.CARB	0.1W 5%	1K Ω	
R612	ERJ6GEYJ102V	S.M.CARB	0.1W 5%	1K Ω	
R613	ERJ6GEYJ391V	S.M.CARB	0.1W 5%	390 Ω	
R615	ERJ6GEYJ470V	S.M.CARB	0.1W 5%	47 Ω	
R616	ERJ6GEYJ201V	S.M.CARB	0.1W 5%	200 Ω	
R617	ERJ6GEYJ181V	S.M.CARB	0.1W 5%	180 Ω	
R618	ERJ6GEYJ470V	S.M.CARB	0.1W 5%	47 Ω	
R619	ERJ6GEYJ471V	S.M.CARB	0.1W 5%	470 Ω	
R620	ERJ6GEYJ471V	S.M.CARB	0.1W 5%	470 Ω	
R621	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R622	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R623	ERJ6GEY0R00V	S.M.CARB	0.1W	0 Ω	
R624	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R625	ERJ6GEYJ222V	S.M.CARB	0.1W 5%	2K2 Ω	
R626	ERJ6GEYJ474V	S.M.CARB	0.1W 5%	470K Ω	
R627	ERJ6GEYJ474V	S.M.CARB	0.1W 5%	470K Ω	
R628	ERDS1TJ564T	CARBON	0.5W 5%	560K Ω	
R629	ERJ6GEYJ154V	S.M.CARB	0.1W 5%	150K Ω	
R630	ERJ6ENF1802V	S.M.CARB	0.1W 1%	18K Ω	
R631	ERO50PKF5603	METAL	0.5W 1%	560K Ω	
R632	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R633	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R634	ERJ6GEYJ272V	S.M.CARB	0.1W 5%	2K7 Ω	
R635	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R638	ERJ6GEYJ151V	S.M.CARB	0.1W 5%	150 Ω	
R646	ERJ6GEYJ100V	S.M.CARB	0.1W 5%	10 Ω	
R701	ERJ6GEYJ102V	S.M.CARB	0.1W 5%	1K Ω	
R702	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R703	ERJ6GEYJ392V	S.M.CARB	0.1W 5%	3K9 Ω	
R704	ERJ6GEYJ562V	S.M.CARB	0.1W 5%	5K6 Ω	
R705	ERDS1TJ821T	CARBON	0.5W 5%	820 Ω	
R706	ERJ6GEYJ563V	S.M.CARB	0.1W 5%	56K Ω	
R707	ERJ6GEYJ104V	S.M.CARB	0.1W 5%	100K Ω	
R708	ERJ6GEYJ273V	S.M.CARB	0.1W 5%	27K Ω	
R709	ERJ6GEYJ393V	S.M.CARB	0.1W 5%	39K Ω	
R710	ERJ6GEYJ393V	S.M.CARB	0.1W 5%	39K Ω	
R711	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R712	ERJ6GEYJ561V	S.M.CARB	0.1W 5%	560 Ω	
R713	ERG1SJ101P	METAL	1W 5%	100 Ω	
R715	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R716	ERJ6GEYJ432V	S.M.CARB	0.1W 5%	4K3 Ω	
R717	ERJ6GEYJ392V	S.M.CARB	0.1W 5%	3K9 Ω	
R751	ERJ6GEYJ152V	S.M.CARB	0.1W 5%	1K5 Ω	
R752	ERJ6GEYJ222V	S.M.CARB	0.1W 5%	2K2 Ω	
R753	ERJ6GEYJ152V	S.M.CARB	0.1W 5%	1K5 Ω	
R754	ERJ6GEYJ103V	S.M.CARB	0.1W 5%	10K Ω	
R756	ERDS1TJ472T	CARBON	0.5W 5%	4K7 Ω	
R757	ERJ6GEYJ680V	S.M.CARB	0.1W 5%	68 Ω	
R758	ERJ6GEYJ392V	S.M.CARB	0.1W 5%	3K9 Ω	
R759	ERQ12HJ3R3P	FUSIBLE	0.5W 5%	3R3 Ω	
R760	ERJ6GEYJ101V	S.M.CARB	0.1W 5%	100 Ω	
R761	ERG1SJ473P	METAL	1W 5%	47K Ω	
R762	ERJ6GEYJ102V	S.M.CARB	0.1W 5%	1K Ω	

