

Service Manual



Colour Television
TX-29PN1D, TX-29PN1F,
TX-29PN1P,
TX-28PN1D, TX-28PN1F,
TX-28PN1P,

GP4L Chassis

SPECIFICATIONS

(Information in brackets [] refers to models 28")

Power Source: 220-240V a.c., 50Hz

Power Consumption: 68W [65W]

Stand-by Power Consumption: 1W

Aerial Impedance: 75Ω unbalanced, Coaxial Type

Receiving System: PAL-I, B/G, D/K, PAL-525/60
SECAM B/G, D/K, L/L'
M.NTSC (AV only)
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, 33,9MHz
Sound	33,4MHz (B/G), 33,16MHz (A2) 33,05MHz (NICAM B/G,D/K,L)
	32,4MHz (D/K),32,66MHz (CZ STEREO)
	40,4MHz (L'), 39,75MHz (L'NICAM)
Colour	34,47MHz (PAL) 34,5MHz, 34,65MHz (SECAM) 38,3MHz, 38,15MHz (SECAM L')

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

AV2 IN	Video (21 pin)	1V p-p 75Ω
	Audio (21 pin)	500mV rms 10kΩ
	S-Video IN (21-pin)	Y: 1V p-p 75Ω C:0,3V p-p 75Ω
AV2 OUT	Video (21 pin)	1V p-p 75Ω
	Audio (21 pin)	500mV rms 1kΩ
AV3 IN	Audio (RCAx2)	500mV rms 10kΩ
	Video (RCAx1)	1V p-p 75Ω
High Voltage:	31kV ± 1kV	
Picture Tube:	A68EPD10X30 [W66MAF185X03	68cm 66cm]
Audio Output:	2x5W RMS, 2x10W MPO, 8Ω impedance	
Headphones:	8Ω Impedance	
Accessories supplied :	Remote Control 2 x R6 (UM3) Batteries	
Dimensions:		
Height:	584mm	[528mm]
Width:	668mm	[698mm]
Depth:	500mm	[490mm]
Net weight:	40kg	[35,5kg]

Note:
Specifications are subject to change without notice.
Weights and dimensions shown are approximate.

Panasonic

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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 32kV 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 $2k\Omega$ 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.

HOT CHECK CIRCUIT

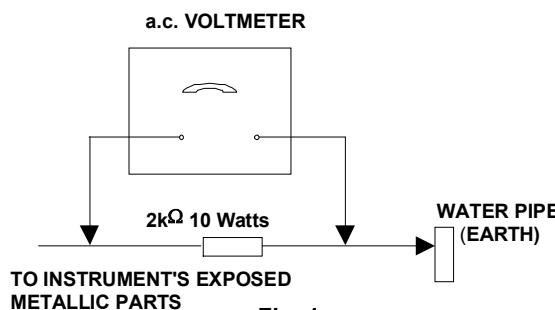


Fig. 1.

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 32kV 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: $31kV \pm 1kV$.
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

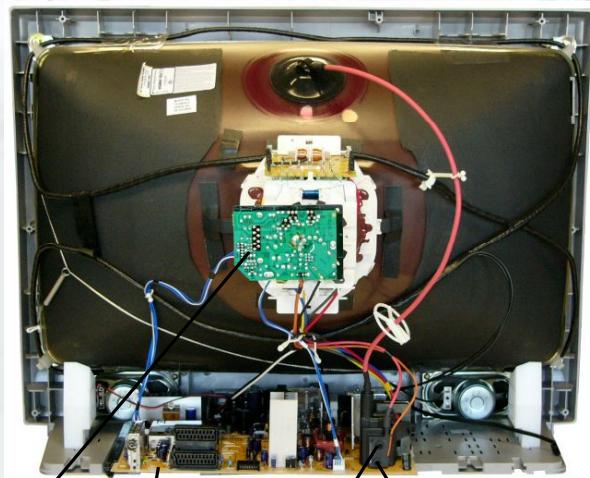
How to remove the rear cover

1. Remove the 10 screws as shown in Fig.2.



Fig. 2

LOCATION OF CONTROLS



L-Board D-Board Focus Screen

Fig.3

ADJUSTMENT PROCEDURE

Item / Preparation	Adjustments	
+B SET-UP	Confirm the following voltages:	
1. Receive a Window pattern.	TPD11 12,3 ± 0,5V Audio 5W	TPD21 9,4 ± 0,5V
2. Set the controls :	13,5 ± 0,5V Audio MIN	5,7 ± 0,3V Standby mode
Brightness Minimum	TPD12 3,3 ± 0,15V	TPD23 138 ± 1,5V
Contrast Minimum	TPD13 5 ± 0,25V	TPD121 205 ± 10V
Volume Minimum	TPD16 8 ± 0,3V	TPD122 17,2 ± 1V
	TPD17 3,3 ± 0,15V	TPD123 -11,6 ± 1V
	TPD20 1,8 ± 0,1V	TPD124 13,6 ± 1V
		TPL5 6,3 ± 0,3V
CUT OFF / Ug2 Test	To adjust Cutoff connect an oscilloscope to the Blue cathode. Adjust the screen VR until the black level is 160V ± 2V.	
1. Receive a Window pattern.		
3. Set:		
Colour 50%		
Brightness 50%		
Contrast 100%		
	Black Level 160V ± 2V GND	

SELF CHECK

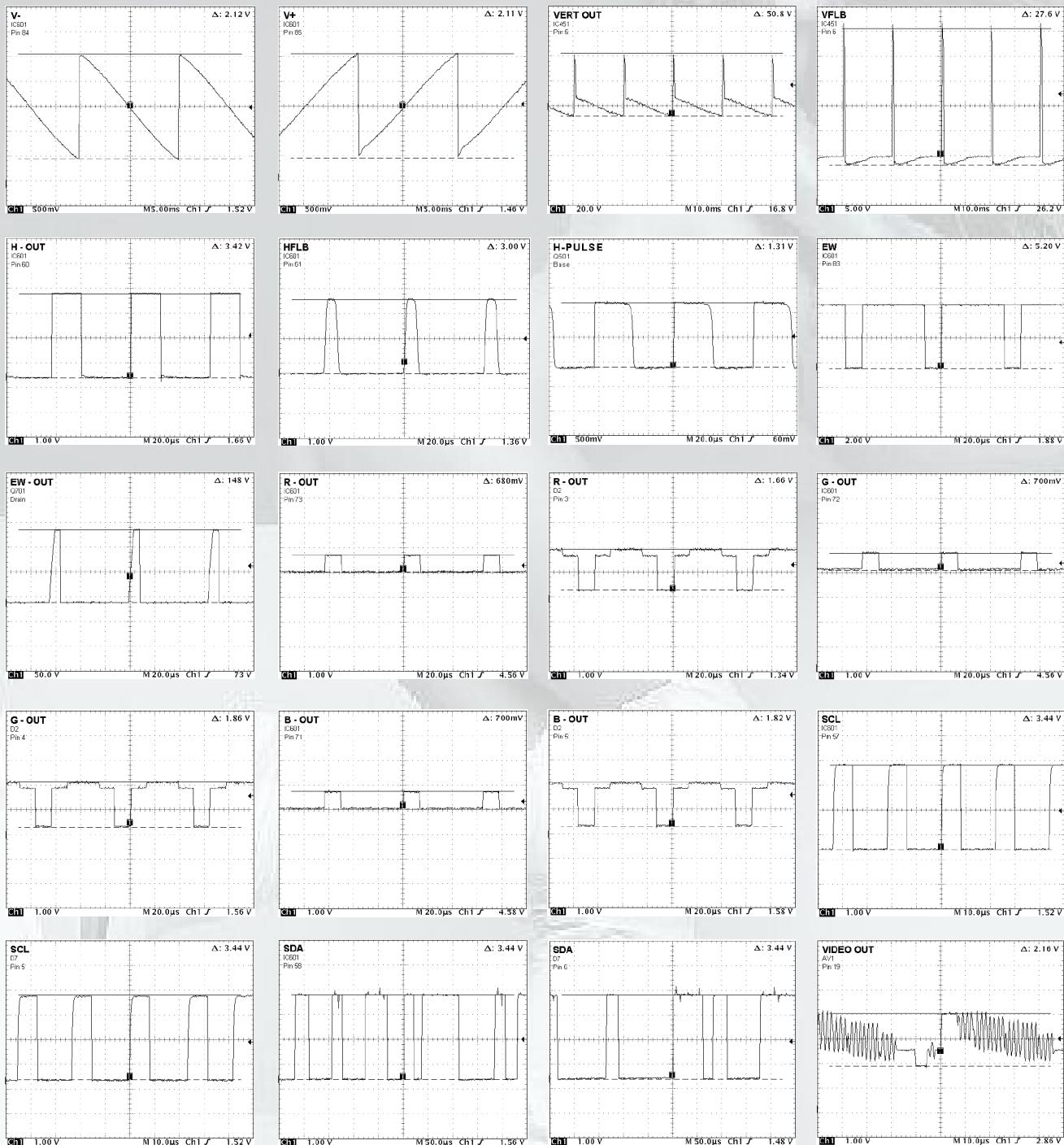
Self-check is used to automatically check the bus lines and hexadecimal code of the TV set. To enter Self-Check mode, press the **STATUS** button on the remote control and at the same time press the down (-v) button on the customer controls at the front the TV set. To exit Self Check, switch off the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

E2	O.K.	TUN	O.K.
DDP	O.K.	MSP	O.K.
VSP	O.K.	DPL	---
AVSW	O.K.	MAS	---
		VCTi	F1

	TX-29PN1D	TX-29PN1F TX-29PN1P	TX-28PN1D	TX-28PN1F TX-28PN1P
OPTION 1	0F	0F	0F	0F
OPTION 2	00	00	00	00
OPTION 3	A0	A0	B0	B0
OPTION 4	11	11	11	11
OPTION 5	00	00	00	00
OPTION 6	35	35	35	35
OPTION 7	7F	7F	7F	7F
OPTION 8	D4	54	D4	54
OPTION 9	00	00	00	00
OPTION 10	00	00	00	00
OPTION 11	11	11	11	11
OPTION 12	00	00	00	00
OPTION 13	88	88	88	88
CHECK	E1	61	F1	71

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

WAVEFORM PATTERN TABLE



CONDITIONS: Contrast: MAX, Brightness: MID, Colour: MID, Sharpness: MID

R,G,B /IC601/: Receive a window pattern.

