

Service Manual



Colour Television

**TX-36PF10
TX-32PF10**

EURO-5 Chassis

SPECIFICATIONS

(Information in brackets { } refer to TX-32PF10)

Power Source:	220-240V AC, 50Hz		
Power Consumption:	162W {155W}		
Aerial Impedance:	75Ω unbalanced, Coaxial Type		
Stand-by Power Consumption:	1,9W		
Receiving System:	PAL I, PAL 525/60 M.NTSC NTSC (AV only)		
Receiving Channels:	UHF E21-E69		
Intermediate Frequency:			
Video	39,5MHz		
Audio	33,5MHz, 32,95MHz		
Colour	35,07MHz		
Video/Audio Terminals:			
AUDIO MONITOR OUT	Audio (RCAx2)	500mV rms 1kΩ	
AV1 IN	Video (21 pin)	1V p-p 75Ω	
	Audio (21 pin)	500mV rms 10kΩ	
	RGB (21 pin)		
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	
	Selectable Output (21 pin)		
	AV3 IN	S-Video IN (4-pin)	Y: 1V p-p 75Ω C: 0.3V p-p 75Ω
		Audio(RCAx2)	500mV rms 10kΩ
	AV4 IN	Video (21 pin)	1V p-p 75Ω
		Audio (21 pin)	500mV rms 10kΩ
	AV4 OUT	S-Video IN (21 pin)	Y: 1V p-p 75Ω C: 0.3V p-p 75Ω
		Video (21 pin)	1V p-p 75Ω
		Audio (21 pin)	500mV rms 1kΩ
	High Voltage:	32kV ±1kV	
	Picture Tube:	W86LPX555X05	
		{W76LPX555X05}	
	Audio Output: (Music Power)	Front Left/Right Centre	2 x 20W 14W (Speech mode only)
		8Ω Impedance	
	Headphones:	8Ω Impedance 3,5 mm	
	Accessories Supplied:	Remote Control 2 x R6 (UM3) Batteries VS-36PF10 Video cabinet {VS-32PF10 Video cabinet}	
	Dimensions:		
	Height:	637mm	{576mm}
	Width:	874mm	{777mm}
	Depth:	588mm	{537mm}
	Net weight:	78kg	{56kg}
	Specifications are subject to change without notice. Weights and dimensions shown are approximate.		
	NOTE: This Service Manual should be used in conjunction with the EURO-5 Technical Guide.		

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 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 33kV 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 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.

X-RADIATION WARNING

HOT CHECK CIRCUIT

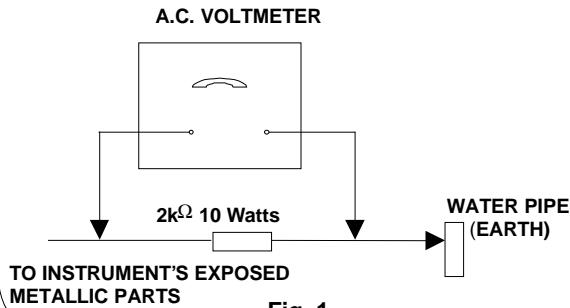


Fig. 1.

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 33kV without causing X-Radiation.

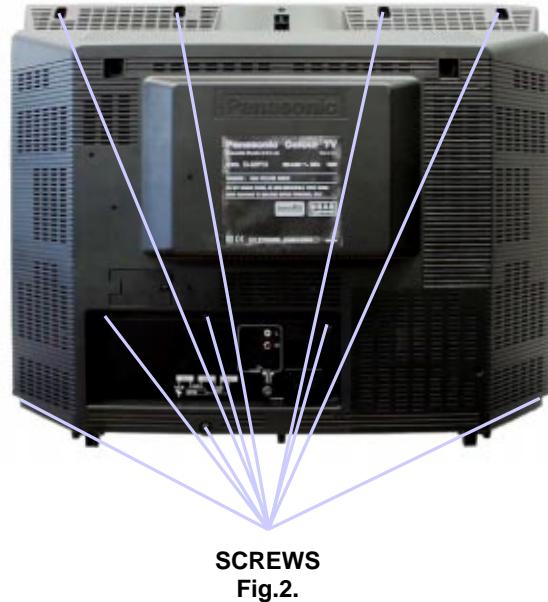
NOTE: It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate :- $32kV \pm 1kV$. 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.



LOCATION OF CONTROLS

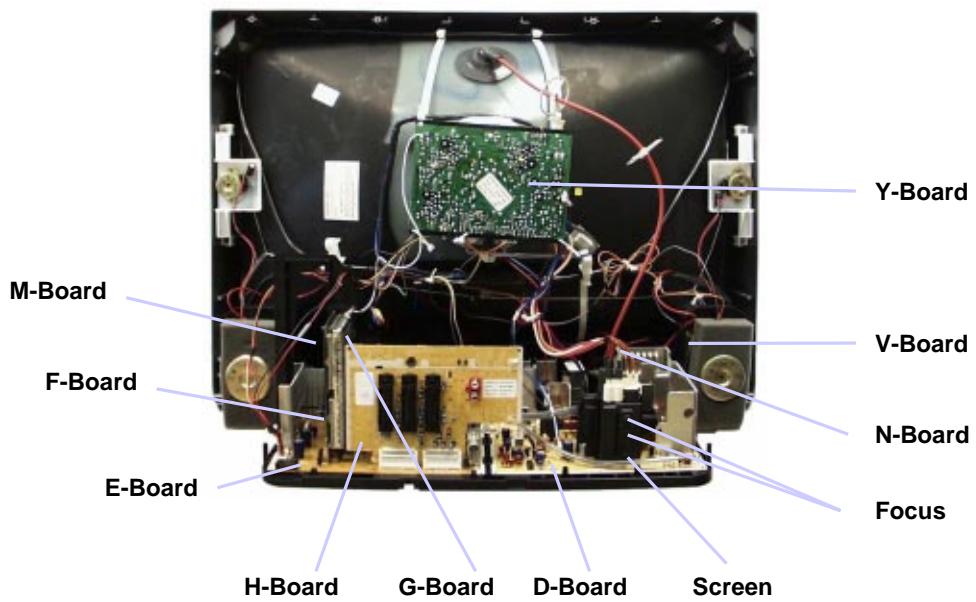
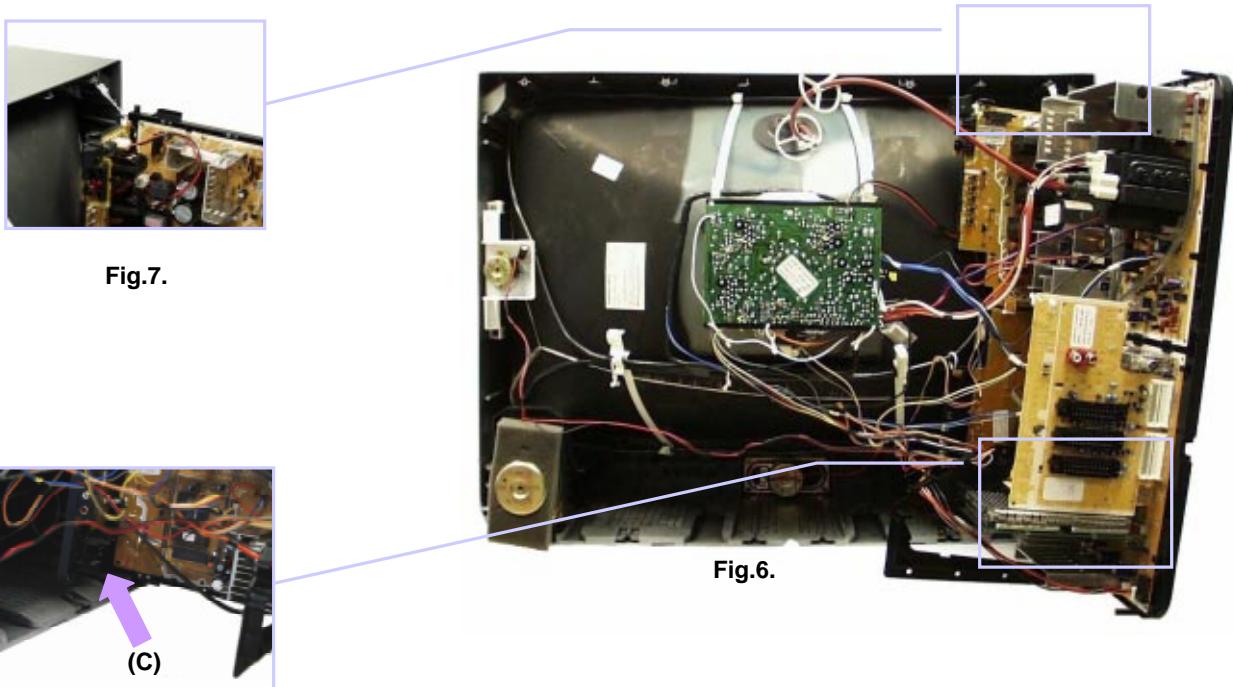
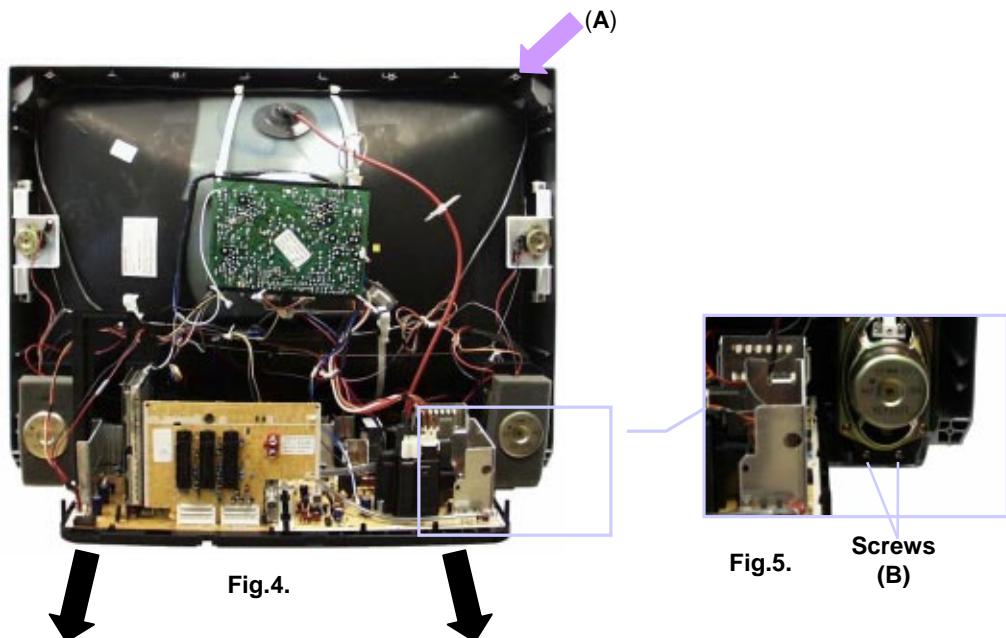


Fig.3.