Cct Ref	Parts Number	Description			
R763	ERG3FJ561H	METAL	3W	5%	560 Ω
R802	ERC12ZGK335V	SOLID	0.5W	10%	3M3 Ω Δ
R803	ERF7ZK2R7	WOUND	7W	20%	2R7 Ω
R804	ERG2ANJP104H	METAL	2W	5%	100K Ω
R805	ERDS1TJ103T	CARBON	0.5W	5%	10K Ω
R806	ERDS1TJ332T	CARBON	0.5W	5%	3K3 Ω
R807	ERDS2TJ152T	CARBON	0.5W	5%	1K5 Ω
R809	D0D2R47KA003	WOUND	2W	10%	R47 Ω
R810	ERDS1TJ152T	CARBON	0.5W	5%	1K5 Ω
R811	ERQ12HJ100P	FUSIBLE	0.5W	5%	10 Ω
R812	ERD75TAJ825	CARBON	0.75W	5%	8M2 Ω Δ
R813	ERDS1TJ333T	CARBON	0.5W	5%	33K Ω
R814	ERDS1TJ330T	CARBON	0.5W	5%	33 Ω
R815	ERDS1TJ681T	CARBON	0.5W	5%	680 Ω
R851	ERG2SJS470H	METAL	2W	5%	47 Ω
R852	ERG2SJS130H	METAL	2W	5%	13 Ω
R855	ERDS1TJ4R7T	CARBON	0.5W	5%	4R7 Ω
R856	ERDS2TJ101T	CARBON	0.25W	5%	100 Ω
R857	ERDS2TJ202T	CARBON	0.25W	5%	2K Ω
R858	ERDS1TJ103T	CARBON	0.5W	5%	10K Ω
R1101	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1102	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1104	ERJ6GEYJ562V	S.M.CARB	0.1W	5%	5K6 Ω
R1105	ERJ6GEYJ562V	S.M.CARB	0.1W	5%	5K6 Ω
R1110	ERJ6GEYJ102V	S.M.CARB	0.1W	5%	1K Ω
R1112	ERJ6GEYJ362V	S.M.CARB	0.1W	5%	3K6 Ω
R1113	ERJ6GEYJ242V	S.M.CARB	0.1W	5%	2K4 Ω
R1114	ERJ6GEYJ332V	S.M.CARB	0.1W	5%	3K3 Ω
R1115	ERJ6GEYJ512V	S.M.CARB	0.1W	5%	5K1 Ω
R1116	ERJ6GEYJ912V	S.M.CARB	0.1W	5%	9K1 Ω
R1117	ERJ6GEYJ821V	S.M.CARB	0.1W	5%	820 Ω
R1118	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1119	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1120	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1121	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1125	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1127	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1128	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1129	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R1130	ERJ6GEYJ473V	S.M.CARB	0.1W	5%	47K Ω
R1131	ERJ6GEYJ472V	S.M.CARB	0.1W	5%	4K7 Ω
R1132	ERJ6GEYJ225V	S.M.CARB	0.1W	5%	2M2 Ω
R1133	ERJ6GEYJ104V	S.M.CARB	0.1W	5%	100K Ω
R1134	ERJ6GEYJ224V	S.M.CARB	0.1W	5%	220K Ω
R1135	ERJ6GEYJ102V	S.M.CARB	0.1W	5%	1K Ω
R1136	ERJ6GEYJ221V	S.M.CARB	0.1W	5%	220 Ω
R1137	ERJ6GEYJ104V	S.M.CARB	0.1W	5%	100K Ω
R1138	ERJ6GEYJ223V	S.M.CARB	0.1W	5%	22K Ω
R1139	ERJ6GEYJ273V	S.M.CARB	0.1W	5%	27K Ω
R1140	ERJ6GEYJ103V	S.M.CARB	0.1W	5%	10K Ω
R1141	ERJ6GEYJ103V	S.M.CARB	0.1W	5%	10K Ω
R1145	ERJ6GEYJ104V	S.M.CARB	0.1W	5%	100K Ω
R1146	ERJ6GEYJ473V	S.M.CARB	0.1W	5%	47K Ω
R1148	ERJ6GEYJ103V	S.M.CARB	0.1W	5%	10K Ω
R1149	ERJ6GEYJ103V	S.M.CARB	0.1W	5%	10K Ω
R1150	ERJ6GEYJ103V	S.M.CARB	0.1W	5%	10K Ω
R1202	ERDS1TJ680T	CARBON	0.5W	5%	68 Ω
R1205	ERJ6GEYJ152V	S.M.CARB	0.1W	5%	1K5 Ω
R1206	ERJ6GEYJ223V	S.M.CARB	0.1W	5%	22K Ω
R1209	ERDS1TJ560T	CARBON	0.5W	5%	56 Ω
R2022	ERJ6GEYJ303V	S.M.CARB	0.1W	5%	30K Ω
R3100	ERJ6GEYJ304V	S.M.CARB	0.1W	5%	300K Ω
R3101	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R3102	ERJ6GEYJ123V	S.M.CARB	0.1W	5%	12K Ω
R3103	ERJ6GEYJ823V	S.M.CARB	0.1W	5%	82K Ω
R3104	ERJ6GEYJ472V	S.M.CARB	0.1W	5%	4K7 Ω