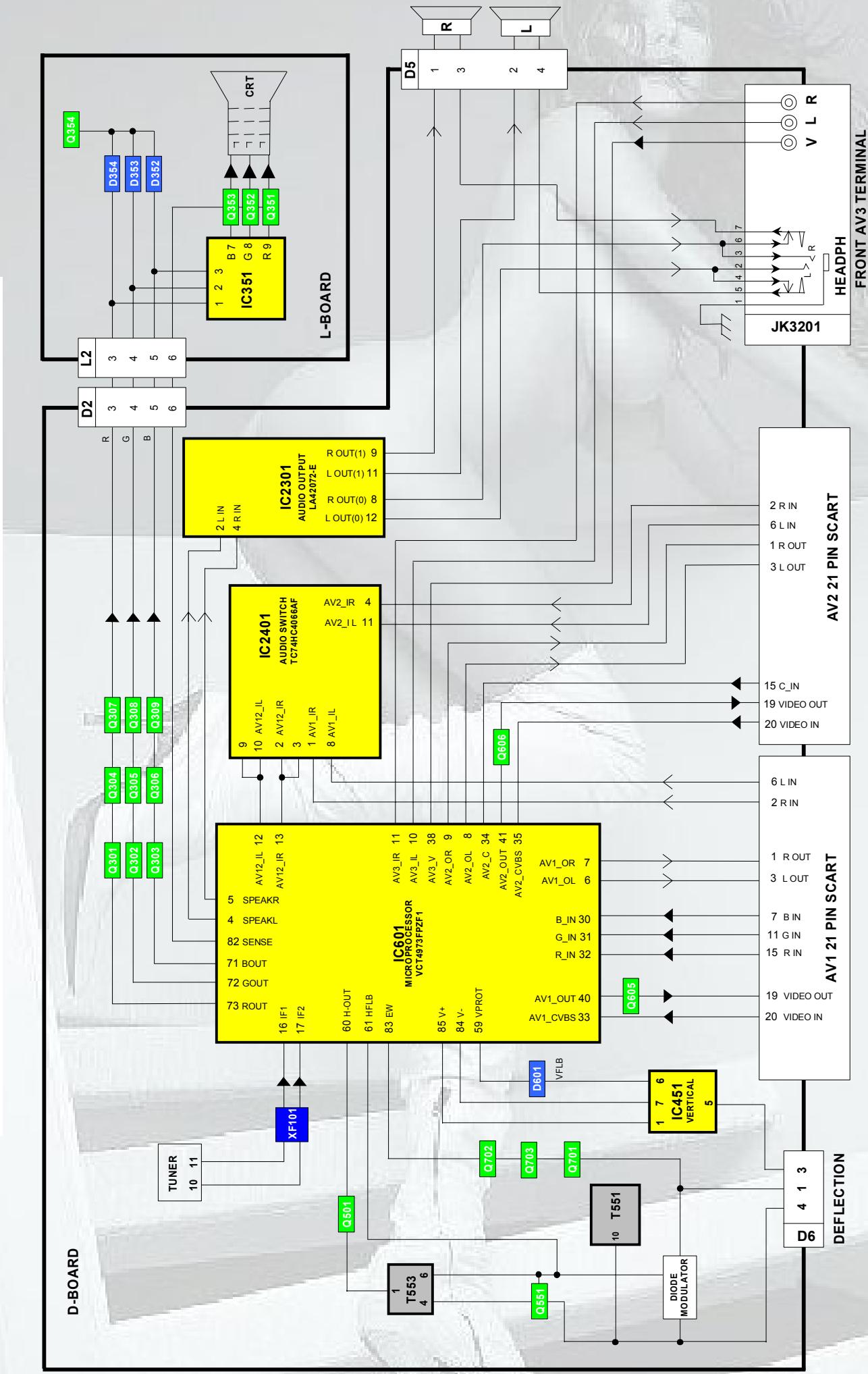
ALIGNMENT SETTINGS

(The figures below are nominal and used for representative purposes only.)

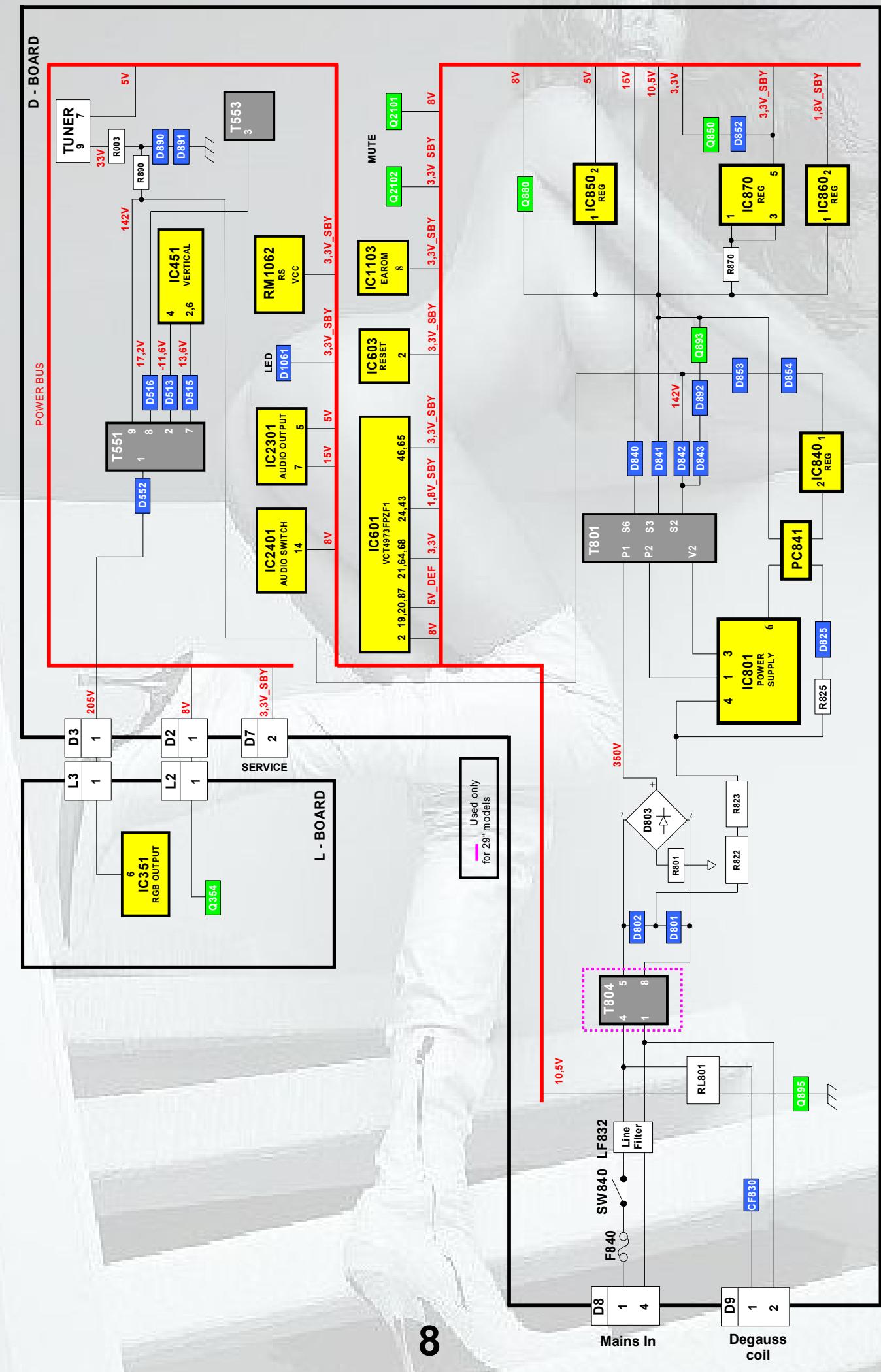
1. Set the Bass to maximum position, set the Treble to minimum position, set the Volume to minimum then press the down button (-/v) on the customer controls at the front of the TV and at the same time press the **INDEX** button on the remote control, this will place the TV into the Service Mode 1.
2. Press the **RED / GREEN** buttons to step up / down through the functions.
3. Press the **YELLOW / BLUE** buttons to alter the function values.
4. Press the **OK** button after each adjustment has been made to store the required values.
5. To exit the Service Mode, press the "N" button.

Alignment Function	Setting indication <i>Note: All setting values are approximate</i>	Settings / Special features
EAROM copy	TV/EXT	---
FLASH program copy	EXT -> TV	---
Horizontal Position	H-Pos -4	Optimum setting.
Vertical Position	V-Pos 0	Optimum setting.
Horizontal Amplitude	H-Amp 93	Optimum setting.
Vert. Amplitude	V-Amp -15	Optimum setting.
EW-amplitude	EW-Amp 1 -30	Optimum setting.
Lower Corner	Lower Corner 11	Optimum setting.
Trapezium-comp	Trapez 1 4	Optimum setting.
Upper Corner	Upper Corner 11	Optimum setting.
Vertical Linearity	V-Lin 39	Optimum setting.
Vertical Symmetry	V-Sym -6	Optimum setting.
Angle	Angle 0	Optimum setting.
Bow	Bow 0	Optimum setting.
DVCO	DVCO 63	Receive a PAL Colour Bar Pattern. For DVCO alignment press " Blue " button, wait until the figure colour is changed from red to black colour.
Highlight Lowlight	High 0374 0318 0335 Low 0207 0331 0256	Optimum setting.
Sub-Brightness	Sub-Brightness -10	Optimum setting.