HOW TO MOVE THE CHASSIS INTO SERVICE POSITION

1. Remove the bead clamper from the mains lead and affix, using back cover screw, into top right-hand cabinet rib (**A**), shown in **Fig.4**.
2. Remove 2 screws (**B**), as shown in **Fig.5**, and remove speaker assembly.
3. Hold and lift the rear of the chassis and gently pull the chassis toward you, as shown in **Fig.4**.
4. Release the respective wiring clips and rotate the chassis vertically through 90°, anti-clockwise.
5. Locate the base of the chassis frame into location (**C**), shown in **Fig.6 / Fig.8**.
6. Clip the chassis frame onto the bead clamper, shown in **Fig.6 / Fig.7**.
7. After servicing replace the bead clamper and speaker, and ensure all wiring is returned to its original position before returning the receiver to the customer.



ADJUSTMENT PROCEDURE

Item / Preparation	Adjustments																																																																
+B SET-UP	<p>1. Confirm the following voltages.</p> <table> <thead> <tr> <th colspan="2">D-Board</th> <th colspan="2">E-Board</th> </tr> </thead> <tbody> <tr> <td>D3</td><td>PIN5 147V</td> <td>± 3V</td><td>U8A E19-PIN8 8V</td> <td>± 0,5V</td> </tr> <tr> <td>D12</td><td>PIN5 5V</td> <td>± 0,3V</td><td>U9 IC3801-PIN3 9V</td> <td>± 0,5V</td> </tr> <tr> <td>D13</td><td>PIN1 40V</td> <td>± 4V</td><td>U12 E22-PIN8 12V</td> <td>± 0,5V</td> </tr> <tr> <td>D3</td><td>PIN4 230V</td> <td>± 10V</td><td>STD5VE26-PIN4 5V</td> <td>± 0,5V</td> </tr> <tr> <td>D3</td><td>PIN4 205V</td> <td>± 10V</td><td>U15 E23-PIN8 15V</td> <td>± 1V</td> </tr> <tr> <td>D3</td><td>PIN4 190V</td> <td>± 10V</td><td>U15 E23-PIN9 -15V</td> <td>± 1V</td> </tr> <tr> <td>D3</td><td>PIN4 190V</td> <td>± 10V</td><td>U33 E22-PIN10 33V</td> <td>± 4V</td> </tr> <tr> <td>D14</td><td>PIN5 5V</td> <td>± 0,5V</td><td>U40 E24-PIN1 40V</td> <td>± 3V</td> </tr> <tr> <td>D12</td><td>PIN7 15V</td> <td>± 2V</td><td>U5B E19-PIN5 5V</td> <td>± 0,5V</td> </tr> <tr> <td>D12</td><td>PIN9 15V</td> <td>± 2V</td><td></td> <td></td> </tr> <tr> <td>D11</td><td>PIN8 12V</td> <td>± 2V</td><td></td> <td></td> </tr> <tr> <td>D11</td><td>PIN10 33V</td> <td>± 3V</td><td></td> <td></td> </tr> </tbody> </table>	D-Board		E-Board		D3	PIN5 147V	± 3V	U8A E19-PIN8 8V	± 0,5V	D12	PIN5 5V	± 0,3V	U9 IC3801-PIN3 9V	± 0,5V	D13	PIN1 40V	± 4V	U12 E22-PIN8 12V	± 0,5V	D3	PIN4 230V	± 10V	STD5VE26-PIN4 5V	± 0,5V	D3	PIN4 205V	± 10V	U15 E23-PIN8 15V	± 1V	D3	PIN4 190V	± 10V	U15 E23-PIN9 -15V	± 1V	D3	PIN4 190V	± 10V	U33 E22-PIN10 33V	± 4V	D14	PIN5 5V	± 0,5V	U40 E24-PIN1 40V	± 3V	D12	PIN7 15V	± 2V	U5B E19-PIN5 5V	± 0,5V	D12	PIN9 15V	± 2V			D11	PIN8 12V	± 2V			D11	PIN10 33V	± 3V		
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Cut Off	1. Receive a Greyscale signal. 2. Degauss the tube externally. 3. Set the TV into Service Mode 1. 4. Select Cut off mode.																																																																

FACTORY SETTINGS

To return customer settings to factory settings and clear owner ID of all information input by the customer, enter Self-Check mode. Press the down (**-/v**) button on the customer controls at the front of the TV set, at the same time pressing the **STATUS** button  on the remote control. To exit Self Check, switch off the TV set at the power button.

NOTE: Self Check should only be used when refurbishing the TV set and not during normal repair work.

VPC	O.K.	PCB	O.K.
TUN	O.K.	Cab	O.K.
E2	O.K.	Sum	Factory use only
DPL	--		
CIP1	O.K.		
CIP2	O.K.		
VP	O.K.		
DFU	O.K.		
COL	O.K.		
PIP	O.K.		
OPTION 1	80		
OPTION 2	B1		
OPTION 3	42		
OPTION 4	20		
OPTION 5	B1		
OPTION 6	E9		

Self Check is also used to automatically check the bus lines and hexadecimal code of the TV set. If the CCU ports have been checked and found to be incorrect or not located then " -- " will appear in place of "O.K.". For more in-depth TV diagnostics use the **LUCI** interface as listed below.

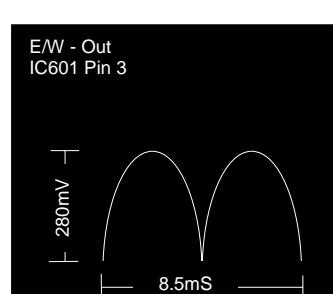
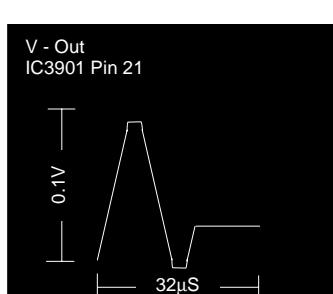
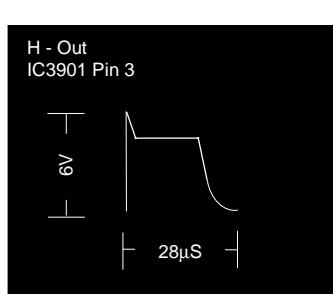
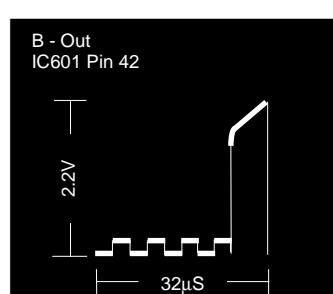
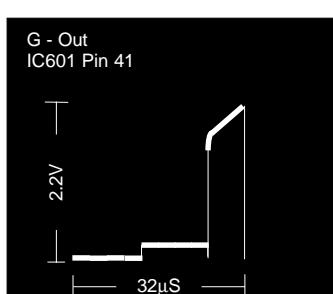
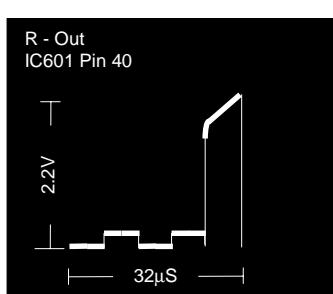
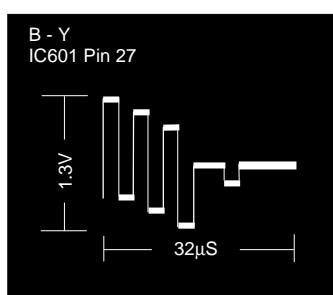
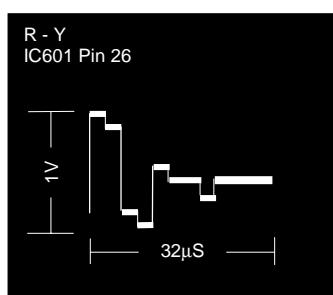
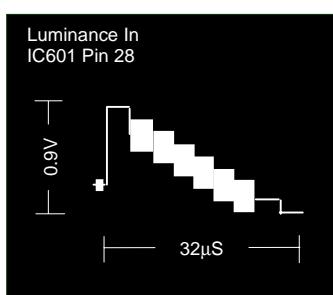
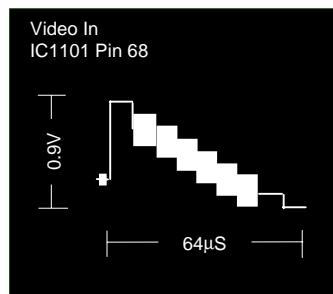
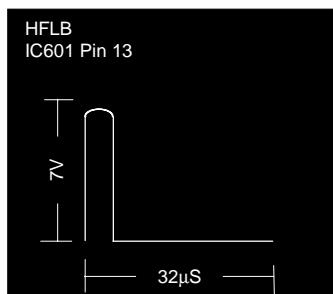
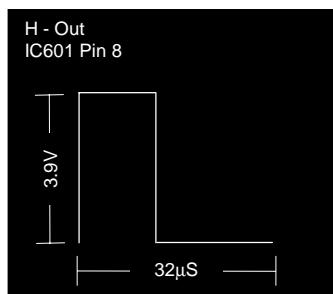
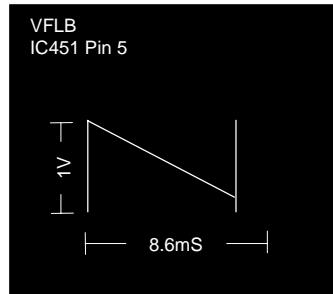
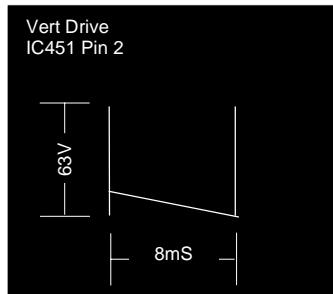
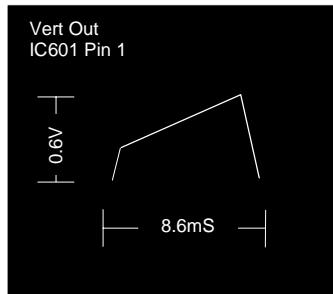
Service Aids

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
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

NOTE: All waveforms have been taken using a standard colour bar pattern.