Cct Ref	Parts Number	Description			
R3105	ERJ6GEYJ222V	S.M.CARB	0.1W	5%	2K2 Ω
R3106	ERJ6GEYJ101V	S.M.CARB	0.1W	5%	100 Ω
R3111	ERDS1TJ101T	CARBON	0.5W	5%	100 Ω
R3115	ERJ6GEYJ151V	S.M.CARB	0.1W	5%	150 Ω
R3116	ERJ6GEYJ750V	S.M.CARB	0.1W	5%	75 Ω
R3117	ERJ6GEYJ750V	S.M.CARB	0.1W	5%	75 Ω
R3118	ERJ6GEYJ750V	S.M.CARB	0.1W	5%	75 Ω
R3119	ERJ6GEYJ221V	S.M.CARB	0.1W	5%	220 Ω
R3120	ERDS1TJ750T	CARBON	0.5W	5%	75 Ω
R3121	ERJ6GEYJ334V	S.M.CARB	0.1W	5%	330K Ω
R3122	ERJ6GEY0R00V	S.M.CARB	0.1W		0 Ω
R3123	ERJ6GEYJ102V	S.M.CARB	0.1W	5%	1K Ω
R3124	ERJ6GEYJ102V	S.M.CARB	0.1W	5%	1K Ω
R3125	ERJ6GEYJ104V	S.M.CARB	0.1W	5%	100K Ω
R3127	ERJ6GEYJ153V	S.M.CARB	0.1W	5%	15K Ω
R3128	ERJ6GEYJ562V	S.M.CARB	0.1W	5%	5K6 Ω
R3129	ERDS1TJ750T	CARBON	0.5W	5%	75 Ω
R3131	ERJ6GEYJ102V	S.M.CARB	0.1W	5%	1K Ω
R3132	ERJ6GEYJ221V	S.M.CARB	0.1W	5%	220 Ω
R3133	ERJ6GEYJ221V	S.M.CARB	0.1W	5%	220 Ω
R3134	ERJ6GEY0R00V	S.M.CARB	0.1W		0 Ω
CAPACITORS					
C001	ECA1CM220B	ELECT	16V		22μF
C002	ECJ2VF1H104Z	S.M.CAP	50V		100nF
C005	ECJ2VF1H104Z	S.M.CAP	50V		100nF
C006	SMG1CV101MT5	ELECT	16V		100μF
C007	SMG1HV330MT5	ELECT	50V		33μF
C008	ECA1HM010B	ELECT	50V		1μF
C009	ECUV1H100DCX	S.M. CAP	50V		10pF
C010	ECUV1H100DCX	S.M. CAP	50V		10pF
C117	ECJ2VB1H103K	S.M.CAP	50V		10nF
C118	ECJ2VB1H103K	S.M.CAP	50V		10nF
C252	ECJ2VB1H223K	S.M.CAP	50V		22nF
C253	ECKR1H103ZF5	CERAMIC	50V		100μF
C255	ECA1CM470B	ELECT	16V		47μF
C257	ECA1CHG102B	ELECT	10V		1000μF
C258	SMG1CV101MT5	ELECT	16V		100μF
C261	ECA1VM102B	ELECT	35V		1000μF
C263	ECA1HM010B	ELECT	50V		1μF
C264	ECA1HHG222E	ELECT	50V		2200μF
C268	ECJ2FB1H104K	S.M.CAP	50V		100nF
C270	ECJ2FB1H104K	S.M.CAP	50V		100nF
C351	ECA2EM010B	ELECT	250V		1μF
C352	ECKR2H152KB5	CERAMIC	500V		1.5nF
C354	ECJ2VF1H104Z	S.M.CAP	50V		100nF
C356	ECUV1H102ZFX	S.M. CAP	50V		1nF
C357	ECKW3D152KBP	CERAMIC	2KV		1.5nF
C358	ECUV1H561KBX	S.M. CAP	50V		560pF
C370	ECA1CM221B	ELECT	16V		220μF
C405	ECUV1H100CCX	S.M. CAP	50V		10pF
C406	ECA1HHG101B	ELECT	50V		100μF
C408	ECQV1H274JL3	FILM	50V		270nF
C409	ECA1HM2R2B	ELECT	50V		2.2μF
C410	ECA1HM101B	ELECT	50V		100μF
C501	EEUFC1H390B	ELECT	50V		390pF
C502	ECQB1273JF3	FILM	100V		27nF
C504	ECUV1H222JCX	S.M. CAP	50V		2.2nF
C554	ECA1VM471B	ELECT	35V		470μF
C555	ECKR2H471KB5	CERAMIC	500V		470pF
C556	ECKR2H471KB5	CERAMIC	500V		470pF
C558	ECA2CM4R7B	ELECT	160V		470pF
C559	ECWH16822JVB	FILM	1600V		8.2nF
C560	ECQF4273JZH	FILM	400V		27nF
C562	ECA2GHG2R2B	ELECT	400V		27nF
C563	ECWF2334JBB	FILM	250V		330nF
C564	ECA1VM471B	ELECT	35V		470μF