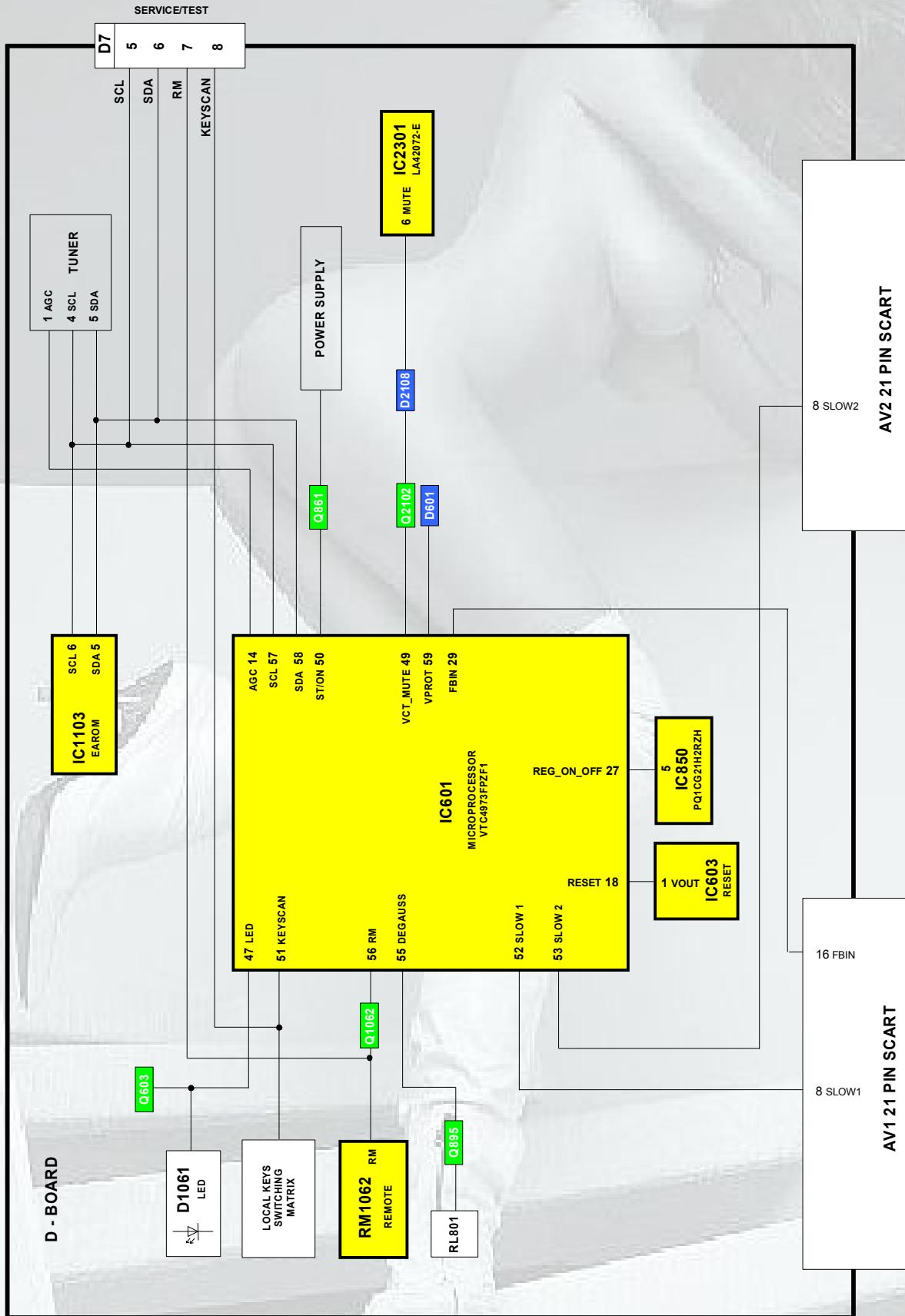
VIDEO & STEREO AUDIO & DEFLECTION BLOCK DIAGRAM



POWER SUPPLY BLOCK DIAGRAM



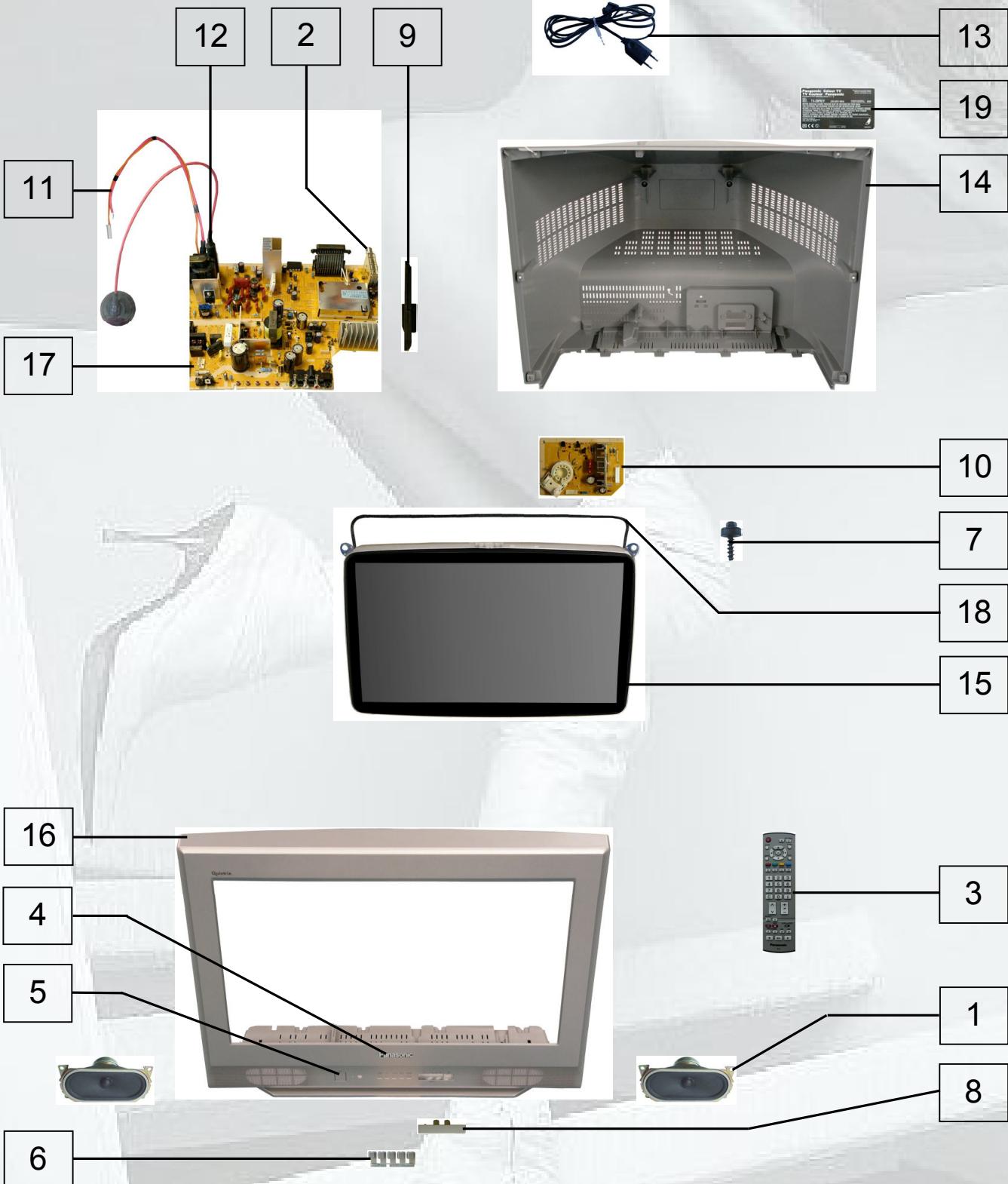
CONTROL BLOCK DIAGRAM



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
COMMON PARTS		
EXPLODED VIEW		
1	EASG12D552A2	SPEAKER
2	ENV57K01G3F	TUNER
3	EUR7651010	REMOTE CONTROL
4	TBM0E3002	PANASONIC BADGE
5	TBX0E81100	POWER BUTTON
6	TBX0E81200	5-KEY BUTTON
7	THT1062J	CRT FIXING SCREW
8	TKP0E12701	AV COVER
9	TMZ0E9803	CHASSIS RAIL
10	TNP0EL006AA	L.P.C.B.
11	TXJ/FC0DEG1	FOCUS LEAD ASSY
12	ZTFP14501A	F.B.T.+ ANODE ASSY
MISCELLANEOUS COMPONENTS		
	R6RC/2P	BATTERY
	TES2298	CRT EARTH SPRING
	TKP0E12601	IR WINDOW
	TMW0E704-1	LED HOLDER
I.C.s		
IC351	TDA6108JF	RGB OUTPUT
IC451	LA78045-E	VERTICAL OUTPUT
IC601	GP4L/SW1.03	MICRO VCT4973FPZF1
IC603	XC61CN2802TH	IC RESET
IC801	STRW6754LF06	POWER SUPPLY
IC840	SE130N	ERROR AMPLIFIER
IC850	PQ1CG21H2RZH	REGULATOR
IC860	PQ1CG21H2RZH	REGULATOR
IC870	C0CBABD00059	REGULATOR
IC2301	LA42072-E	AUDIO AMPLIFIER
IC2401	C0JBAS000227	AUDIO SWITCH
RM1062	KSM-602LM2EL	LED RECEIVER
FUSES		
F840	K5D502BNA005	FUSE
F841	TSF19632	FS LINK
DIODES		
CF830	59890T60B110	THERMISTOR
D351	1N4148-34	DIODE
D352	1N4148-34	DIODE
D353	1N4148-34	DIODE
D354	1N4148-34	DIODE
D357	1N4148-34	DIODE
D358	1N4148-34	DIODE
D359	1N4148-34	DIODE

Cct Ref	Parts Number	Description
D360	EU02	DIODE
D361	EU02	DIODE
D362	EU02	DIODE
D402	1SR124-4AT82	DIODE
D501	1SR124-4AT82	DIODE
D506	1SR124-4AT82	DIODE
D507	1N4148-34	DIODE
D512	1N4148-34	DIODE
D513	1SR124-4AT82	DIODE
D515	1SR124-4AT82	DIODE
D516	1SR124-4AT82	DIODE
D552	1SR124-4AT82	DIODE
D556	FMQ-G2FLS699	DIODE
D557	RU3LFA1	DIODE
D558	1N4148-34	DIODE
D561	1N4148-34	DIODE
D562	1N4148-34	DIODE
D580	MA4130MTA	DIODE
D601	DAN217T146	DIODE
D604	1N4148WS	DIODE
D708	1SR124-4AT82	DIODE
D801	EU02	DIODE
D802	EU02	DIODE
D803	RS406MBSR01	DIODE
D810	SARS01LF-F7	DIODE
D817	1SR124-4AT82	DIODE
D820	MAZ20820A0LS	DIODE
D823	1N4148-34	DIODE
D824	1N4148-34	DIODE
D825	GDZJ6.8C-34	DIODE
D840	RU4AMLF-M1	DIODE
D841	RU3LFA1	DIODE
D842	RU4BLF-L1	DIODE
D843	AU02AV0	DIODE
D844	1N4148WS	DIODE
D845	GDZJ3.3A-34	DIODE
D846	1SR124-4AT82	DIODE
D847	1N4148-34	DIODE
D849	GDZJ3.6A-34	DIODE
D850	B0JCNE000004	DIODE SFPB-74V
D851	B0HCMM000014	DIODE
D852	GDZJ6.8C-34	DIODE
D853	MTZJT-777.5B	DIODE
D854	MA165TA5	DIODE
D860	B0JCNE000004	DIODE SFPB-74V
D861	B0HCMM000014	DIODE
D862	GDZJ20C-34	DIODE
D880	GDZJ8.2B-34	DIODE
D881	1N4148WS	DIODE
D890	MTZJT-7716A	DIODE
D891	MTZJT-7716A	DIODE

Cct Ref	Parts Number	Description
D892	BT149D	DIODE
D895	GDZJ5.1B-34	DIODE
D896	1N4148WS	DIODE
D897	1N4148-34	DIODE
D1056	GDZJ3.6A-34	DIODE
D1061	LS5469-GK	LED
D1132	GDZJ3.9A-34	DIODE
D2103	1N4148-34	DIODE
D2107	1N4148-34	DIODE
D2108	1N4148-34	DIODE
D3141	GDZJ8.2C-34	DIODE
D3142	GDZJ8.2C-34	DIODE
D3143	1N4148-34	DIODE
D3144	1N4148-34	DIODE
PC841	SFH617A-20P6	PHOTO COUPLER
TRANSISTORS		
Q301	BC847B	TRANSISTOR
Q302	BC847B	TRANSISTOR
Q303	BC847B	TRANSISTOR
Q304	BC847B	TRANSISTOR
Q305	BC847B	TRANSISTOR
Q306	BC847B	TRANSISTOR
Q307	BC857B	TRANSISTOR
Q308	BC857B	TRANSISTOR
Q309	BC857B	TRANSISTOR
Q351	2SA1767	TRANSISTOR
Q352	2SA1767	TRANSISTOR
Q353	2SA1767	TRANSISTOR
Q354	BC857B	TRANSISTOR
Q501	2SD2195T100	TRANSISTOR
Q551	2SC5517000LK	TRANSISTOR
Q581	BC857B	TRANSISTOR
Q603	BC847B	TRANSISTOR
Q605	BC847B	TRANSISTOR
Q606	BC847B	TRANSISTOR
Q610	BC857B	TRANSISTOR
Q611	BC857B	TRANSISTOR
Q701	2SK3342TE16Q	TRANSISTOR
Q702	MMBT3904	TRANSISTOR
Q703	MMBT3904	TRANSISTOR
Q841A	BC847B	TRANSISTOR
Q850	2SC1318-S	TRANSISTOR
Q861	BC847B	TRANSISTOR
Q880	BC547B/126	TRANSISTOR
Q881	BC847B	TRANSISTOR
Q882	BC857B	TRANSISTOR
Q893	BC847B	TRANSISTOR
Q895	BC847B	TRANSISTOR
Q1062	BC847B	TRANSISTOR
Q2101	BC857B	TRANSISTOR
Q2102	BC847B	TRANSISTOR
Q2402	BC847B	TRANSISTOR
Q2403	BC847B	TRANSISTOR
TRANSFORMERS		
T553	ETH19Y209AZ	TRANSFORMER
T801	ETS35AA6X6AC	TRANSFORMER
COILS		
L002	TALV35VB100K	COIL
L004	TALV35VB100K	COIL
L005	EXCELSA35T	COIL
L108	ELJFAR68KF2	COIL
L300	EXCELDR35V	COIL
L301	TLTACT4R7K	COIL
L553	ELC16B821L	COIL
L555	ELC10D821E	COIL