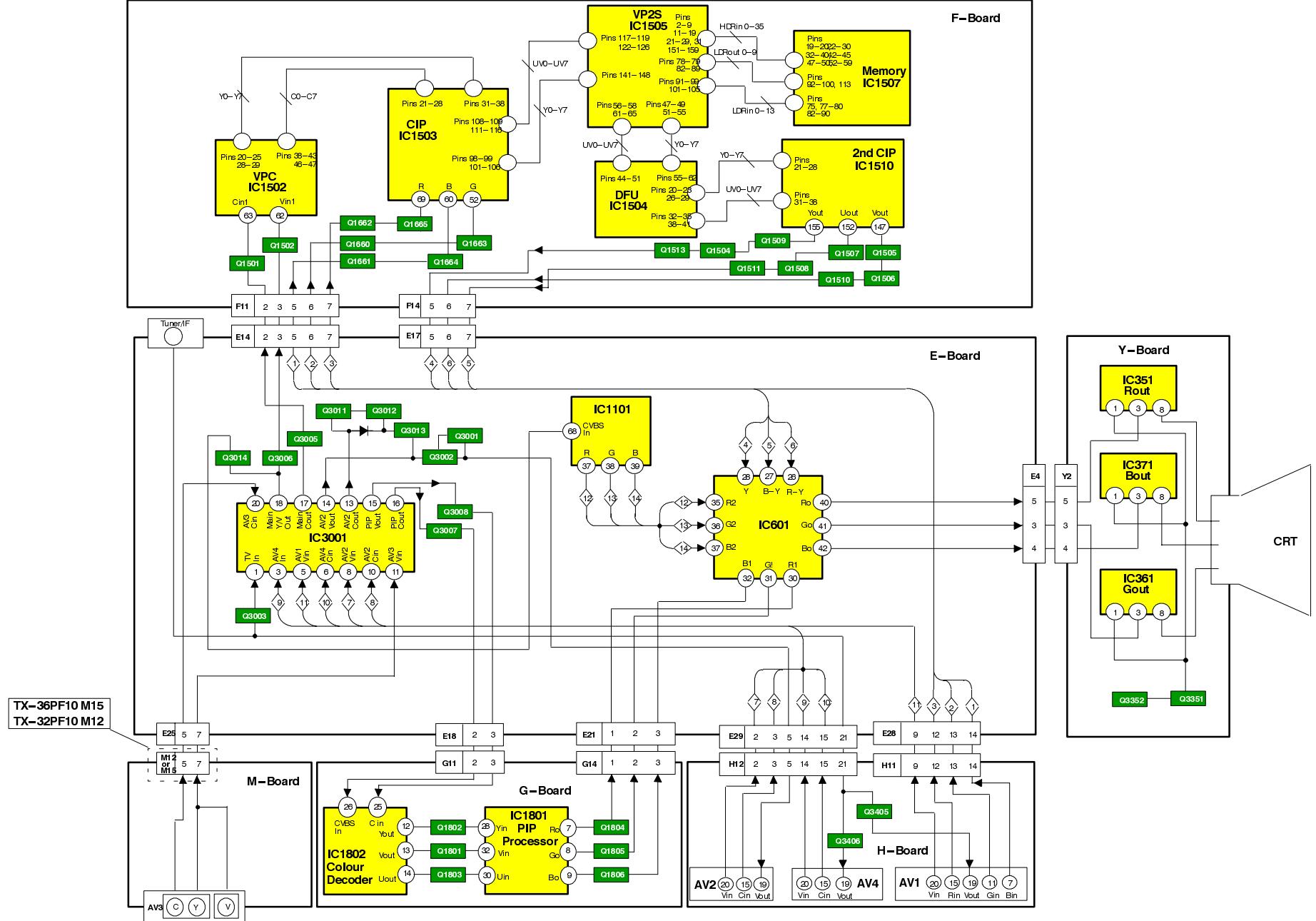
ALIGNMENT SETTINGS:

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

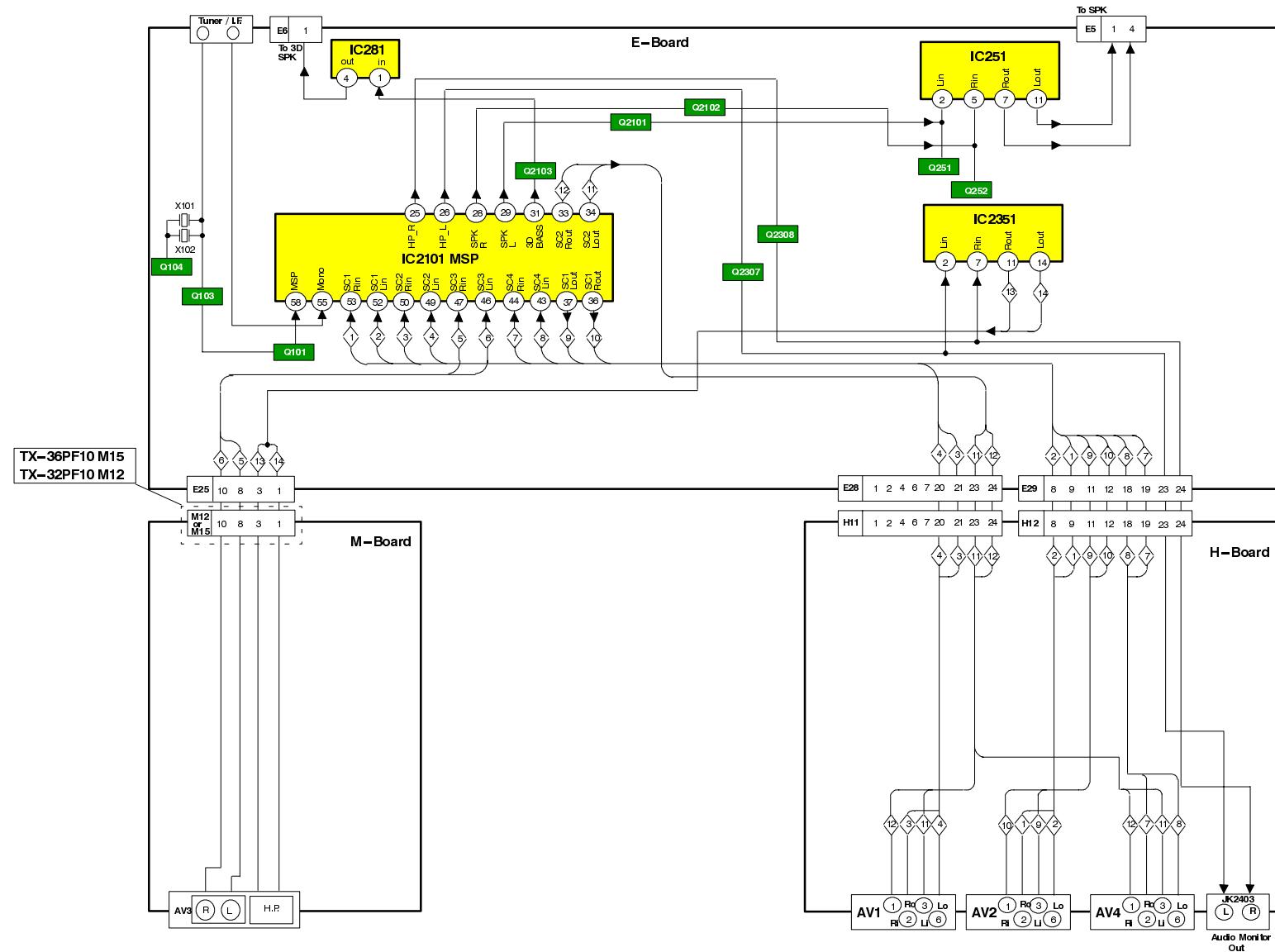
1. Set the Bass to maximum position, set the Treble to minimum position, press the down button (- / v) on the customer controls at the front of the TV and at the same time press the **INDEX** button on the remote control, this will place the TV into the Service Mode.
2. Press the **RED / GREEN** buttons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

Alignment Function		Settings / Special features
Horizontal Position	H-Pos +020	Optimum setting.
Vertical Position	V-Pos +024	Optimum setting.
Horizontal Amplitude	H-Amp +049	Optimum setting.
Vert. Amplitude	V-Amp +029	Optimum setting.
EW-amplitude	E/W-Amp1 +022	Optimum setting.
EW-amplitude	E/W-Amp2 +000	Optimum setting.
Trapezium-comp	Trapez-1 +033	Optimum setting.
Horizontal-Parallel	H-Parallel +032	Optimum setting.
Vertical Linearity	V-Lin +004	Optimum setting.
DVCO	DVCO 000	Receive a PAL Colour Bar Pattern. For DVCO alignment press " Blue " button, wait until the colours are stable and press " STR ".
Cut-off DC	Cut-off O.K.	To adjust Cutoff adjust the screen VR until the display shows "O.K."
Highlight	High 0031 0031 0031	Contrast Maximum A.I. Off Adjust for optimum setting.
Sub-Brightness	Sub-Brightness 000	Optimum setting.