Cct Ref	Parts Number	Description		
C565	ECKR2H471KB5	CERAMIC	500V	470pF
C566	ECA1VM471B	ELECT	35V	470μF
C567	ECKW3D222KBP	CERAMIC	2KV	2.2nF
C570	ECKR2H472MD5	CERAMIC	500V	4.7nF
C601	ECA1CM102B	ELECT	16V	1000μF
C602	ECJ2FB1H104K	S.M.CAP	50V	100nF
C603	ECJ2VB1H472K	S.M.CAP	50V	4.7nF
C604	ECQV1H224JL3	FILM	50V	220nF
C605	ECQV1H224JL3	FILM	50V	220nF
C606	ECUV1H222JCX	S.M. CAP	50V	2.2nF
C607	ECA1HM010B	ELECT	50V	1μF
C608	ECA1HM2R2B	ELECT	50V	2.2μF
C609	ECJ2FB1H104K	S.M.CAP	50V	100nF
C610	ECJ2VB1H103K	S.M.CAP	50V	10nF
C612	ECJ2VB1H472K	S.M.CAP	50V	4.7nF
C613	ECJ2VB1H472K	S.M.CAP	50V	4.7nF
C614	ECQV1H104JL3	FILM	50V	0.1μF
C615	ECQV1H224JL3	FILM	50V	220nF
C616	ECUV1H332KBX	S.M. CAP	50V	3.3nF
C617	ECA1CM100B	ELECT	16V	10μF
C619	ECA1HM2R2B	ELECT	50V	2.2μF
C620	ECUV1H470GCG	S.M. CAP	50V	47pF
C621	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C622	ECUV1H101JCX	S.M. CAP	50V	100pF
C623	ECUV1H220GCG	S.M. CAP	50V	22pF
C624	ECQB1H223JF3	FILM	50V	22nF
C625	ECQB1H223JF3	FILM	50V	22nF
C626	ECQB1H223JF3	FILM	50V	22nF
C627	ECJ2YB1H473K	S.M.CAP	50V	47nF
C628	ECJ2YB1H473K	S.M.CAP	50V	47nF
C629	ECJ2FB1H104K	S.M.CAP	50V	100nF
C631	SMG1CV101MT5	ELECT	16V	100μF
C632	SMG1CV101MT5	ELECT	16V	100μF
C633	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C634	SMG1CV101MT5	ELECT	16V	100μF
C635	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C636	ECA1CM102B	ELECT	16V	1000μF
C637	SMG1CV101MT5	ELECT	16V	100μF
C638	SMG1CV101MT5	ELECT	16V	100μF
C639	SMG1HV220MT5	ELECT	50V	22μF
C640	ECA1HM2R2B	ELECT	50V	2.2μF
C642	ECA1HM010B	ELECT	50V	1μF
C643	ECUV1H821JCX	S.M. CAP	50V	820pF
C644	ECJ2VB1H472K	S.M.CAP	50V	4.7nF
C653	ECJ2YB1H473K	S.M.CAP	50V	47nF
C701	ECA1HM100B	ELECT	50V	10μF
C702	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C703	ECA1HHG100B	ELECT	50V	10μF
C704	ECQB1H102JF3	FILM	50V	1nF
C705	ECQB1H223JF3	FILM	50V	22nF
C706	ECQP1152JZW	FILM	100V	1.5nF
C707	ECQP1102JZW	FILM	100V	1nF
C708	ECA1HM220B	ELECT	50V	22μF
C751	ECWF2334JBB	FILM	250V	330nF
C752	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C753	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C754	ECA1JM101B	ELECT	63V	100μF
C755	ECKR2H471KB5	CERAMIC	500V	470pF
C802	ECKWNA332ME	CERAMIC	250V	3.3nF
C803	ECKWNA152MEC	CERAMIC	250V	1.5nF
C805	ECQU2A474MLA	FILM	250V	470nF
C806	ECKW2H472PU7	CERAMIC	500V	4.7nF
C807	ECKW2H472PU7	CERAMIC	500V	4.7nF
C808	ECKW2H472PU7	CERAMIC	500V	4.7nF
C809	ECOS2GA151BB	ELECT	400V	150μF
C810	ECA1HHG101B	ELECT	50V	100μF