Cct Ref	Parts Number	Description
L556	ELC08D682E	COIL
L601	G0C100JA0055	COIL
L602	G0C100JA0055	COIL
L603	G0C100JA0055	COIL
L604	G0C100JA0055	COIL
L605	EXCELDR35V	COIL
L606	G0C100JA0055	COIL
L607	EXCELDR25V	COIL
L608	G0C100JA0055	COIL
L609	G0C100JA0055	COIL
L610	EXCELSA35T	COIL
L611	G0C100JA0055	COIL
L613	EXCELSA35V	COIL
L614	EXCELSA35V	COIL
L615	EXCELDR25V	COIL
L616	EXCELSA35T	COIL
L617	EXCELSA35V	COIL
L623	EXCELSA35V	COIL
L625	EXCELSA35V	COIL
L820	EXCELSA39V	COIL
L841	EXCELSA35T	COIL
L842	EXCELSA35T	COIL
L844	EXCELSA39V	COIL
L845	EXCELSA39V	COIL
L846	EXCELSA35B	COIL
L847	TSL0808S470K	COIL
L850	G0A471ZA0041	COIL
L860	G0A471ZA0041	COIL
L861	TLTACT4R7K	COIL
L1061	TLT331K991R	COIL
L2301	EXCELSA35T	COIL
L2302	EXCELSA35T	COIL
L2303	ELJFC100KF	COIL
L2313	EXCELDR35V	COIL
L2314	EXCELDR35V	COIL
L2321	EXC3BB221H	COIL
L2322	EXC3BB221H	COIL
L2323	EXCELDR35V	COIL
L2324	EXCELDR35V	COIL
L2325	EXCELDR35V	COIL
L2326	EXCELDR35V	COIL
L2327	EXCELDR35V	COIL
L3000	TLTACT2R2K	COIL
L3001	TLTACT2R2K	COIL
L3002	ELJFC4R7KF	COIL
L3003	ELJFC4R7KF	COIL
L3004	ELJFC2R2KF	COIL
L3005	ELJFC2R2KF	COIL
L3006	TLTACT4R7K	COIL
L3007	TLTACT4R7K	COIL
L3142	SPT0305A6R8K	COIL
L3143	SPT0305A6R8K	COIL
FILTERS		
LF832	ELF18N012A	LINE FILTER
XF101	F4SE-H0E5	FILTER
CRYSTALS		
X601	4730007267	CRYSTAL
RESISTORS		
JA4	ERJ6GEY0R00	S.M.CARB
JA5	ERJ6GEY0R00	S.M.CARB
JA6	ERJ6GEY0R00	S.M.CARB
JA8	ERJ6GEY0R00	S.M.CARB
JA9	ERJ6GEY0R00	S.M.CARB
JA10	ERJ6GEY0R00	S.M.CARB
JA11	ERJ6GEY0R00	S.M.CARB

Cct Ref	Parts Number	Description			
JA12	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA13	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA14	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA15	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA17	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA18	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA19	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA20	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JA21	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD501	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD608	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD669	ERJ8GEY0R00	S.M.CARB	.125W	-	0 Ω
JSD670	ERJ8GEY0R00	S.M.CARB	.125W	-	0 Ω
JSD671	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD672	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD674	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD675	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD676	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD2312	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD3132	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
JSD3133	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
L003	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
R001	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22 Ω
R002	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22 Ω
R003	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R005	ERJ6GEYJ512	S.M.CARB	0.1W	5%	5K1 Ω
R006	ERJ6GEYJ473	S.M.CARB	0.1W	5%	47K Ω
R007	ERJ6GEYJ682	S.M.CARB	0.1W	5%	6K8 Ω
R253	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R255	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R256	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R257	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R301	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R302	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R303	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R304	ERJ6GEYJ240	S.M.CARB	0.1W	5%	24 Ω
R305	ERJ6GEYJ240	S.M.CARB	0.1W	5%	24 Ω
R306	ERJ6GEYJ240	S.M.CARB	0.1W	5%	24 Ω
R307	ERJ6GEYJ681	S.M.CARB	0.1W	5%	680 Ω
R308	ERJ6GEYJ681	S.M.CARB	0.1W	5%	680 Ω
R309	ERJ6GEYJ681	S.M.CARB	0.1W	5%	680 Ω
R310	ERJ8GEYJ221V	SMD	0.25W	5%	220 Ω
R311	ERJ8GEYJ221V	SMD	0.25W	5%	220 Ω
R312	ERJ8GEYJ221V	SMD	0.25W	5%	220 Ω
R317	ERJ6GEYJ151	S.M.CARB	0.1W	5%	150 Ω
R318	ERJ6GEYJ151	S.M.CARB	0.1W	5%	150 Ω
R319	ERJ6GEYJ151	S.M.CARB	0.1W	5%	150 Ω
R351	ERJ6GEYJ222	S.M.CARB	0.1W	5%	2K2 Ω
R352	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
R353	ERJ6GEYJ331	S.M.CARB	0.1W	5%	330 Ω
R354	ERJ6GEYJ331	S.M.CARB	0.1W	5%	330 Ω
R355	ERJ6GEYJ331	S.M.CARB	0.1W	5%	330 Ω
R356	ERJ6GEYJ331	S.M.CARB	0.1W	5%	330 Ω
R357	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22 Ω
R360	ERQ12AJ121	FUSIBLE	0.5W	5%	120 Ω
R363	ERD25TJ102	CARBON	0.25W	5%	1K Ω
R364	ERD25TJ102	CARBON	0.25W	5%	1K Ω
R365	ERD25TJ102	CARBON	0.25W	5%	1K Ω
R366	ERDS1TJ152	CARBON	0.5W	5%	1K5 Ω
R367	ERDS1TJ152	CARBON	0.5W	5%	1K5 Ω
R368	ERDS1TJ152	CARBON	0.5W	5%	1K5 Ω
R374	ERD25TJ274	CARBON	0.25W	5%	270K Ω
R375	ERJ6GEYJ684	S.M.CARB	0.1W	5%	680K Ω
R376	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω
R403	ERJ6GEYJ563	S.M.CARB	0.1W	5%	56K Ω
R405	ERJ6GEYJ563	S.M.CARB	0.1W	5%	56K Ω

Cct Ref	Parts Number	Description			
R406	ERX12SJR82P	METAL	0.5W	5%	R82 Ω
R416	ERX2SJSR82H	METAL	2W	5%	0.82 Ω
R451	ERJ6GEYJ223	S.M.CARB	0.1W	5%	22K Ω
R453	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R505	ERG1SJ222E	METAL	0.5W	5%	2K2 Ω
R507	ERJ6GEYJ561	S.M.CARB	0.1W	5%	560 Ω
R512	ERJ6ENF1001	S.M.CARB	0.1W	1%	1K Ω
R513	ERJ6GEYJ680	S.M.CARB	0.1W	5%	68 Ω
R554	343-23R3AY	METAL	10W	5%	3R3 Ω
R557	ERG2SJ102E	METAL	2W	5%	1K Ω
R559	ERQ12HKR39P	FUSIBLE	0.5W	10%	R39 Ω
R561	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω
R562	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R563	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R564	ERJ6GEYJ273	S.M.CARB	0.1W	5%	27K Ω
R565	ERJ6GEYJ272	S.M.CARB	0.1W	5%	2K7 Ω
R566	ERJ6GEYJ303	S.M.CARB	0.1W	5%	30K Ω
R567	ERJ6GEYJ273	S.M.CARB	0.1W	5%	27K Ω
R568	ERJ6GEYJ822	S.M.CARB	0.1W	5%	8K2 Ω
R569	ERJ6GEYJ153	S.M.CARB	0.1W	5%	15K Ω
R580	ERJ6ENF2202	SMD	.125W	1%	22K Ω
R592	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R593	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R594	ERJ6GEYJ332	S.M.CARB	0.1W	5%	3K3 Ω
R602	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R604	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω
R606	ERJ6GEYJ752	S.M.CARB	0.1W	5%	7K5 Ω
R607	ERJ6GEYJ752	S.M.CARB	0.1W	5%	7K5 Ω
R608	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R609	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1K Ω
R610	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R611	ERJ6GEYJ4R7V	S.M.CARB	.125W	5%	4.7 Ω
R614	ERJ6ENF2200	S.M.CAR	0.1W	5%	22 Ω
R615	ERJ6GEYJ122	S.M.CARB	0.1W	5%	1K2 Ω
R616	ERJ6GEYJ563	S.M.CARB	0.1W	5%	56K Ω
R619	ERJ6GEYJ332	S.M.CARB	0.1W	5%	3K3 Ω
R621	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22 Ω
R622	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22 Ω
R624	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1K Ω
R625	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1K Ω
R626	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R627	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R628	ERJ6GEYJ823	S.M.CARB	0.1W	5%	82K Ω
R631	ERJ6GEYJ123	S.M.CARB	0.1W	5%	12K Ω
R632	ERJ6GEYJ562	S.M.CARB	0.1W	5%	5K6 Ω
R634	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1K Ω
R635	ERJ6GEYJ821	S.M.CARB	0.1W	5%	820 Ω
R636	ERJ6GEYJ821	S.M.CARB	0.1W	5%	820 Ω
R637	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1K Ω
R638	ERJ6GEYJ184	S.M.CARB	0.1W	5%	180K Ω
R639	ERJ6GEYJ681	S.M.CARB	0.1W	5%	680 Ω
R640	ERJ6GEYJ681	S.M.CARB	0.1W	5%	680 Ω
R644	ERJ6GEYJ823	S.M.CARB	0.1W	5%	82K Ω
R645	ERJ6GEYJ100	S.M.CARB	0.1W	5%	10 Ω
R646	ERJ6GEYJ184	S.M.CARB	0.1W	5%	180K Ω
R647	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R653	ERJ6GEYJ823	S.M.CARB	0.1W	5%	82K Ω
R665	ERJ6GEYJ471	S.M.CARB	0.1W	5%	470 Ω
R666	ERJ6GEYJ471	S.M.CARB	0.1W	5%	470 Ω
R667	ERJ6GEYJ471	S.M.CARB	0.1W	5%	470 Ω
R668	ERJ6GEYJ471	S.M.CARB	0.1W	5%	470 Ω
R702	ERJ6GEYJ680	S.M.CARB	0.1W	5%	68 Ω
R703	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R704	ERJ6GEYJ471	S.M.CARB	0.1W	5%	470 Ω
R705	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R706	ERG1SJ100	METAL	1W	5%	10 Ω