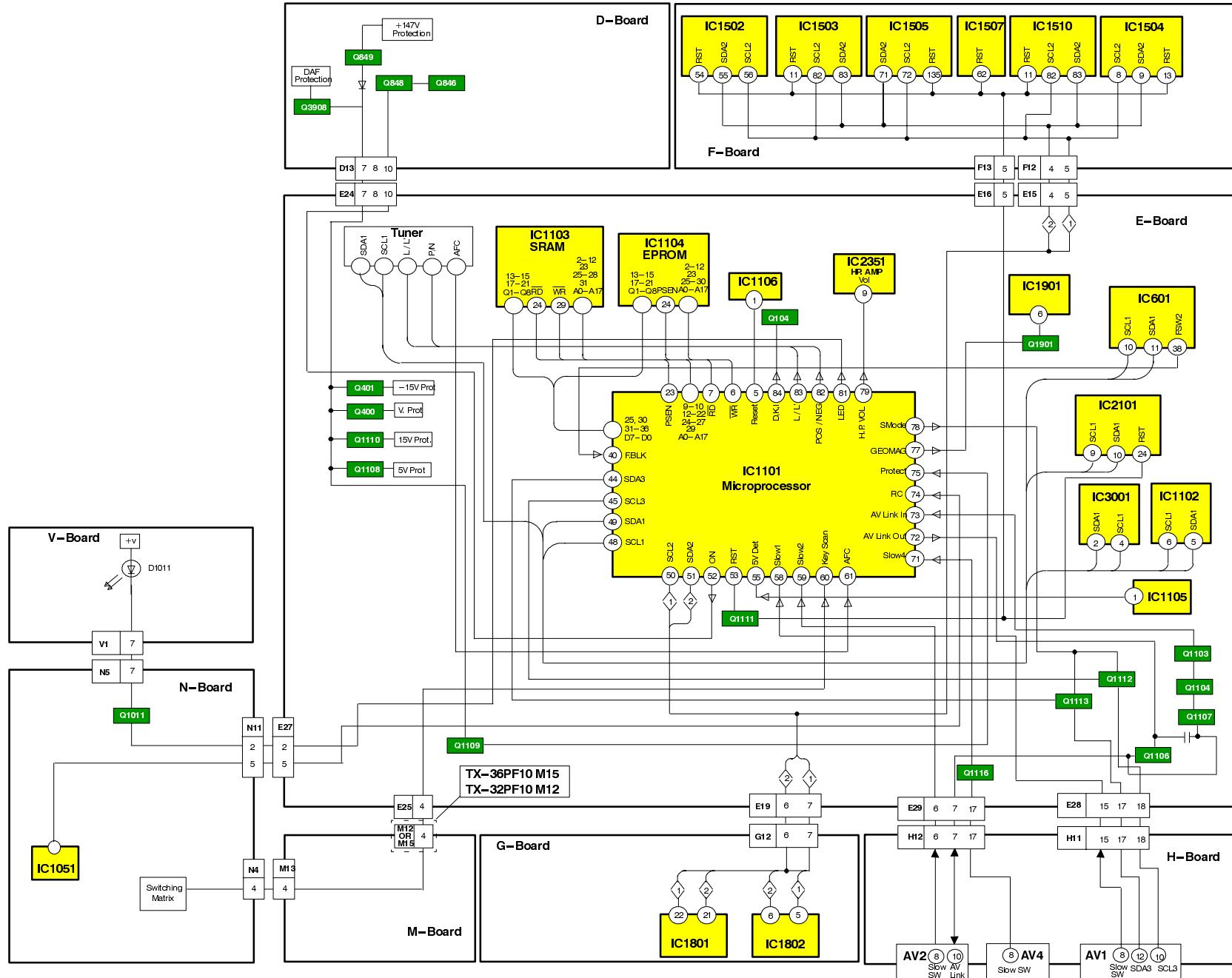
VIDEO BLOCK DIAGRAM



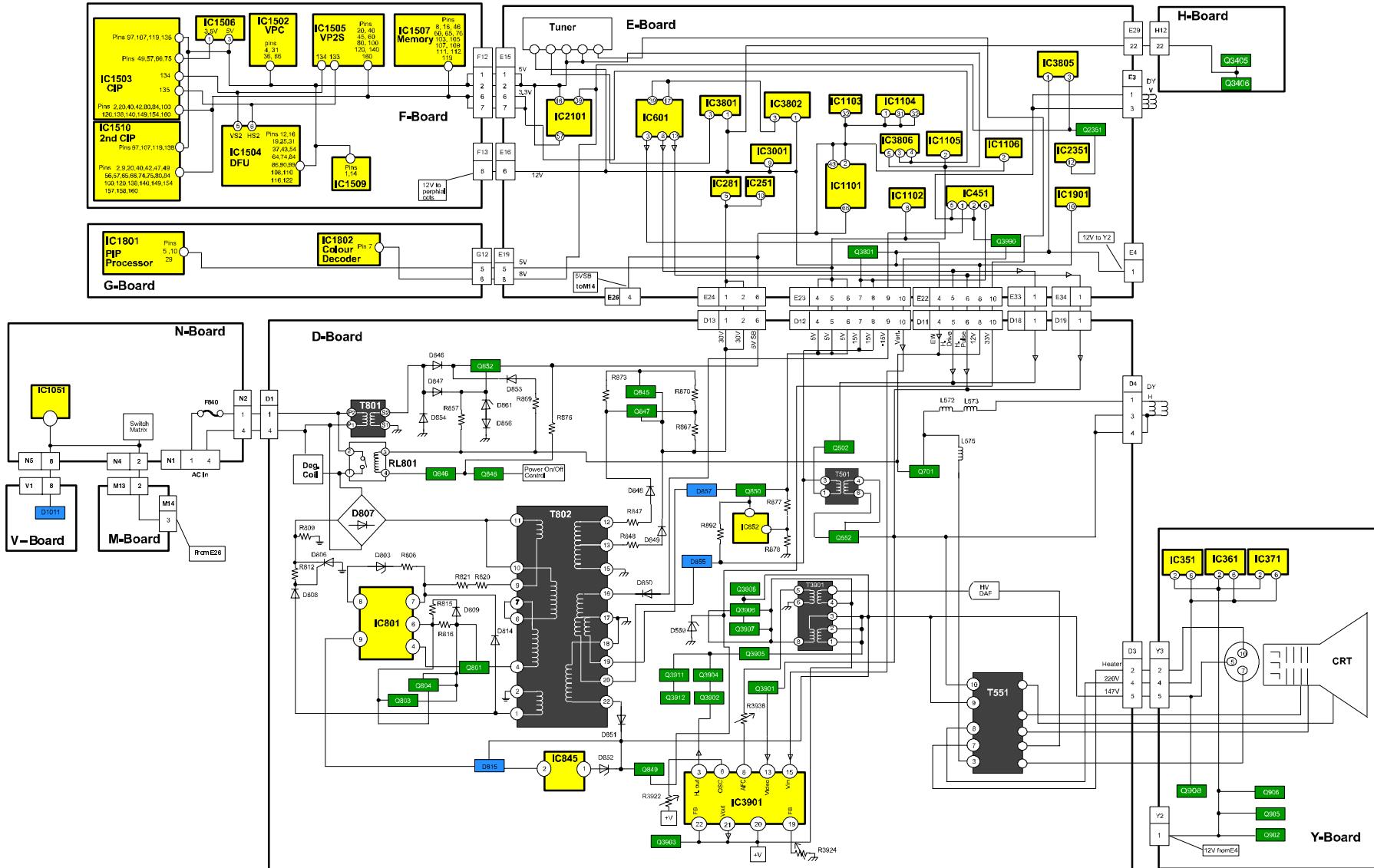
AUDIO BLOCK DIAGRAM



CONTROL BLOCK DIAGRAM



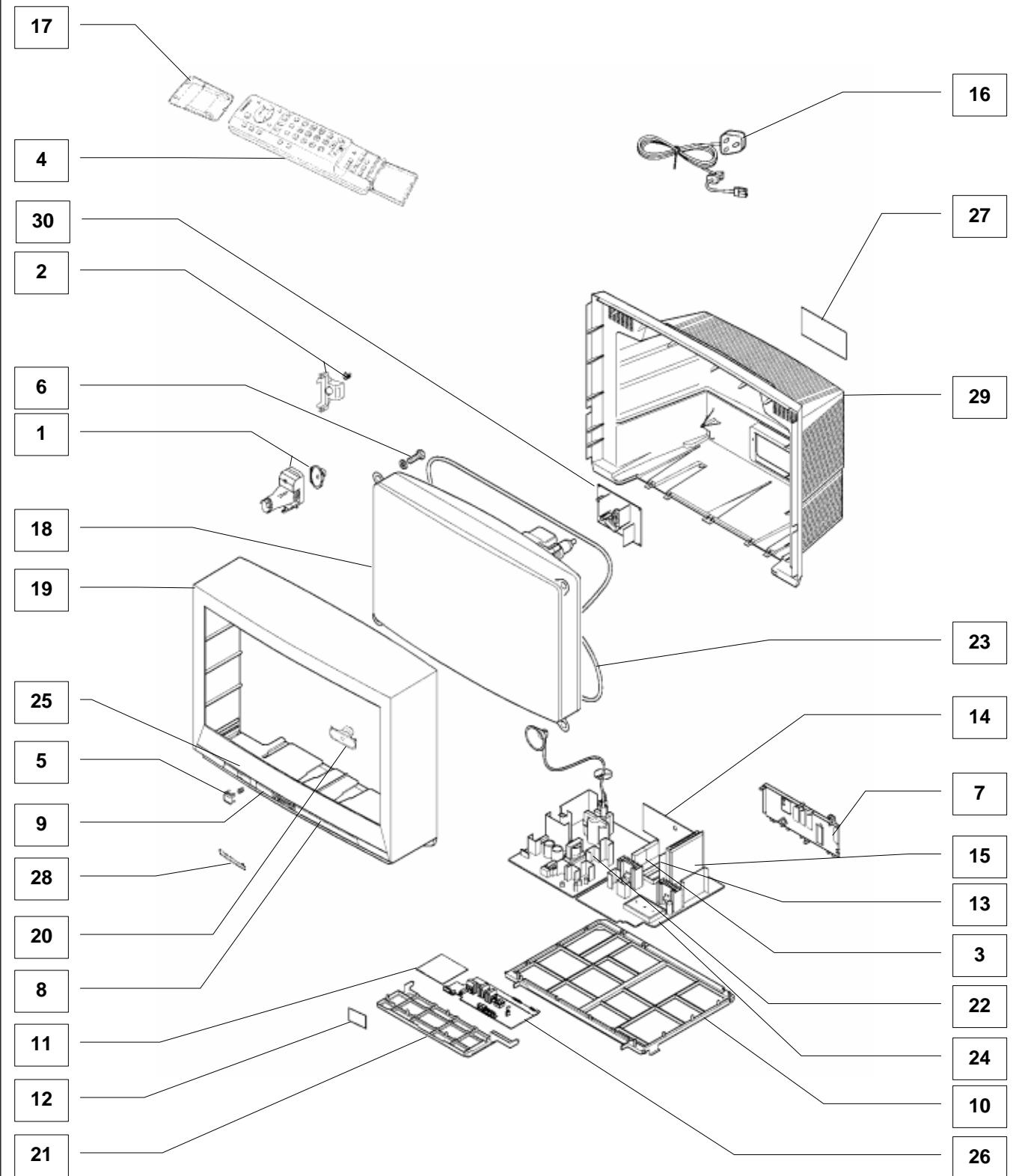
POWER SUPPLY & DEFLECTION BLOCK DIAGRAM



PARTS LOCATION

NOTE:

The numbers on the exploded view below refer to the mechanical 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		
MECHANICAL PARTS		
1	EAB12146B	LOUD SPEAKER
2	EAS13KH14E	TWEETER SPEAKER
3	ENG27501G	TUNER
4	EUR511220	REMOTE CONTROL
5	TBXA19701	POWER BUTTON
6	THTA006Z	CRT FIXING SCREW
7	TKP8E1253-3	REAR AV PANEL
8	TKPA27904	RIGHT DOOR
9	TKPA28004	LEFT DOOR
10	TMX8E034	CHASSIS FRAME
11	TNP8EN017AA	N P.C.B.
12	TNP8EV003AA	V P.C.B.
13	TNPA0877AB	G P.C.B.
14	TNPA1047AC	H P.C.B.
15	TNPA1068AD	F P.C.B.
16	TSX8E0032	POWER CORD
17	UR51EC904A	BATTERY COVER (REMOTE)
MISCELLANEOUS COMPONENTS		
	832AG11D-ESL	IC SOCKET
	PLCC-84-T	84 PIN IC SOCKET
	TBL63413	RUBBER
	TBM8E1940-1	AV PANEL LABEL
	TBMU025-1	LEFT INDICATION SHEET
	TBMU026	BADGE
	TEK6940	LID CATCH
	TES2298	CRT EARTH SPRING
	THT1062	SCREW
	TKPA27711	INDICATOR PANEL
	TKRA13104	HANDLE
	TMWJ002	REMOTE CONTROL HOLDER
	TMWJ011	LED HOLDER
	TMX8E025	P.C.B. BRACKET
	TMX8E035	POWER BUTTON JOINT
	UM-3DJ-2P	BATTERY PACK
	ZTBZAD550A	ANODE CABLE
RL801	TSE1885-1	RELAY
R805	232266296706	THERMISTOR
SOD9	31221212478	FIX CLIP
SOD1	31221212478	FIX CLIP
INSTRUCTION BOOKS		
	TQB8E2692-1	ENGLISH
I.C.s		
IC251	LA4282	AUDIO OUTPUT
IC281	TDA2030AV	AUDIO AMPLIFIER

Cct Ref	Parts Number	Description
IC351	TDA6111Q-N4	RGB OUTPUT
IC361	TDA6111Q-N4	RGB OUTPUT
IC371	TDA6111Q-N4	RGB OUTPUT
IC381	TL431ACLPM	REGULATOR
IC451	LA7845N	VERTICAL OUTPUT