Cct Ref	Parts Number	Description		
C811	ECKR1H471KB5	CERAMIC	50V	470pF
C812	ECKR3A182KBP	CERAMIC	1KV	1.8nF
C813	ECKW3D221JBN	CERAMIC	2kV	220pF
C814	ECKW3D102KBP	CERAMIC	2kV	1nF
C815	ECA2CHG221E	ELECT	160V	220μF
C816	ECKW2H472PU7	CERAMIC	500V	4.7nF
C818	ECQB1H683KF3	FILM	50V	58nF
C851	ECA1CM471B	ELECT	16V	470μF
C854	ECKR2H471KB5	CERAMIC	500V	470pF
C855	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C856	ECA1VM471B	ELECT	35V	470μF
C857	ECA1CM471B	ELECT	16V	470μF
C858	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C859	ECA1HHG471B	ELECT	50V	470μF
C860	ECA1VHG331B	ELECT	35V	330pF
C1101	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C1103	ECUV1H331JCX	S.M. CAP	50V	330pF
C1104	SMG1CV101MT5	ELECT	16V	100μF
C1105	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C1107	ECUV1H221JCX	S.M. CAP	50V	220pF
C1108	ECUV1H221JCX	S.M. CAP	50V	220pF
C1201	ECA1CM471B	ELECT	16V	470μF
C1202	ECQV1H334JL3	FILM	50V	330nF
C1203	SMG1CV101MT5	ELECT	16V	100μF
C1204	SMG1CV101MT5	ELECT	16V	100μF
C1205	ECJ2VF1C334Z	S.M.CAP	16V	330nF
C1210	SMG1CV101MT5	ELECT	16V	100μF
C3101	ECEA1HN100UB	ELECT	50V	10μF
C3103	SMG1CV101MT5	ELECT	16V	100μF
C3104	ECJ2VF1H104Z	S.M.CAP	50V	100nF
C3109	ECUV1H222KBX	S.M. CAP	50V	2.2nF
C3110	ECUV1H222KBX	S.M. CAP	50V	2.2nF
C3111	ECUV1H222KBX	S.M. CAP	50V	2.2nF
C3112	ECUV1H222KBX	S.M. CAP	50V	2.2nF
C3114	ECUV1H222KBX	S.M. CAP	50V	2.2nF
C3116	ECUV1H561KBX	S.M. CAP	50V	560pF
C3117	ECUV1H561KBX	S.M. CAP	50V	560pF
C3119	ECEA1HN100UB	ELECT	50V	10μF
TERMINALS AND LINKS				
JK3101	TJB16663	A.V. TERMINAL		
JK3102	TJB8E011	SCART SOCKET		
S351	TJSC00300	CRT SOCKET		
SWITCHES				
S801	ESB92S11B	SWITCH		
S1101	EVQ21405R	SWITCH		
S1102	EVQ21405R	SWITCH		
S1103	EVQ21405R	SWITCH		
S1104	EVQ21405R	SWITCH		
S1105	EVQ21405R	SWITCH		
RELAYS				
RL801	DJ5D1-0M	RELAY		

NOTES

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SCHEMATIC DIAGRAMS FOR MODEL TX-21AT1P (Z8T CHASSIS)

IMPORTANT SAFETY NOTICE

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

NOTE

1. RESISTOR
All resistors are carbon 1/4W resistor, unless marked otherwise.
Unit of resistance is OHM (Ω) (k=1,000, M=1,000,000)
2. CAPACITORS
All capacitors are ceramic 50V unless marked otherwise.
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 d.c. voltmeter.
Measurement conditions are as follows:
Power source a.c. 220V-240V, 50Hz
Receiving Signal Colour Bar signal (RF)
All customer controls Maximum position