Cct Ref	Parts Number	Description			
R713	ERQ12AJ120E	METAL	0.5W	5%	12 Ω
R801	ERF7ZK2R2	WOUND	7W	10%	2R2 Ω
R806	ERC12ZGK105C	SOLID	0.5W	10%	1M Ω 
R811	ERG2SJS104H	METAL	2W	5%	100K Ω
R817	ERG1SJ100	METAL	1W	5%	10 Ω
R820	ERX12SJR47	METAL	0.5W	5%	R47 Ω
R821	ERX12SJR56E	METAL	0.5W	5%	0.56 Ω
R822	ERDS1TJ124	CARBON	0.5W	5%	120K Ω
R823	ERDS1TJ124	CARBON	0.5W	5%	120K Ω
R824	ERD25TJ272F	CARBON	0.25W	5%	2K7 Ω
R825	ERD25TJ102	CARBON	0.25W	5%	1K Ω
R830	ERDS2TJ221T	CARBON	0.5W	5%	220 Ω
R832	ERDS1TJ224T	CARBON	0.5W	5%	220K Ω
R840	ERD75TAJ825	CARBON	1W	5%	8M2 Ω 
R841	ERX1SJ1R0V	METAL	1W	5%	1 Ω
R844	ERDS1TJ100	CARBON	0.5W	5%	10 Ω
R846	ERDS1TJ751	CARBON	0.5W	5%	750 Ω
R847	ERDS1TJ122	CARBON	0.5W	5%	1K2 Ω
R848	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R849	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R851	ERJ6ENF4701	SMD	.125W	1%	4K7 Ω
R852	ERJ6ENF1581V	SMD	.125W	1%	1.58K Ω
R853	ERJ6GEYJ820	S.M.CARB	0.1W	5%	82 Ω
R861	ERJ6GEYJ153	S.M.CARB	0.1W	5%	15K Ω
R862	ERJ6ENF6341V	SMD	.125W	1%	6K34 Ω
R863	ERJ6ENF2701	S.M.CARB	0.1W	5%	27 Ω
R864	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R865	ERJ6GEYJ272	S.M.CARB	0.1W	5%	2K7 Ω
R870	ERDS1TJ101	CARBON	0.5W	5%	100 Ω
R880	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R881	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R882	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R883	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R884	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R890	ERG2SJS273	METAL	2W	5%	27K Ω
R892	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R893	ERJ6GEYJ683	S.M.CARB	0.1W	5%	68K Ω
R894	ERJ6GEYJ683	S.M.CARB	0.1W	5%	68K Ω
R895	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R896	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R897	ERJ6GEYJ560	S.M.CARB	0.1W	5%	56 Ω
R898	ERJ6GEYJ203	S.M.CARB	0.1W	5%	20K Ω
R899	ERJ6GEYJ203	S.M.CARB	0.1W	5%	20K Ω
R1026	ERJ6GEYJ222	S.M.CARB	0.1W	5%	2K2 Ω
R1027	ERJ6GEYJ332	S.M.CARB	0.1W	5%	3K3 Ω
R1028	ERJ6GEYJ682	S.M.CARB	0.1W	5%	6K8 Ω
R1029	ERJ6GEYJ153	S.M.CARB	0.1W	5%	15K Ω
R1031	ERJ6GEYJ152	S.M.CARB	0.1W	5%	1K5 Ω
R1061	ERJ6GEYJ471	S.M.CARB	0.1W	5%	470 Ω
R1062	ERD25TJ102	CARBON	0.25W	5%	1K Ω
R1064	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1K Ω
R1109	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R1115	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R1126	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R1128	ERJ6GEYJ272	S.M.CARB	0.1W	5%	2K7 Ω
R1129	ERJ6GEYJ272	S.M.CARB	0.1W	5%	2K7 Ω
R1131	ERJ6GEYJ123	S.M.CARB	0.1W	5%	12K Ω
R1140	ERJ6GEYJ822	S.M.CARB	0.1W	5%	8K2 Ω
R1142	ERJ6GEYJ100	S.M.CARB	0.1W	5%	10 Ω
R1177	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R1181	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R1201	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R1202	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R1228	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22 Ω
R1229	ERJ6GEYJ220	S.M.CARB	0.1W	5%	22 Ω
R2110	ERJ6GEY0R00	S.M.CARB	0.1W	-	0 Ω

Cct Ref	Parts Number	Description			
R2111	ERJ6GEYJ221	S.M.CARB	0.1W	5%	220 Ω
R2112	ERJ6GEYJ102	S.M.CARB	0.1W	5%	1K Ω
R2114	ERJ6GEYJ103	S.M.CARB	0.1W	5%	10K Ω
R2115	ERJ6GEYJ222	S.M.CARB	0.1W	5%	2K2 Ω
R2116	ERD25TJ102	CARBON	0.25W	5%	1K Ω
R2325	ERJ6GEYJ2R2V	SMD	.125W	5%	2R2 Ω
R2326	ERJ6GEYJ2R2V	SMD	.125W	5%	2R2 Ω
R2328	ERJ6GEYJ2R2V	SMD	.125W	5%	2R2 Ω
R2329	ERJ6GEYJ2R2V	SMD	.125W	5%	2R2 Ω
R2401	ERJ6GEYJ822	S.M.CARB	0.1W	5%	8K2 Ω
R2402	ERJ6GEYJ223	S.M.CARB	0.1W	5%	22K Ω
R2407	ERJ6GEYJ472	S.M.CARB	0.1W	5%	4K7 Ω
R2408	ERJ6GEYJ822	S.M.CARB	0.1W	5%	8K2 Ω
R2503	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R2505	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R2506	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R3002	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R3003	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R3004	ERJ6GEYJ683	S.M.CARB	0.1W	5%	68K Ω
R3006	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R3007	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R3008	ERJ6GEYJ683	S.M.CARB	0.1W	5%	68K Ω
R3009	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R3010	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R3015	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R3016	ERJ6GEYJ683	S.M.CARB	0.1W	5%	68K Ω
R3019	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R3020	ERJ6GEYJ683	S.M.CARB	0.1W	5%	68K Ω
R3021	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R3044	ERJ6GEYJ750	S.M.CARB	0.1W	5%	75 Ω
R3132	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R3133	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R3134	ERDS1TJ151	CARBON	0.5W	5%	150 Ω
R3135	ERDS1TJ151	CARBON	0.5W	5%	150 Ω
R3143	ERJ6GEYJ153	S.M.CARB	0.1W	5%	15K Ω
R3145	ERJ6GEYJ153	S.M.CARB	0.1W	5%	15K Ω
R3247	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
R3250	ERJ6GEYJ101	S.M.CARB	0.1W	5%	100 Ω
CAPACITORS					
C001	ECUV1H104KBX	S.M. CAP	50V		100nF
C005	ECUV1H104KBX	S.M. CAP	50V		100nF
C006	ECA1HM101GB	ELECT	50V		100μF
C008	ECA1HM010GB	ELECT	50V		1μF
C252	ECUV1H472KBX	S.M. CAP	50V		4.7nF
C253	ECJ2VF1C474Z	S.M. CAP	16V		470nF
C256	ECUV1H472KBX	S.M. CAP	50V		4.7nF
C257	ECJ2VF1C474Z	S.M. CAP	16V		470nF
C301	ECUV1H683ZFX	S.M. CAP	50V		68nF
C304	ECUV1H104KBX	S.M. CAP	50V		100nF
C305	F2A1C3310039	ELECT	16V		330μF
C306	ECJ2VC1H102J	S.M. CAP	50V		1nF
C307	ECJ2VC1H102J	S.M. CAP	50V		1nF
C308	ECJ2VC1H102J	S.M. CAP	50V		1nF
C350	ECJ2VF1H224Z	S.M. CAP	50V		220nF
C352	ECA1CM471GB	ELECT	16V		470μF
C353	ECJ2VC1H102J	S.M. CAP	50V		1nF
C355	ECUV1H222KBX	S.M. CAP	50V		2.2nF
C356	ECUV1H222KBX	S.M. CAP	50V		2.2nF
C357	ECUV1H222KBX	S.M. CAP	50V		2.2nF
C361	ECA2EM100B	ELECT	250V		10μF
C362	ECWF2224JBB	FILM	250V		220nF
C363	ECJ2VF1H224Z	S.M. CAP	50V		220nF
C370	ECKC3D102J	CERAMIC	2KV		1nF
C401	ECUV1H560GCG	S.M. CAP	50V		56pF
C403	ECJ2VC1H030C	S.M. CAP	50V		3pF
C404	ECQB1H222J	FILM	50V		2.2nF

Cct Ref	Parts Number	Description			
C406	ECA1VM221B	ELECT	35V	220µF	
C407	ECUV1H560GCG	S.M. CAP	50V	56pF	
C408	ECQV1H274JL3	FILM	50V	270nF	
C454	ECJ2VB1C124K	CERAMIC	16V	120nF	
C501	ECA1HM220GB	ELECT	50V	22µF	
C505	ECQV1H104J	FILM	50V	100nF	
C507	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C511	ECA1HHG010B	ELECT	50V	1µF	
C514	ECA1CM102B	ELECT	16V	1000µF	
C516	ECA1CM102B	ELECT	16V	1000µF	
C518	ECA1HM330B	ELECT	50V	33µF	
C551	ECWH20102JYV	FILM	2kV	1nF	
C552	F2A2E100A025	ELECT	250V	10µF	
C555	ECWF4303JBB	FILM	400V	30nF	
C556	ECWF2334JSB	FILM	250V	330nF	
C558	ECA1HHG220B	ELECT	50V	22µF	
C562	ECWH20102JYV	FILM	2kV	1nF	
C565	ECQB1H273J	FILM	50V	27nF	
C581	ECA1HM4R7GB	ELECT	50V	4.7µF	
C601	ECJ2FB1C474K	S.M.CAP	16V	470nF	
C602	ECJ2VB1H223K	S.M.CAP	50V	22nF	
C603	ECUV1H104KBX	S.M. CAP	50V	100nF	
C604	F2A1C101A180	ELECT	16V	100µF	
C605	ECUV1H104KBX	S.M. CAP	50V	100nF	
C606	ECUV1H104KBX	S.M. CAP	50V	100nF	
C610	ECUV1H104KBX	S.M. CAP	50V	100nF	
C611	ECUV1H104KBX	S.M. CAP	50V	100nF	
C612	ECUV1H104KBX	S.M. CAP	50V	100nF	
C613	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C614	ECUV1H220JCX	S.M. CAP	50V	22pF	
C615	ECUV1H220JCX	S.M. CAP	50V	22pF	
C616	ECJ2YF1C225Z	CERAMIC	16V	2.2µF	
C618	F2A1C101A180	ELECT	16V	100µF	
C619	F2A1C101A180	ELECT	16V	100µF	
C620	ECUV1H332ZFX	S.M. CAP	50V	3.3nF	
C621	ECJ2YF1C225Z	CERAMIC	16V	2.2µF	
C622	F2A1C101A180	ELECT	16V	100µF	
C623	F2A1C101A180	ELECT	16V	100µF	
C624	ECJ2VF1H102Z	S.M.CAP	50V	1nF	
C626	F2A1C101A180	ELECT	16V	100µF	
C627	F2A1C101A180	ELECT	16V	100µF	
C628	F2A1C100A180	ELECT	16V	10µF	
C630	ECJ2VF1H103Z	S.M.CAP	50V	10nF	
C631	ECUV1H332ZFX	S.M. CAP	50V	3.3nF	
C632	F2A1H4R7A182	ELECT	50V	4.7µF	
C633	ECJ2FB1C474K	S.M.CAP	16V	470nF	
C634	ECJ2FB1C474K	S.M.CAP	16V	470nF	
C635	ECUV1H104KBX	S.M. CAP	50V	100nF	
C636	ECUV1H104KBX	S.M. CAP	50V	100nF	
C637	ECUV1H104KBX	S.M. CAP	50V	100nF	
C639	ECUV1H104KBX	S.M. CAP	50V	100nF	
C640	ECUV1H104KBX	S.M. CAP	50V	100nF	
C643	ECJ2VC1H390J	S.M.CAP	50V	39pF	
C644	ECUV1H104KBX	S.M. CAP	50V	100nF	
C645	ECUV1H104KBX	S.M. CAP	50V	100nF	
C646	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C647	ECUV1H104KBX	S.M. CAP	50V	100nF	
C648	ECUV1H104KBX	S.M. CAP	50V	100nF	
C649	ECUV1H104KBX	S.M. CAP	50V	100nF	
C650	ECUV1H104KBX	S.M. CAP	50V	100nF	
C651	ECA1CM221GB	ELECT	16V	220µF	
C653	ECUV1H104KBX	S.M. CAP	50V	100nF	
C654	F2A1C101A180	ELECT	16V	100µF	
C655	ECA1CM221GB	ELECT	16V	220µF	
C661	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C662	ECJ2VC1H102J	S.M.CAP	50V	1nF	