IC601	TDA9330HN1G	VIDEO PROCESSOR
IC801	AN8029	POWER SUPPLY
IC845	SE140N	ERROR AMPLIFER
IC852	TL431ACLPM	REGULATOR
IC1051	PNA4601M04TV	LED RECEIVER
IC1101	SDA5450C48-1	MICRO PROCESSOR
IC1103	M5M51008BP	SRAM
IC1104	27C2001-J02	EPROM *
IC1105	MN1381-T(TA)	RESET
IC1106	MN1381-R(TA)	RESET
IC1502	VPC3215CB4TP	VPC
IC1503	MB87F1720	CIP
IC1504	FJB007S	DFU
IC1505	MB87F2131	VP2S
IC1506	AN77L035M-E1	3.5V REGULATOR
IC1507	MB87H2010	MEMORY
IC1509	TLC2932IPWL	CLOCK CONVERTOR
IC1510	MB87F1720	CIP
IC1801	SDA9288XESEGEG	PIP PROCESSOR
IC1802	TDA9143-N1	COLOUR DECODER
IC1901	LA6515	EARTH CORRECTION
IC2101	MSP3410DPPB4	AUDIO PROCESSOR
IC2351	AN7108	H.P. AMPLIFIER
IC3001	TEA6415C	VIDEO SWITCH
IC3801	AN7809FLB	9V REGULATOR
IC3802	AN7708FLB	8V REGULATOR
IC3805	AN7808LB	8V REGULATOR
IC3806	SI-3033C	3.5V REGULATOR
IC3901	AN5422K	DYNAMIC FOCUS
FUSES		
F840	XBA2C50TH15	FUSE
F845	TR5-T3150	FUSE
F846	TR5-T1250	FUSE
F8401	EYF52BC	FUSE HOLDER
F8402	EYF52BC	FUSE HOLDER
DIODES		
D001	MA4020	DIODE
D002	MA4020	DIODE
D252	MA165TA5	DIODE
D253	MA700TA5	DIODE
D254	MA700TA5	DIODE
D255	MA165TA5	DIODE
D282	MA165TA5	DIODE
D284	MA165TA5	DIODE
D285	MA165TA5	DIODE
D286	MA165TA5	DIODE
D287	MA4200	DIODE

SCHEMATIC DIAGRAMS FOR MODELS

**TX-36PF10
TX-32PF10**

(EURO-5 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.

NOTE

1. RESISTOR

All resistors are carbon $\frac{1}{4}W$ resistor, unless marked otherwise.
Unit of resistance is OHM (Ω) ($k=1,000$, $M=1,000,000$)

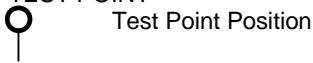
2. CAPACITORS

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



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.