7.
 Indicates the Video signal path
 Indicates the Audio signal path

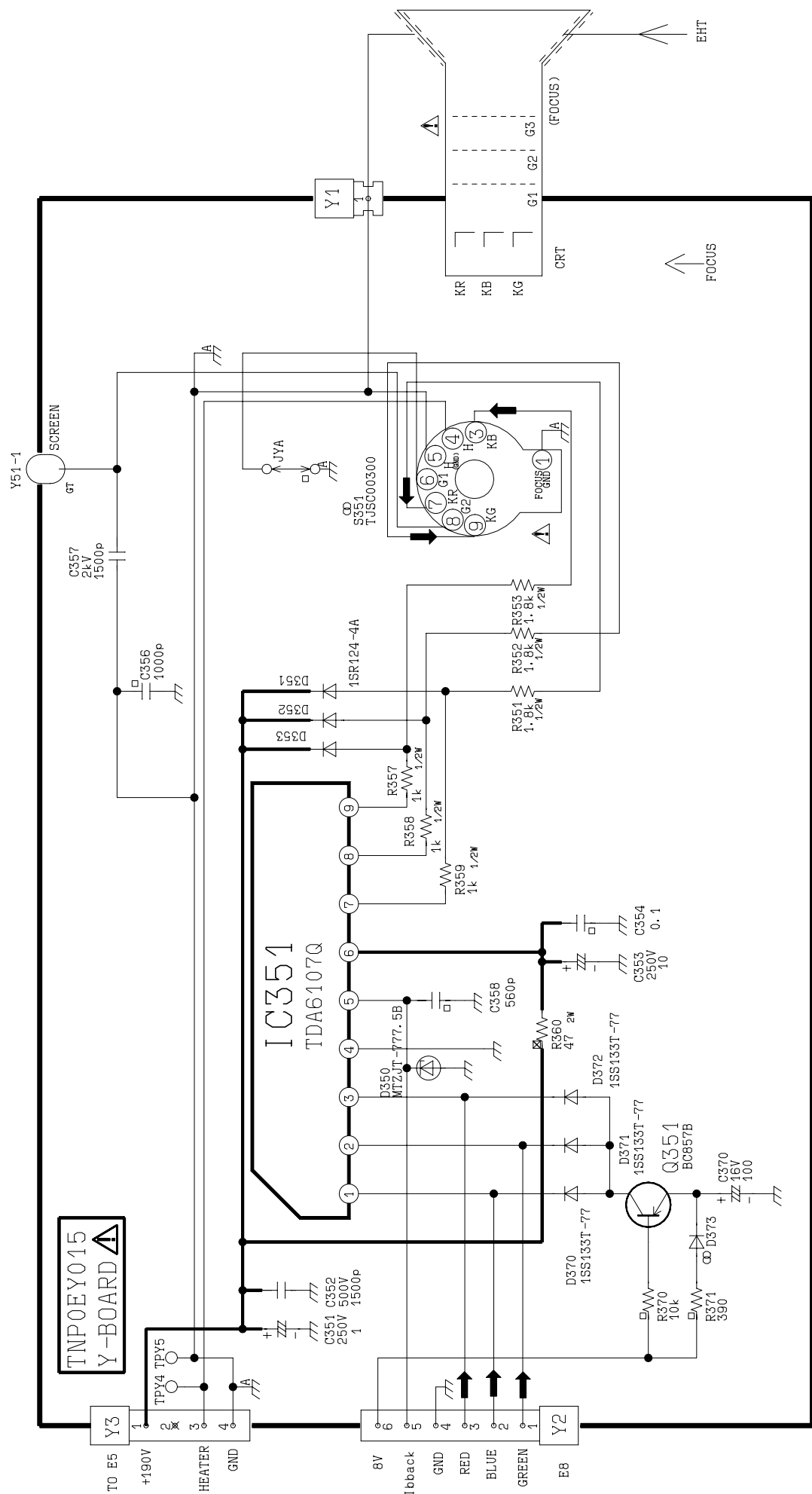
These schematic diagrams are the latest at time of printing and are subject to change without notice.

REMARKS

- a. Do not touch the hot part, or the hot and cold parts 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.