Cct Ref	Parts Number	Description			
C663	F2A1H3R3A182	ELECT	50V	3.3µF	
C664	ECUV1H104KBX	S.M. CAP	50V	100nF	
C665	F2A1C470A180	ELECT	16V	47µF	
C666	F2A1C470A180	ELECT	16V	47µF	
C667	F2A1C470A180	ELECT	16V	47µF	
C668	F2A1C470A180	ELECT	16V	47µF	
C704	F1B2H392A015	CERAMIC	500V	3.9nF	
C806	ECKWB1E472ZER	CERAMIC	250V	4.7nF	
C807	ECKWB1E472ZER	CERAMIC	250V	4.7nF	
C808	ECKWB1E472ZER	CERAMIC	250V	4.7nF	
C809	ECKWB1E472ZER	CERAMIC	250V	4.7nF	
C810	ECEC2GA151CJ	ELECT	400V	150µF	
C811	ECQM4473JZW	FILM	400V	47nF	
C816	ECA1VM100B	ELECT	35V	10µF	
C819	F2A1H1R00053	ELECT	50V	1µF	
C825	ECQB1H471KF3	FILM	50V	470pF	
C826	ECQB1H103J	FILM	50V	10nF	
C830	ECQB1H182K	FILM	50V	1.8nF	
C833	ECQU2A224BN9	FILM	250V	220nF	⚠
C834	ECQE2A473JFB	FILM	250V	47nF	
C838	ECQU2A224BN9	FILM	250V	220nF	⚠
C839	ECQU2A224BN9	FILM	250V	220nF	⚠
C840	ECKWNA222ME	CERAMIC	250V	2.2nF	⚠
C842	ECA1HHG222E	ELECT	50V	2200µF	
C843	F1B2H471A015	CERAMIC	500V	470pF	
C844	EEUFC1C472E	ELECT	16V	4700µF	
C845	ECKC3D471JB	CERAMIC	2KV	470pF	
C846	EEUEB2D101B	ELECT	250V	100pF	
C847	ECA2DM2R2B	ELEKT	200V	2.2µF	
C849	ECA2CM221E	ELECT	160V	220µF	
C850	ECA1CM102B	ELECT	16V	1000µF	
C851	ECUV1H103JCN	S.M.CAP	50V	10nF	
C852	EEUFC1A471B	ELECT	10V	470µF	
C853	ECUV1H103JCN	S.M.CAP	50V	10nF	
C854	ECUV1H682KBX	S.M. CAP	50V	6.8nF	
C855	ECJ2FB1H104	S.M.CAP	50V	100nF	
C860	EEUFC1E471B	ELECT	25V	470µF	
C861	ECUV1H103JCN	S.M.CAP	50V	10nF	
C862	EEUFC1A471B	ELECT	10V	470µF	
C863	ECUV1H103JCN	S.M.CAP	50V	10nF	
C864	ECJ2VB1H102K	S.M.CAP	50V	1nF	
C865	ECJ2FB1H104	S.M.CAP	50V	100nF	
C870	ECA1HM101GB	ELECT	50V	100µF	
C871	ECUV1H103JCN	S.M.CAP	50V	10nF	
C872	ECUV1H103JCN	S.M.CAP	50V	10nF	
C873	ECA1AM101B	ELECT	10V	100µF	
C874	ECUV1H103JCN	S.M.CAP	50V	10nF	
C880	EEUFC1C471B	ELECT	16V	470µF	
C881	ECUV1H103JCN	S.M.CAP	50V	10nF	
C882	ECA1AM101B	ELECT	10V	100µF	
C890	ECA1HM330B	ELECT	50V	33µF	
C892	ECUV1H101JCG	S.M.CAP	50V	100pF	
C893	ECJ2VB1H102K	S.M.CAP	50V	1nF	
C894	F1B2H471A015	CERAMIC	500V	470pF	
C1064	ECUV1H103JCN	S.M.CAP	50V	10nF	
C1065	F2A1C101A180	ELECT	16V	100µF	
C1066	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C1118	ECJ2FB1H104	S.M.CAP	50V	100nF	
C1122	F2A1C101A180	ELECT	16V	100µF	
C1142	ECUV1H104KBX	S.M. CAP	50V	100nF	
C2129	F2A1C1020049	ELECT	16V	1000µF	
C2303	ECEA1CKA100	ELECT	16V	10µF	
C2308	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2309	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2314	ECA1EM470GB	ELECT	25V	47µF	
C2315	ECA1EM222GB	ELECT	25V	2200µF	

Cct Ref	Parts Number	Description			
C2317	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2319	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2320	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C2321	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C2322	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C2323	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C2329	ECJ2VC1H102J	S.M.CAP	50V	1nF	
C2350	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2351	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2352	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2353	ECJ2VF1H224Z	S.M.CAP	50V	220nF	
C2407	ECJ2VF1C105Z	S.M.CAP	16V	1μF	
C2411	ECJ2VF1C105Z	S.M.CAP	16V	1μF	
C2412	ECJ2VF1C105Z	S.M.CAP	16V	1μF	
C2414	F2A1C100A180	ELECT	16V	10μF	
C2416	ECJ2VF1C105Z	S.M.CAP	16V	1μF	
C2417	ECUV1H104KBX	S.M. CAP	50V	100nF	
C2418	ECQB1H153K	FILM	50V	15nF	
C3005	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3006	ECUV1H561KBX	S.M. CAP	50V	560pF	
C3007	ECUV1H561KBX	S.M. CAP	50V	560pF	
C3008	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3010	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3012	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3019	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3026	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3028	ECUV1H101JCG	S.M.CAP	50V	100pF	
C3029	ECUV1H101JCG	S.M.CAP	50V	100pF	
C3030	ECUV1H561KBX	S.M. CAP	50V	560pF	
C3031	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3032	ECUV1H561KBX	S.M. CAP	50V	560pF	
C3033	ECJ2VC1H331J	S.M.CAP	50V	330pF	
C3136	ECUV1H103JCN	S.M.CAP	50V	10nF	
C3137	ECUV1H103JCN	S.M.CAP	50V	10nF	
C3138	F2A1C101A180	ELECT	16V	100μF	
C3139	F2A1C101A180	ELECT	16V	100μF	
C3143	ECUV1H561KBX	S.M. CAP	50V	560pF	
C3144	ECUV1H561KBX	S.M. CAP	50V	560pF	
C3145	ECUV1H561KBX	S.M. CAP	50V	560pF	
C3146	ECUV1H561KBX	S.M. CAP	50V	560pF	
TERMINALS AND LINKS					
JK3001	0350808500	21PIN TERMINAL			
JK3201	TJB16673	A.V. TERMINAL			
SC351	0330550049	CRT SOCKET			⚠
SWITCHES					
SW840	ESB92S11B	SWITCH			⚠
SW1011	EVQ11G05R	SWITCH			
SW1012	EVQ11G05R	SWITCH			
SW1013	EVQ11G05R	SWITCH			
SW1014	EVQ11G05R	SWITCH			
SW1015	EVQ11G05R	SWITCH			
RELAYS					
RL801	8-1419125-3	RELAY			⚠
DIFFERENCES FOR MODEL TX--28PN1D					
EXPLODED VIEW					
13	TXASX01ABLE	AC CORD ASSY			⚠
14	TKU0E0140	BACK COVER			⚠
15	W66MAF185X03	C.R.T.			⚠
16	TKY0E0151	CABINET			
17	D-28PN1D	D P.C.B.			⚠
18	TLK0E9023	DEGAUSS COIL			⚠
19	TBM0E0422	MODEL LABEL			⚠

Cct Ref	Parts Number	Description			
MISCELLANEOUS COMPONENTS					
.	TPC0E46001	CARTON			
.	TPD0E0066	BOTTOM CUSHION			
.	TPD0E0067	TOP CUSHION			
INSTRUCTION BOOKS					
.	TQB0E0149A-M	GERMAN			
.	TQB0E0149C-M	ITALIAN			
.	TQB0E0149D-M	FRENCH			
I.C.s					
IC1103	GP4L/2A06D	EAROM 24C32ANSU27T			
DIODES					
D511	MA4200LTA	DIODE			
COILS					
L557	ELH5L6164	COIL			
RESISTORS					
R404	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω
R407	ERG1SJ331	METAL	1W	5%	330 Ω
R413	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω
R506	ERG1SJ101	METAL	1W	5%	100 Ω
R508	ERG1SJ470P	METAL	1W	5%	47 Ω
R556	ERQ12AJ151P	FUSIBLE	0.5W	5%	150 Ω
R810	ERG2FJ120	METAL	2W	5%	12 Ω
CAPACITORS					
C553	ECWF2155JSB	FILM	250V	1.5μF	⚠
C554	ECWF2334JSB	FILM	250V	330nF	
C559	ECWH16622JVB	FILM	1.6KV	6.2nF	
C560	ECQF4273JZH	FILM	400V	27nF	
C569	ECWH16472JVB	FILM	1600V	4.7nF	⚠
C821	ECKC3D681J	CERAMIC	2KV	680pF	
DIFFERENCES FOR MODEL TX--28PN1F					
EXPLODED VIEW					
13	TXASX01ABLE	AC CORD ASSY			⚠
14	TKU0E0140	BACK COVER			⚠
15	W66MAF185X03	C.R.T.			⚠
16	TKY0E0151	CABINET			
17	D-28PN1F	D P.C.B.			⚠
18	TLK0E9023	DEGAUSS COIL			⚠
19	TBM0E0421	MODEL LABEL			
MISCELLANEOUS COMPONENTS					
.	TPC0E46001	CARTON			
.	TPD0E0066	BOTTOM CUSHION			
.	TPD0E0067	TOP CUSHION			
INSTRUCTION BOOKS					
.	TQB0E0148A-M	GERMAN			
.	TQB0E0148B-M	DUTCH			
.	TQB0E0148D-M	FRENCH			
.	TQB0E0148E-M	SPANISH			
.	TQB0E0148F-M	SWEDISH			
.	TQB0E0148G-M	NORWAY			
.	TQB0E0148H-M	FINNISH			
.	TQB0E0148J-M	PORTUGUESE			
.	TQB0E0148K-M	DANISH			
I.C.s					
IC1103	GP4L/2A06F	EAROM 24C32ANSU27T			
DIODES					
D511	MA4200LTA	DIODE			
COILS					
L557	ELH5L6164	COIL			

Cct Ref	Parts Number	Description				
L704	ELC10D123E	COIL				
RESISTORS						
R404	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω	
R407	ERG1SJ331	METAL	1W	5%	330 Ω	
R413	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω	
R506	ERG1SJ101	METAL	1W	5%	100 Ω	
R508	ERG1SJ470P	METAL	1W	5%	47 Ω	
R556	ERQ12AJ151P	FUSIBLE	0.5W	5%	150 Ω	
R810	ERG2FJ120	METAL	2W	5%	12 Ω	
CAPACITORS						
C553	ECWF2155JSB	FILM	250V	1.5μF	⚠	
C554	ECWF2334JSB	FILM	250V	330nF		
C559	ECWH16622JVB	FILM	1.6KV	6.2nF		
C560	ECQF4273JZH	FILM	400V	27nF		
C569	ECWH16472JVB	FILM	1600V	4.7nF	⚠	
C821	ECKC3D681J	CERAMIC	2KV	680pF		
DIFFERENCES FOR MODEL TX--28PN1P						
EXPLODED VIEW						
13	TXASX01ABLE	AC CORD ASSY				⚠
14	TKU0E0140	BACK COVER				⚠
15	W66MAF185X03	C.R.T.				⚠
16	TKY0E0151	CABINET				⚠
17	D-28PN1P	D P.C.B.				⚠
18	TLK0E9023	DEGAUSS COIL				⚠
19	TBM0E0423	MODEL LABEL				⚠
MISCELLANEOUS COMPONENTS						
	TPC0E46001	CARTON				
	TPD0E0066	BOTTOM CUSHION				
	TPD0E0067	TOP CUSHION				
INSTRUCTION BOOKS						
	TQB0E0150M-M	BULGARIAN				
	TQB0E0150N-M	ROMANIAN				
	TQB0E0150P-M	POLISH				
	TQB0E0150Q-M	HUNGARIAN				
	TQB0E0150R-M	CZECH				
	TQB0E0150U-M	ENGLISH				
	TQB0E0150W-M	SLOVAKIAN				
I.C.s						
IC1103	GP4L/2A06P	EAROM 24C32ANSU27T				
DIODES						
D511	MA4200LTA	DIODE				
COILS						
L557	ELH5L6164	COIL				
L704	ELC10D123E	COIL				
RESISTORS						
R404	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω	
R407	ERG1SJ331	METAL	1W	5%	330 Ω	
R413	ERJ6GEYJ183	S.M.CARB	0.1W	5%	18K Ω	
R506	ERG1SJ101	METAL	1W	5%	100 Ω	
R508	ERG1SJ470P	METAL	1W	5%	47 Ω	
R556	ERQ12AJ151P	FUSIBLE	0.5W	5%	150 Ω	
R810	ERG2FJ120	METAL	2W	5%	12 Ω	
CAPACITORS						
C553	ECWF2155JSB	FILM	250V	1.5μF	⚠	
C554	ECWF2334JSB	FILM	250V	330nF		
C559	ECWH16622JVB	FILM	1.6KV	6.2nF		
C560	ECQF4273JZH	FILM	400V	27nF		
C569	ECWH16472JVB	FILM	1600V	4.7nF	⚠	
C821	ECKC3D681J	CERAMIC	2KV	680pF		