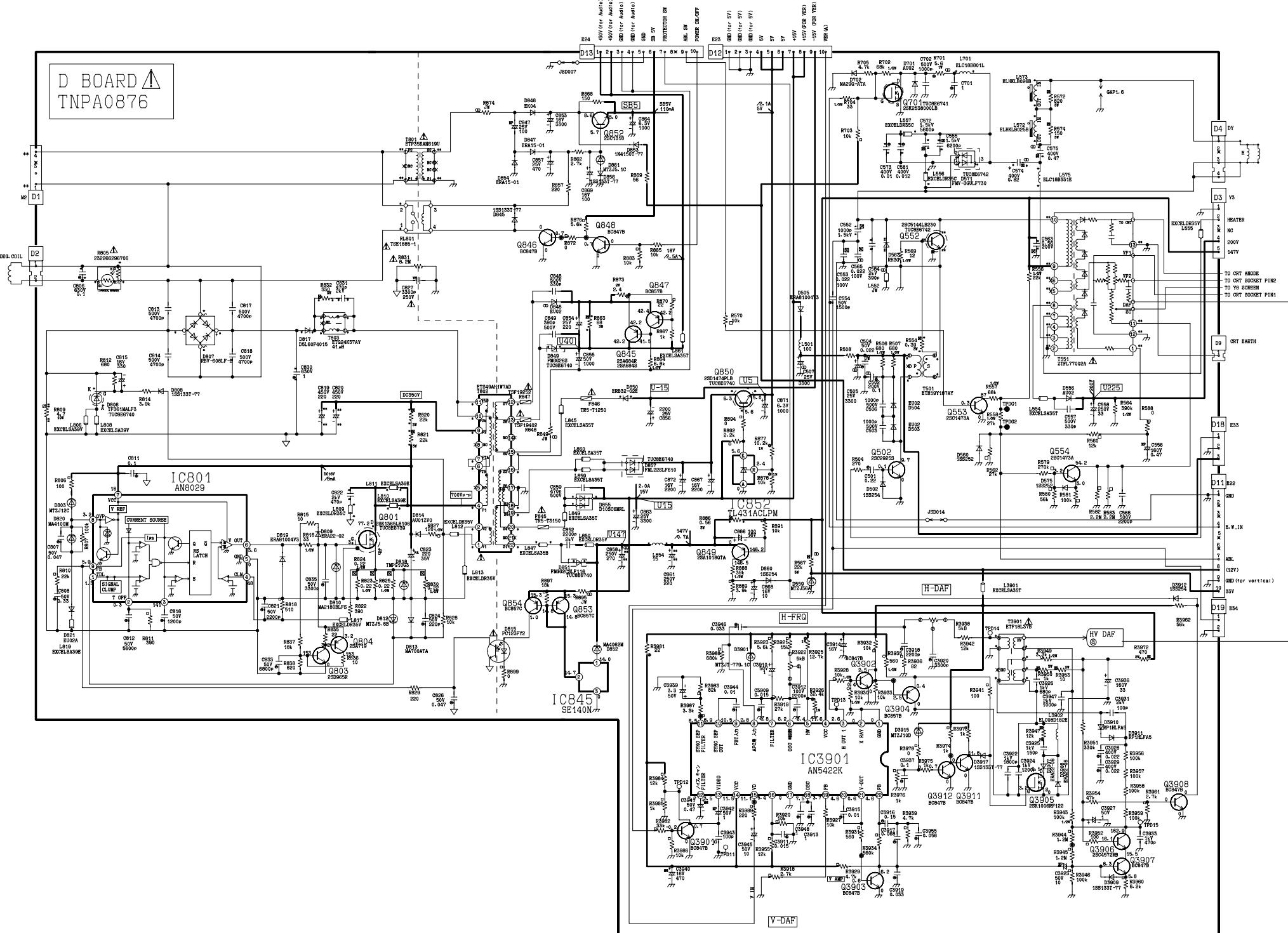
REMARKS

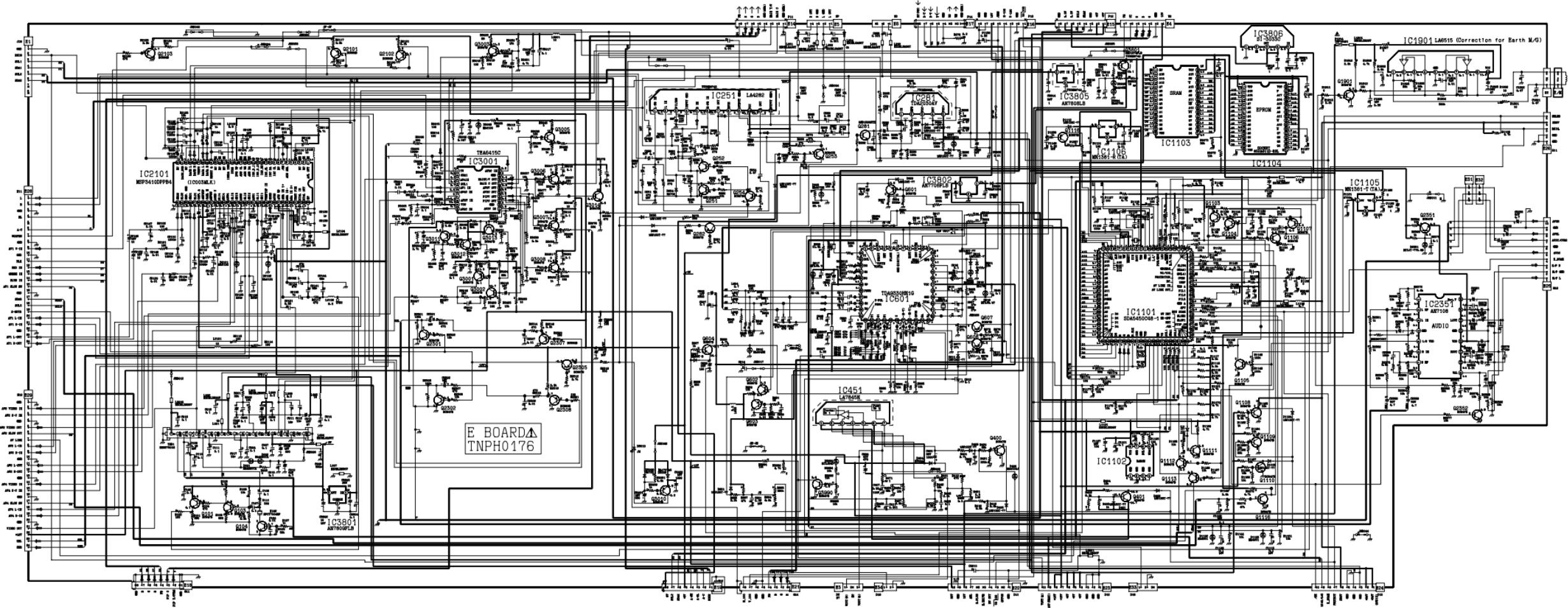
- a. Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
- b. Do not short circuit the hot and cold circuits as electrical components may be damaged.
- c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously 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

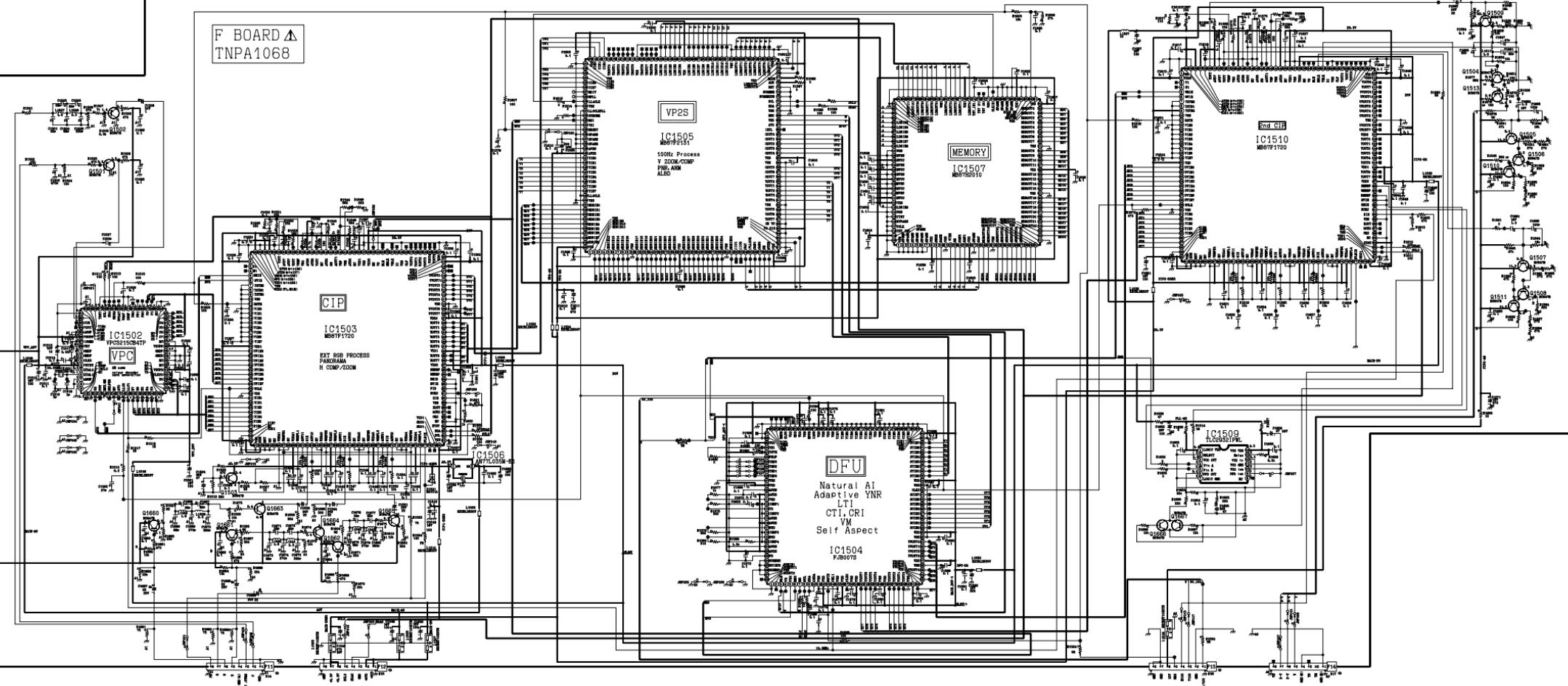
1. The Power Supply Circuit contains a circuit area, which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits, except the Power Circuit, are COLD.