NOTE

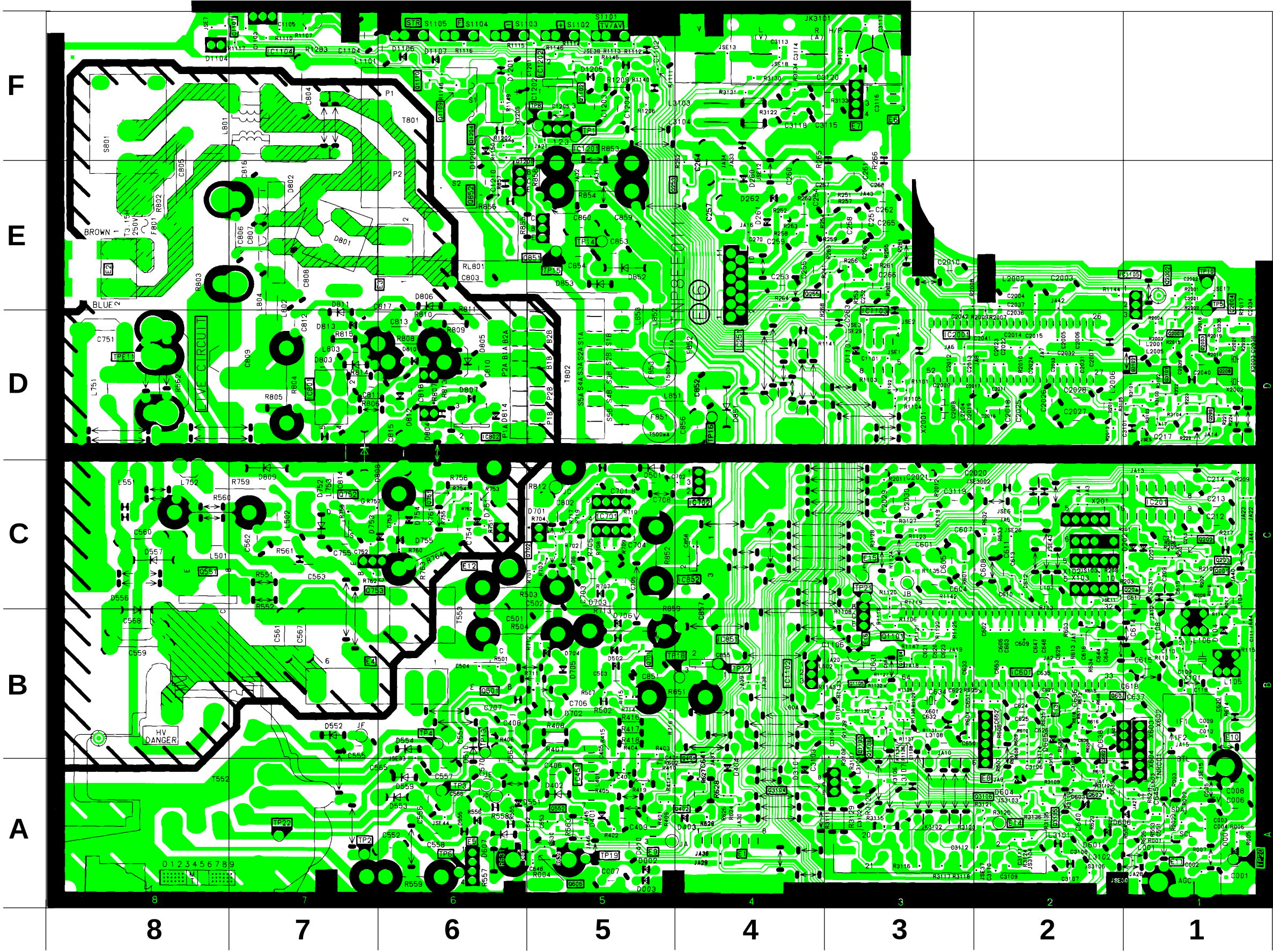
1. The Power Supply Circuit contains a circuit area, which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits, except the Power Circuit, are COLD.