Cct Ref	Parts Number	Description									
DIFFERENCES FOR MODEL TX--29PN1D											
EXPLODED VIEW											
13	TXASX01AAE	AC CORD ASSY				⚠					
14	TKU0E0141	BACK COVER				⚠					
15	A68EPD10X30	C.R.T.				⚠					
16	TKY0E0152	CABINET				⚠					
17	D-29PN1D	D P.C.B.				⚠					
18	TLK8E05210	DEGAUSS COIL				⚠					
19	TBM0E0425	MODEL LABEL				⚠					
MISCELLANEOUS COMPONENTS											
	TPC0E45301	CARTON									
	TPD0E0068	BOTTOM CUSHION									
	TPD0E0069	TOP CUSHION									
INSTRUCTION BOOKS											
	TQB0E0152A-M	GERMAN									
	TQB0E0152C-M	ITALIAN									
	TQB0E0152D-M	FRENCH									
I.C.s											
IC1103	GP4L/3A06D	EAROM 24C32ANSU27T									
DIODES											
D511	MA4200MTA	DIODE									
COILS											
L557	ELH5L6118	COIL									
L704	ELC18B123L	COIL									
T804	ETQR36T002A	COIL				⚠					
RESISTORS											
R404	ERJ6GEYJ273	S.M.CARB	0.1W	5%	27K Ω						
R407	ERG1SJ221P	METAL	1W	5%	220 Ω						
R413	ERJ6GEYJ273	S.M.CARB	0.1W	5%	27K Ω						
R506	ERG1SJ470P	METAL	1W	5%	47 Ω						
R508	ERG1SJ680	METAL	1W	5%	68 Ω						
R556	ERQ12AJ101	FUSIBLE	0.5W	5%	100 Ω						
R810	ERG2FJ470H	METAL	2W	5%	47 Ω						
CAPACITORS											
C553	ECWF2135JSB	FILM	250V	1.3μF	⚠						
C554	ECWF2564JBB	FILM	250V	560nF	⚠						
C559	ECWH16562JVB	FILM	1K6V	5.6nF							
C560	ECQM4223KC	FILM	400V	220nF							
C569	ECWH16822JVB	FILM	1600V	8.2nF	⚠						
C821	ECKC3D102J	CERAMIC	2KV	1nF							
DIFFERENCES FOR MODEL TX--29PN1F											
EXPLODED VIEW											
13	TXASX01AAE	AC CORD ASSY				⚠					
14	TKU0E0141	BACK COVER				⚠					
15	A68EPD10X30	C.R.T.				⚠					
16	TKY0E0152	CABINET				⚠					
17	D-29PN1F	D P.C.B.				⚠					
18	TLK8E05210	DEGAUSS COIL				⚠					
19	TBM0E0424	MODEL LABEL				⚠					
MISCELLANEOUS COMPONENTS											
	TPC0E45301	CARTON									
	TPD0E0068	BOTTOM CUSHION									
	TPD0E0069	TOP CUSHION									
INSTRUCTION BOOKS											
	TQB0E0151A-M	GERMAN									
	TQB0E0151B-M	DUTCH									
	TQB0E0151D-M	FRENCH									
	TQB0E0151E-M	SPANISH									

Cct Ref	Parts Number	Description
	TQB0E0151F-M	SWEDISH
	TQB0E0151G-M	NORWEGIAN
	TQB0E0151H-M	FINNISH
	TQB0E0151K-M	DANISH
I.C.s		
IC1103	GP4L/3A06F	EAROM 24C32ANSU27T
DIODES		
D511	MA4200MTA	DIODE
COILS		
L557	ELH5L6118	COIL
L704	ELC18B123L	COIL
T804	ETQR36T002A	COIL
RESISTORS		
R404	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27K Ω
R407	ERG1SJ221P	METAL 1W 5% 220 Ω
R413	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27K Ω
R506	ERG1SJ470P	METAL 1W 5% 47 Ω
R508	ERG1SJ680	METAL 1W 5% 68 Ω
R556	ERQ12AJ101	FUSIBLE 0.5W 5% 100 Ω
R810	ERG2FJ470H	METAL 2W 5% 47 Ω
CAPACITORS		
C553	ECWF2135JSB	FILM 250V 1.3µF
C554	ECWF2564JBB	FILM 250V 560nF
C559	ECWH16562JVB	FILM 1K6V 5.6nF
C560	ECQM4223KC	FILM 400V 220nF
C569	ECWH16822JVB	FILM 1600V 8.2nF
C821	ECKC3D102J	CERAMIC 2KV 1nF

DIFFERENCES FOR MODEL TX--29PN1P

EXPLODED VIEW

13	TXASX01AAXE	AC CORD ASSY
14	TKU0E0141	BACK COVER
15	A68EPD10X30	C.R.T.
16	TKY0E0152	CABINET
17	D-29PN1P	D P.C.B.
18	TLK8E05210	DEGAUSS COIL
19	TBM0E0426	MODEL LABEL

MISCELLANEOUS COMPONENTS

TPC0E45301	CARTON
TPD0E0068	BOTTOM CUSHION
TPD0E0069	TOP CUSHION

INSTRUCTION BOOKS

TQB0E0153M-M	BULGARIAN
TQB0E0153N-M	ROMANIAN
TQB0E0153P-M	POLISH
TQB0E0153Q-M	HUNGARIAN
TQB0E0153R-M	CZECH
TQB0E0153U-M	ENGLISH
TQB0E0153W1M	SLOVAKIAN

I.C.s

IC1103	GP4L/3A06P	EAROM 24C32ANSU27T
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DIODES

D511	MA4200MTA	DIODE
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COILS

L557	ELH5L6118	COIL
L704	ELC18B123L	COIL
T804	ETQR36T002A	COIL

RESISTORS

R404	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27K Ω
R407	ERG1SJ221P	METAL 1W 5% 220 Ω
R413	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27K Ω

Cct Ref	Parts Number	Description	1W	5%	47 Ω
R506	ERG1SJ470P	METAL	1W	5%	68 Ω
R508	ERG1SJ680	METAL	0.5W	5%	100 Ω
R556	ERQ12AJ101	FUSIBLE	2W	5%	47 Ω
R810	ERG2FJ470H	METAL			

CAPACITORS

C553	ECWF2135JSB	FILM 250V 1.3µF
C554	ECWF2564JBB	FILM 250V 560nF
C559	ECWH16562JVB	FILM 1K6V 5.6nF
C560	ECQM4223KC	FILM 400V 220nF
C569	ECWH16822JVB	FILM 1600V 8.2nF
C821	ECKC3D102J	CERAMIC 2KV 1nF

SCHEMATIC DIAGRAMS FOR MODELS

TX-29PN1D, TX-29PN1F, TX-29PN1P

TX-28PN1D, TX-28PN1F, TX-28PN1P

(GP4L 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) ($k=1,000$, $M=1,000,000$)

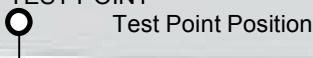
2. CAPACITORS

All capacitors are ceramic 50V unless marked otherwise.
Unit of capacitance is μF unless otherwise stated.

3. COIL

Unit of inductance is μH , unless otherwise stated.

4. TEST POINT



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

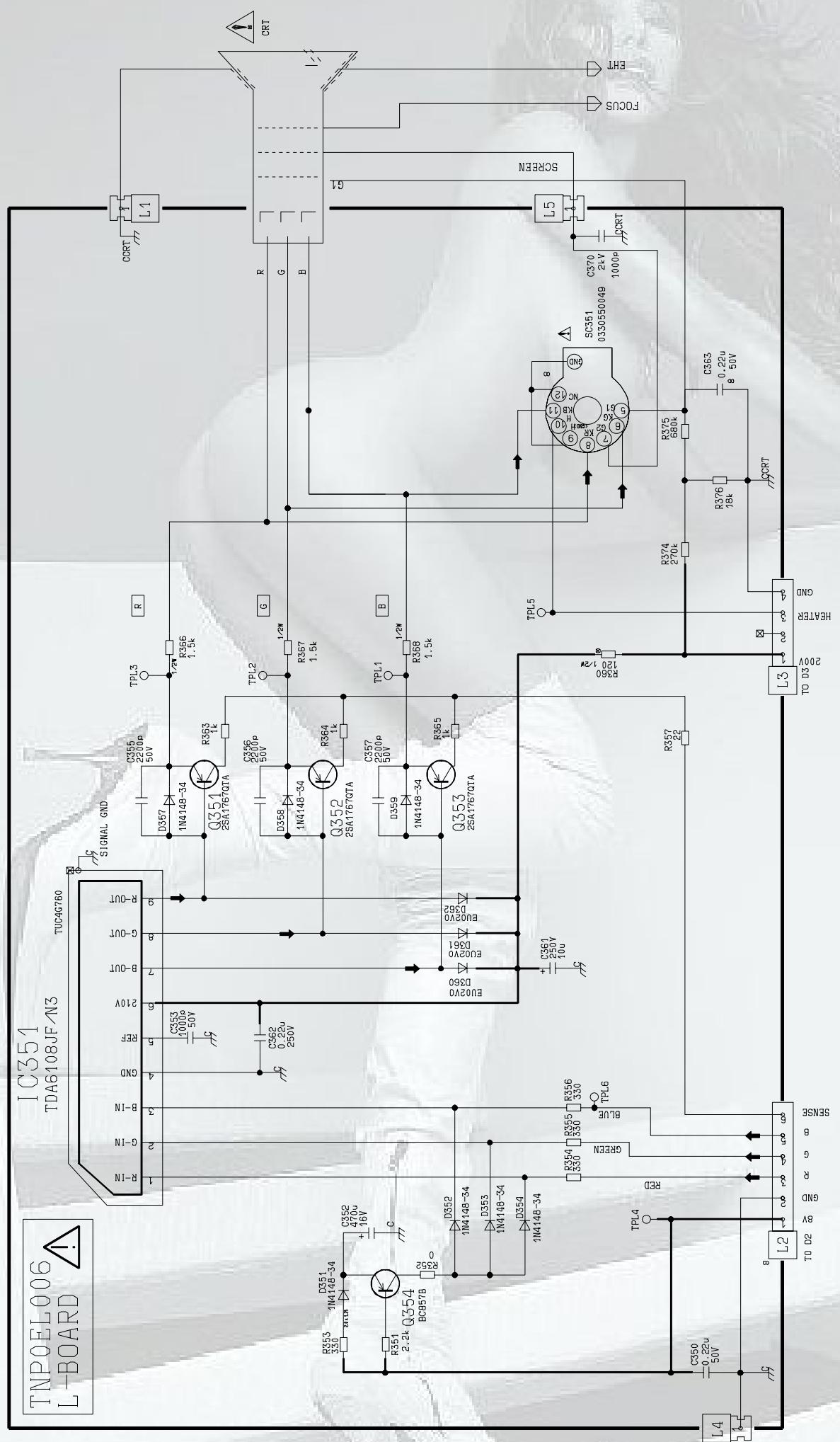
These schematic diagrams are the latest at time of printing and are subject to change without notice.