D BOARD
TNPA0876

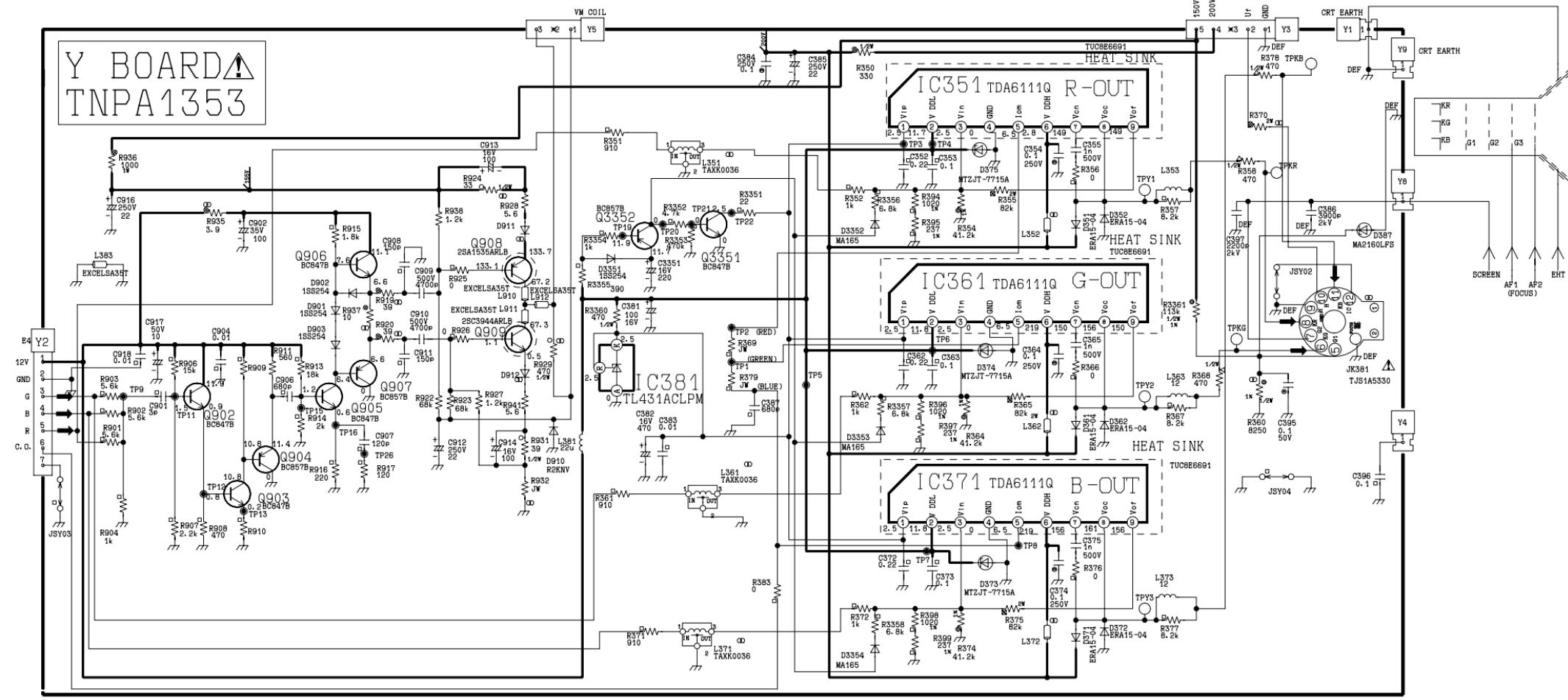




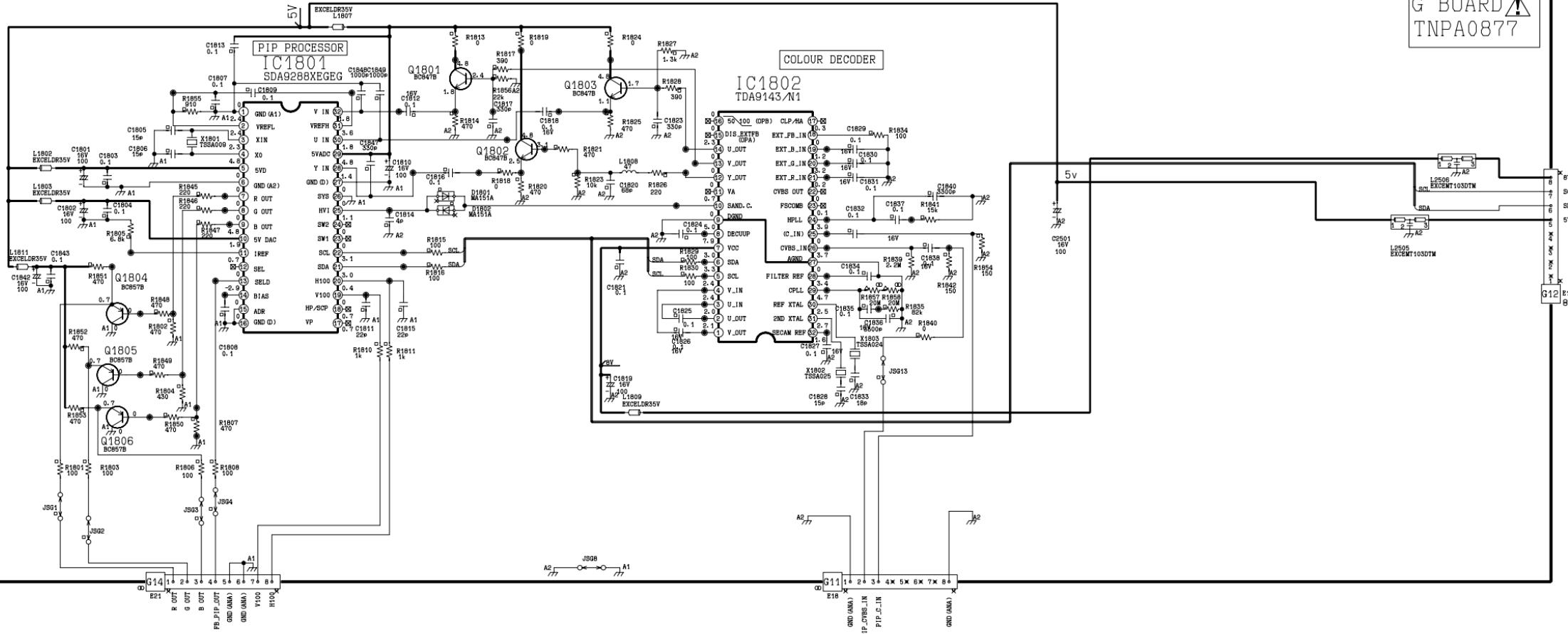
F BOARD △
TNPA1068

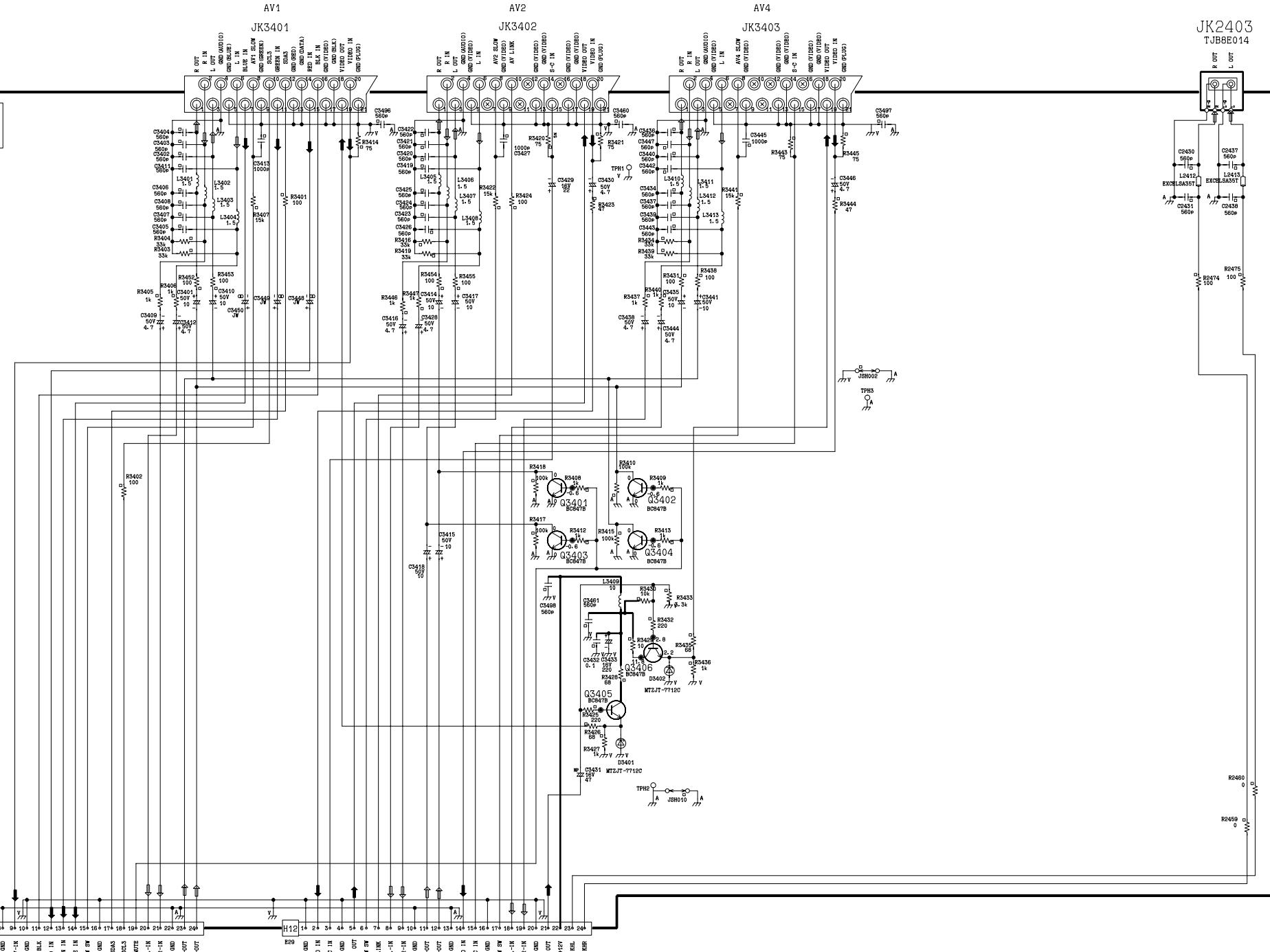


Y BOARD 
TNPA1353



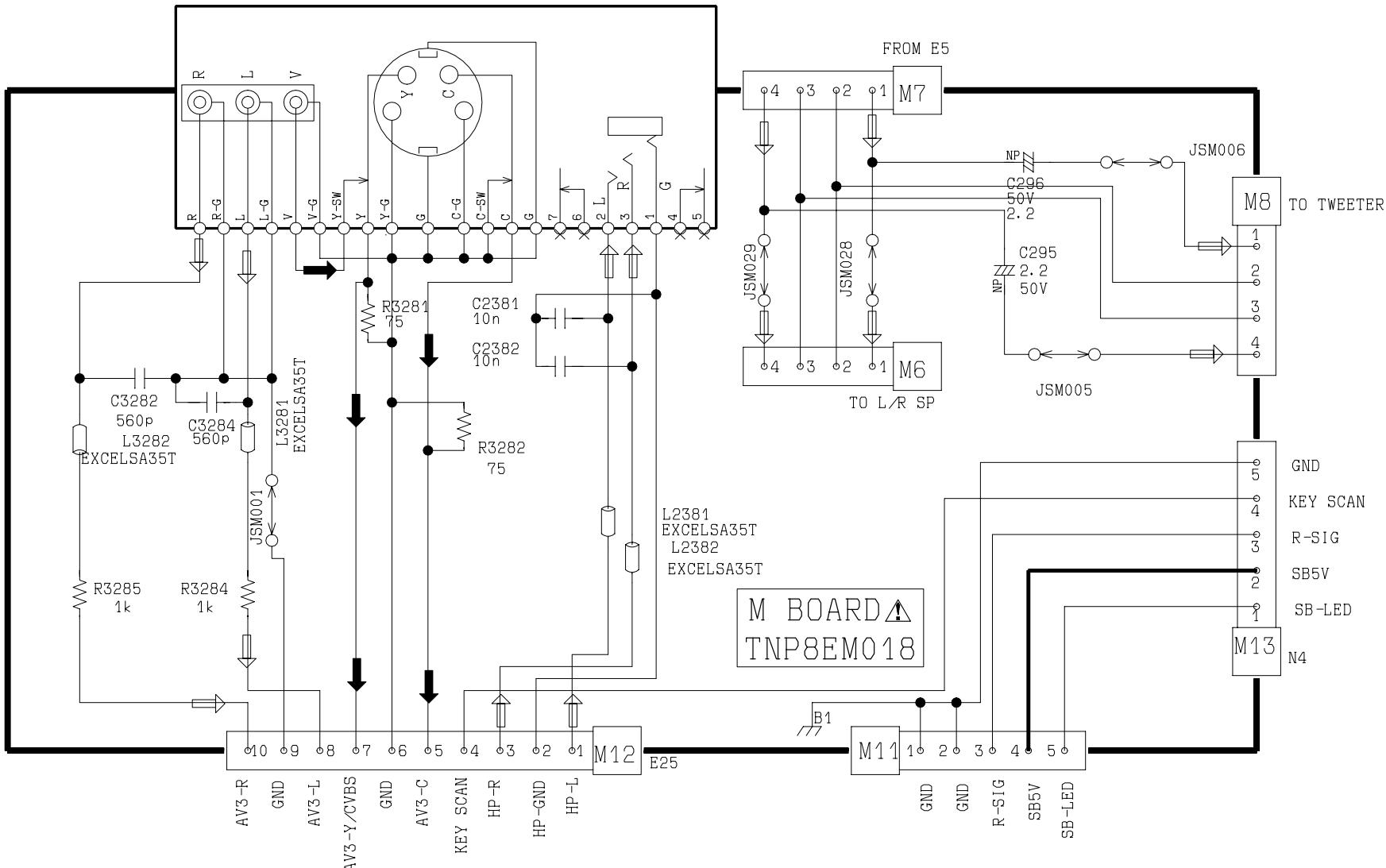
G BOARD
TNPA0877



H BOARD
TNPA1047