E - BOARD TNP8EE011

TRAN'S		D510	B6	D1107	F6
Q253	E4	D551	A6	D1201	F6
Q255	E4	D552	B7	D1202	F6
Q401	A4	D553	A6	D1205	F5
Q402	A4	D554	B6	D3101	A4
Q501	B6	D555	A6		
Q551	C8	D556	B8		
Q552	A5	D557	C8	I.C.'S	
Q601	B2	D559	A6	IC251	E4
Q602	A2	D601	A2	IC451	A5
Q603	A2	D603	A2	IC601	B2
Q701	B5	D606	A1	IC701	C5
Q702	C5	D701	C5	IC702	C4
Q751	C6	D702	B5	IC801	D7
Q752	C7	D703	C5	IC802	D6
Q753	C7	D704	B5	IC851	B4
Q851	E5	D705	B5	IC852	C4
Q852	E6	D706	B5	IC1103	D3
Q1102	F5	D751	C6	IC1104	F7
Q1103	B3	D752	C7	IC1201	F5
Q1104	B3	D753	C6	IC1202	F5
Q1105	B3	D754	C6		
Q1106	B3	D755	C6	T.P.'S	
Q1107	F7	D801	E7	TP1	F5
Q1109	F6	D802	E7	TP2	A7
Q1110	F6	D803	D7	TP3	A6
Q1201	E6	D804	D6	TP4	B6
Q1204	F6	D805	D6	TP5	D1
Q3101	D1	D806	E6	TP6	A6
Q3102	D1	D807	D6	TP8	F5
Q3104	A3	D808	D7	TP10	E1
		D809	C7	TP13	B6
DIODES		D810	D6	TP14	E5
D002	A5	D811	D7	TP15	E5
D003	A5	D812	D6	TP16	D4
D260	E4	D813	D7	TP17	B4
D261	E4	D814	D6	TP18	B4
D262	E4	D851	D4	TP19	A5
D401	A5	D852	E5	TP20	A1
D402	A5	D853	E5	TP21	C3
D403	A4	D1101	D3	TP22	A7
D501	C5	D1104	F8	TPE11	D8
D502	B5	D1106	F6		

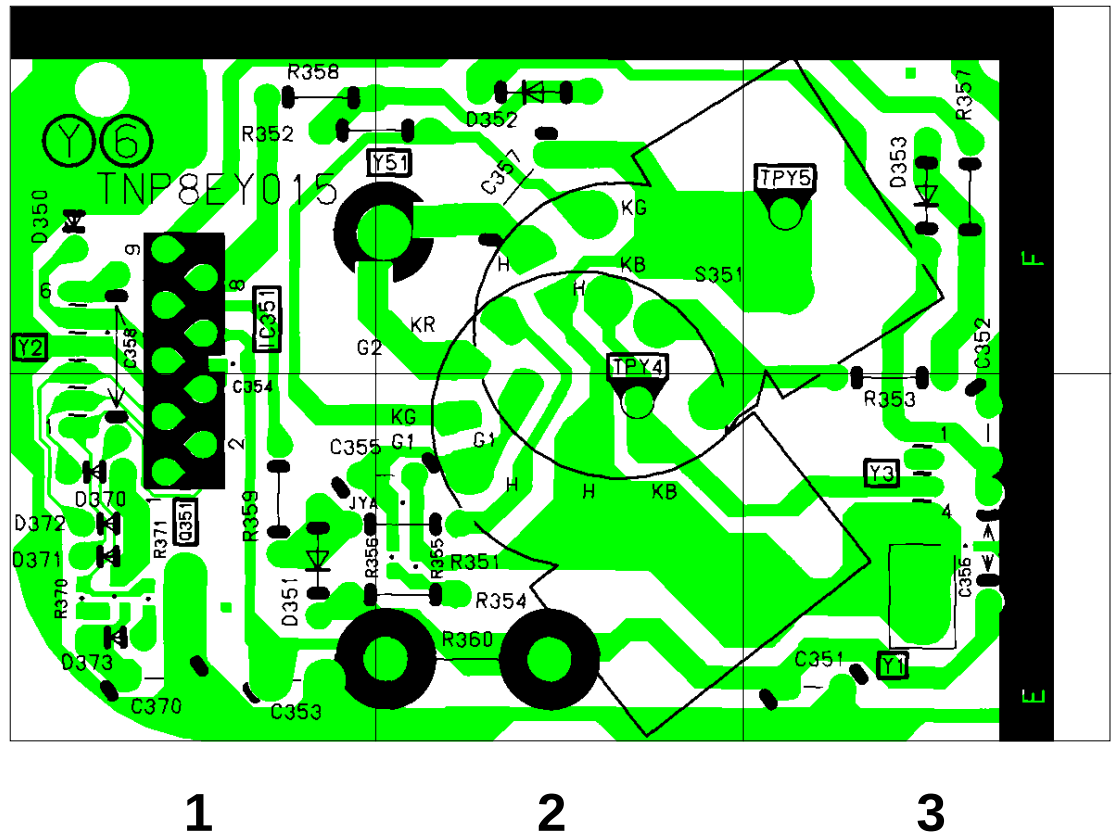


Y - BOARD TNP8EY015

TRAN'S	
Q351	B1
DIODES	
D350	A1
D351	B1
D352	A2
D353	A3
D370	B1
D371	B1
D372	B1
I.C.'S	
IC351	A1
T.P.'S	
TPY4	B2
TPY5	A3

A

B



NOTES

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