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

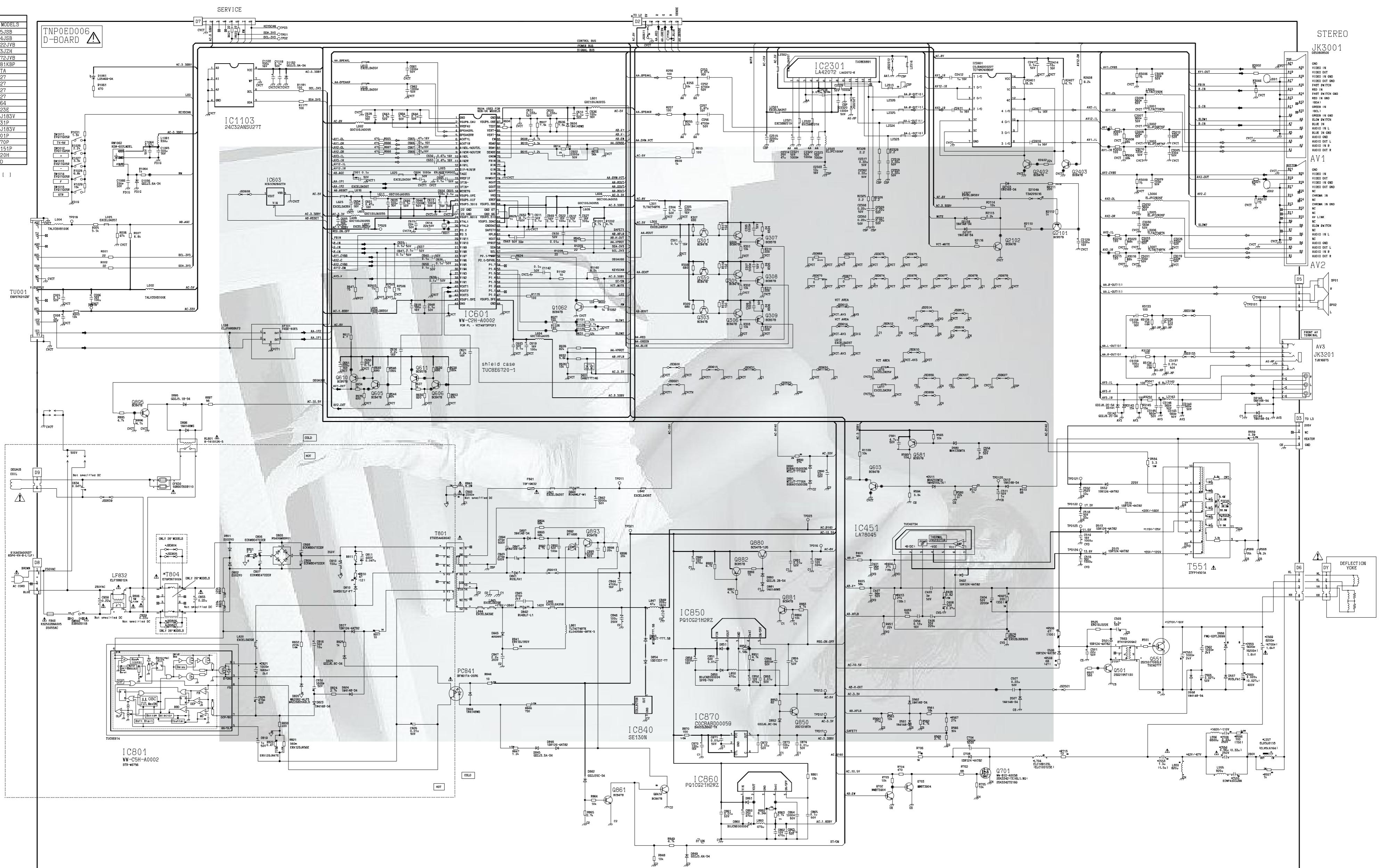
1. The Power Supply Circuit contains a circuit area, which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits, except the Power Circuit, are COLD.



DIFFERENCE LIST

POSITION	MODEL	28" MODELS	26" MODELS
C553	ECWF2135JB	ECWF2155JB	
C554	ECWF2564JSB	ECWF2334JSB	
C559	ECWH16522JB	ECWH16622JB	
C560	ECOF4223JZH	ECOF4273JZH	
C565	ECWH16822JB	ECWH16472JB	
C821	ECKW3D102KBP	ECKW3D681KBP	
D51	MA4200MTA	MA4200LTA	
J5054	NON USED	T3A2060Z	
J5085	NON USED	T3A2060Z	
J5086	NON USED	T3A2060Z	
J5087	NON USED	T3A2060Z	
L557	ELH5L611B		
L704	ELC168123L	ELC101023E	
R404	ERJ66EYJ273V	ERJ66EYJ183V	
R407	ERG1S1J33P		
R413	ERJ66EYJ273V	ERJ66EYJ33V	
R505	ERG1S1J33P	ERG1S1J470P	
R506	ERG1S1J33P	ERG1S1J470P	
R556	ERD12AJ101P	ERD12AJ151P	
R810	ERG2FJ470H	ERG2FJ120H	
T804	ETQR36T002A	NON USED	

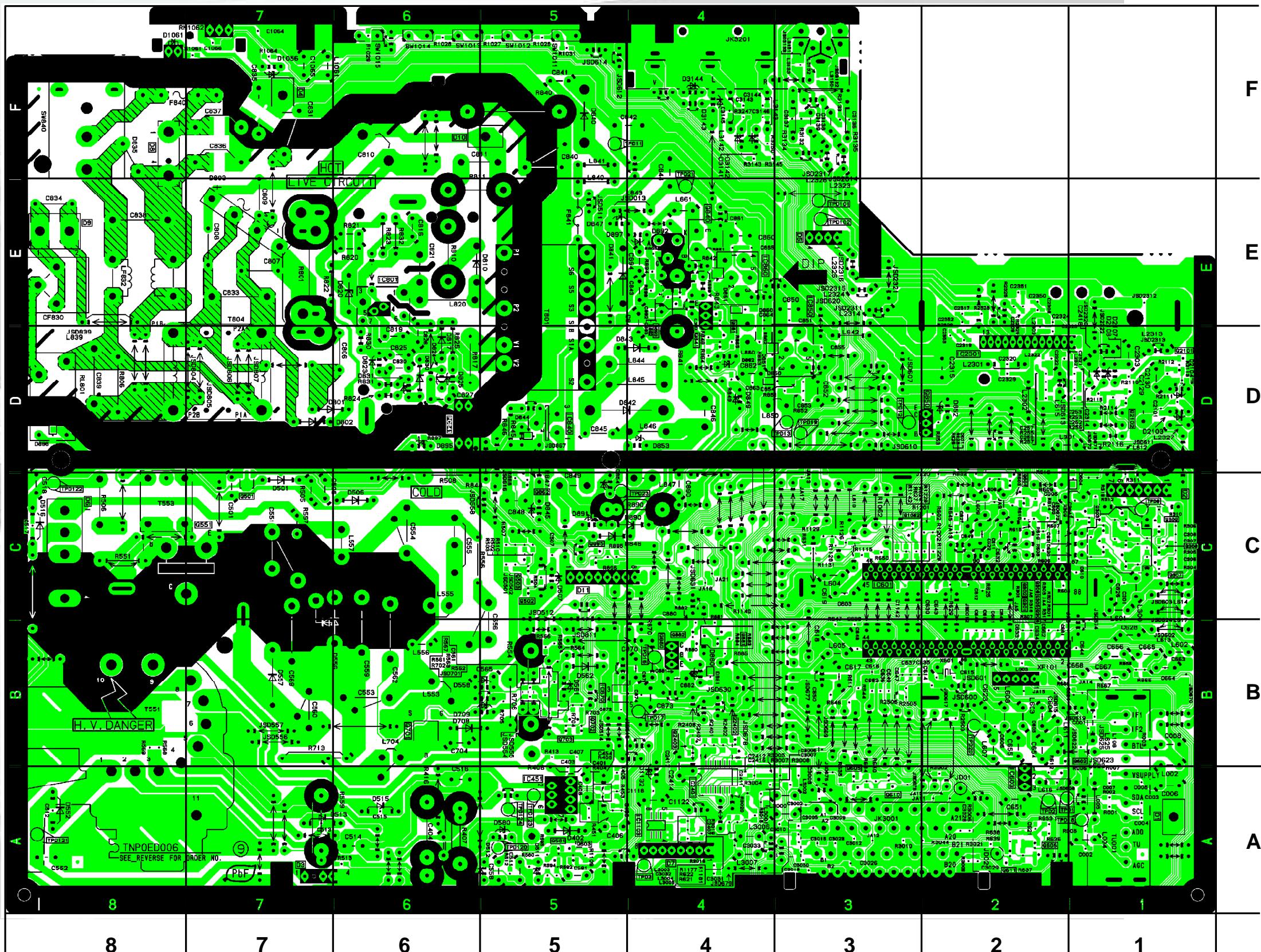
NOTE: VALUES IN THE BRACKETS !
REFERS TO MODELS 28".



**CONDUCTOR VIEWS FOR MODELS
TX-29PN1D, TX-29PN1F, TX-29PN1P, TX-28PN1D, TX-28PN1F, TX-28PN1P**

D-BOARD TNP0ED006

TRAN'S		D3144	F4	D862	D4
Q1062	C3	D402	A5	D880	B4
Q2101	D1	D501	C7	D881	B4
Q2102	D1	D506	C6	D890	C4
Q2402	B4	D507	C5	D891	C5
Q2403	B4	D511	A5	D892	E4
Q301	C1	D512	A5	D895	D6
Q302	C1	D513	A7	D896	D8
Q303	C1	D515	A6	D897	E4
Q304	C1	D516	C8		
Q305	C1	D552	A8		IC'S
Q306	C1	D556	B7	IC1103	A4
Q307	C1	D557	B7	IC2301	D2
Q308	C1	D558	B5	IC2401	A4
Q309	C1	D561	B5	IC451	A5
Q501	C7	D562	B5	IC601	C2
Q551	C7	D580	A5	IC603	A2
Q581	A5	D601	C2	IC801	E6
Q603	A5	D604	C1	IC840	D5
Q605	A3	D708	B6	IC850	D3
Q606	A2	D801	D7	IC860	E4
Q610	A3	D802	D7	IC870	B5
Q611	A2	D803	E7		
Q701	B6	D810	E6		TP'S
Q702	B5	D817	D6	TPD1	A2
Q703	B5	D820	E6	TPD2	A2
Q841A	E4	D823	D6	TPD3	A4
Q850	D2	D824	D6	TPD8	C1
Q861	D4	D825	D6	TPD11	F5
Q880	B4	D840	F5	TPD12	D3
Q881	B4	D841	E5	TPD13	D3
Q882	B4	D842	D5	TPD16	B4
Q893	E4	D843	D4	TPD17	B4
Q895	C5	D844	D5	TPD18	A1
		D845	C5	TPD19	D3
DIODES		D846	C5	TPD20	B2
D1056	F7	D847	E5	TPD21	E4
D1061	F8	D849	D4	TPD23	C5
D1132	A4	D850	D3	TPD101	E3
D2103	D1	D851	D4	TPD102	E3
D2107	D1	D852	D2	TPD120	A5
D2108	D1	D853	D4	TPD121	A8
D3141	F4	D854	C5	TPD122	C8
D3142	F4	D860	E4	TPD123	A5
D3143	F4	D861	E4	TPD124	A5



L-BOARD TNP0EL006

TRAN'S	D360	F3
Q351	F1	D361
Q352	F2	D362
Q353	F1	
Q354	E3	IC'S
		IC351 F2
DIODES		
D351	E3	TP'S
D352	E3	TPL1 F1
D353	E3	TPL2 F2
D354	E2	TPL3 F1
D357	F2	TPL4 E3
D358	F2	TPL5 E1
D359	F1	TPL6 F3