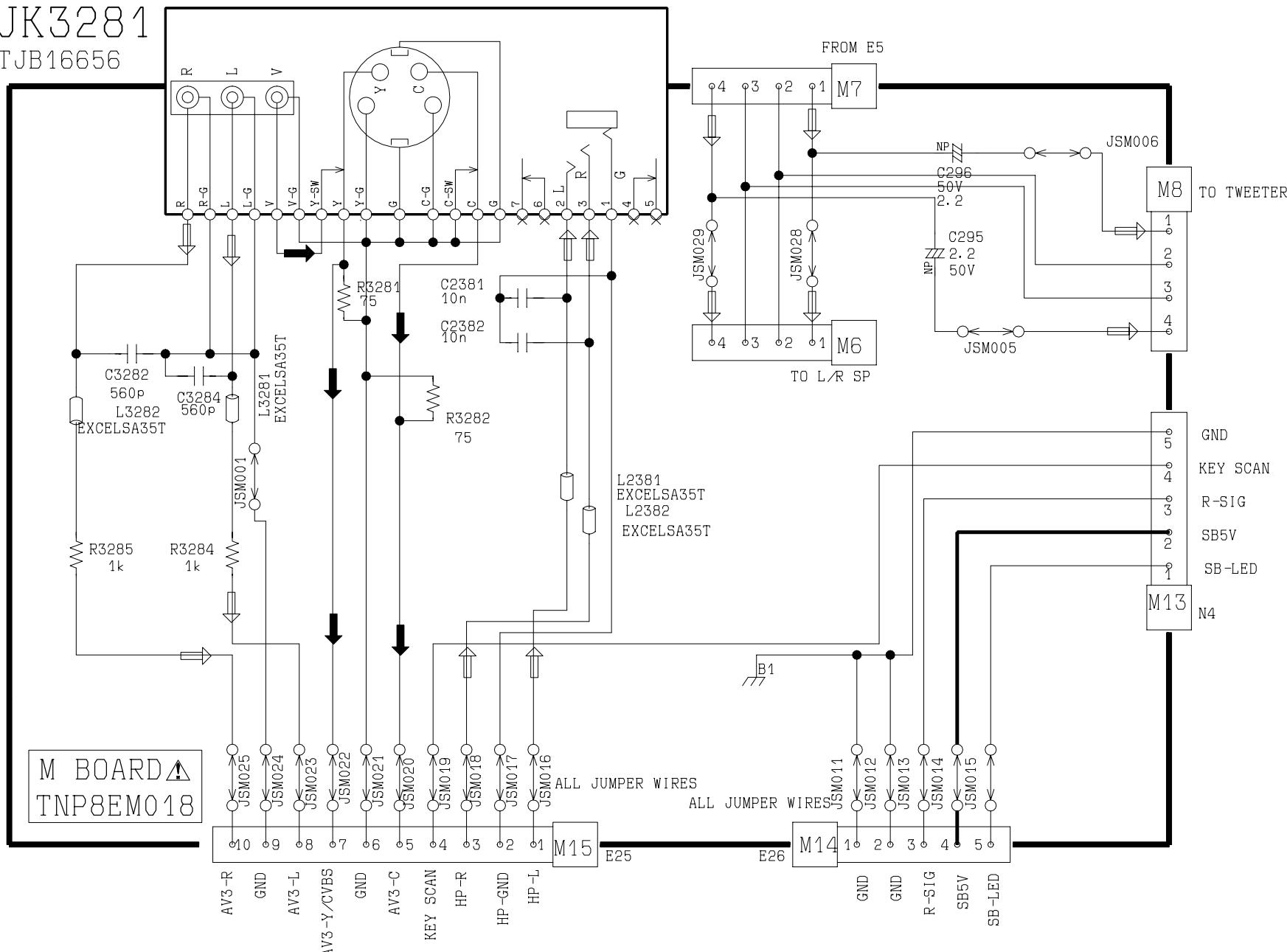
JK3281
TJB16656

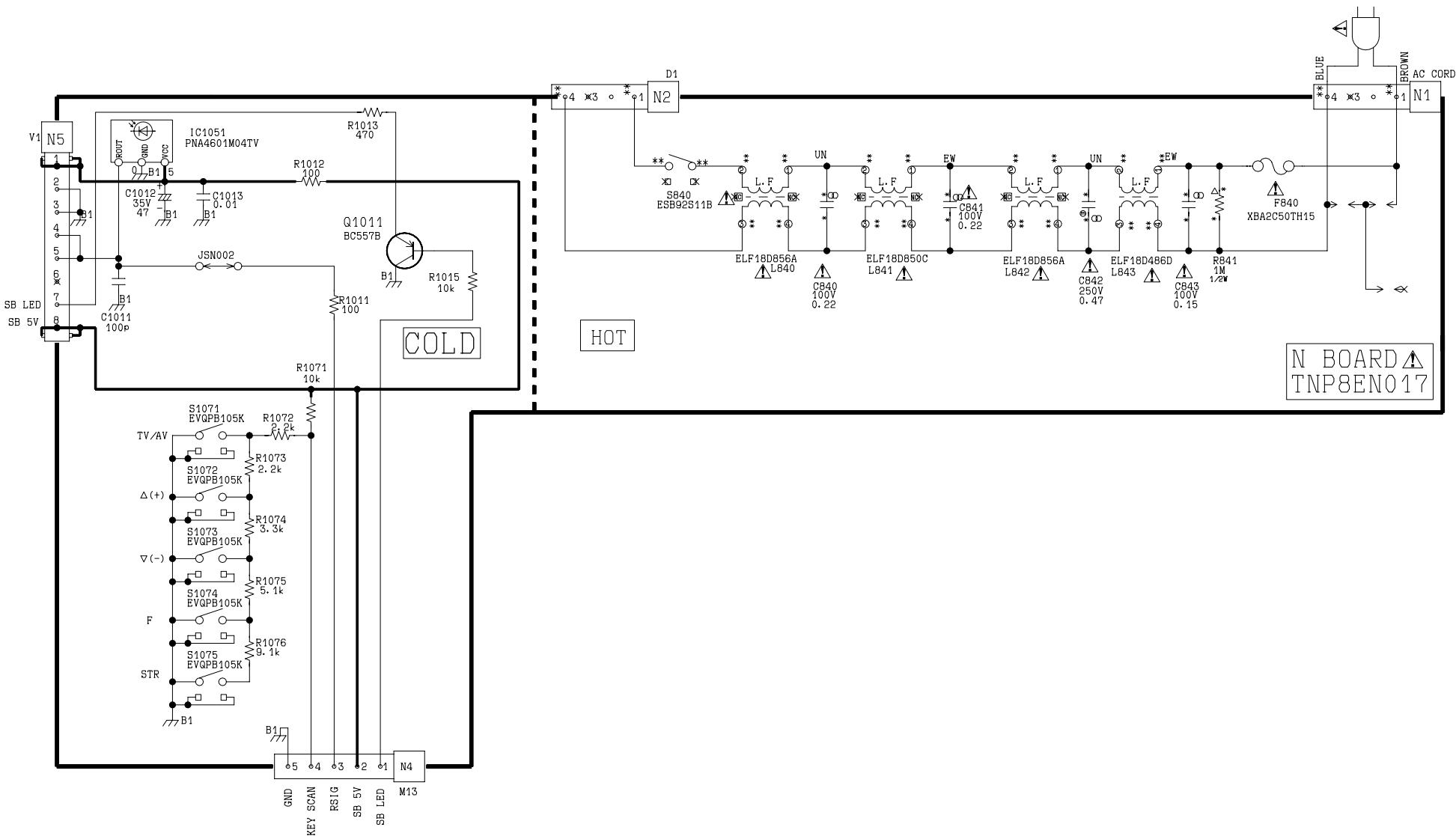
TX -32PF 10



TX -36PF 10

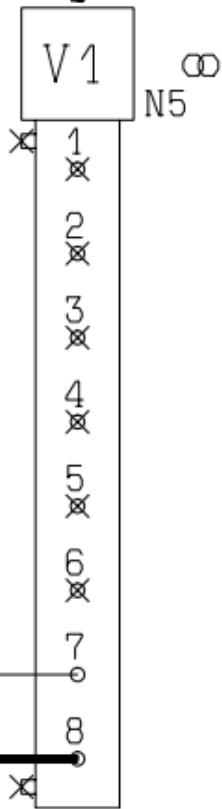
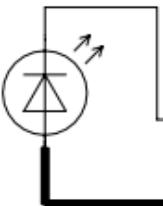
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TJB16656





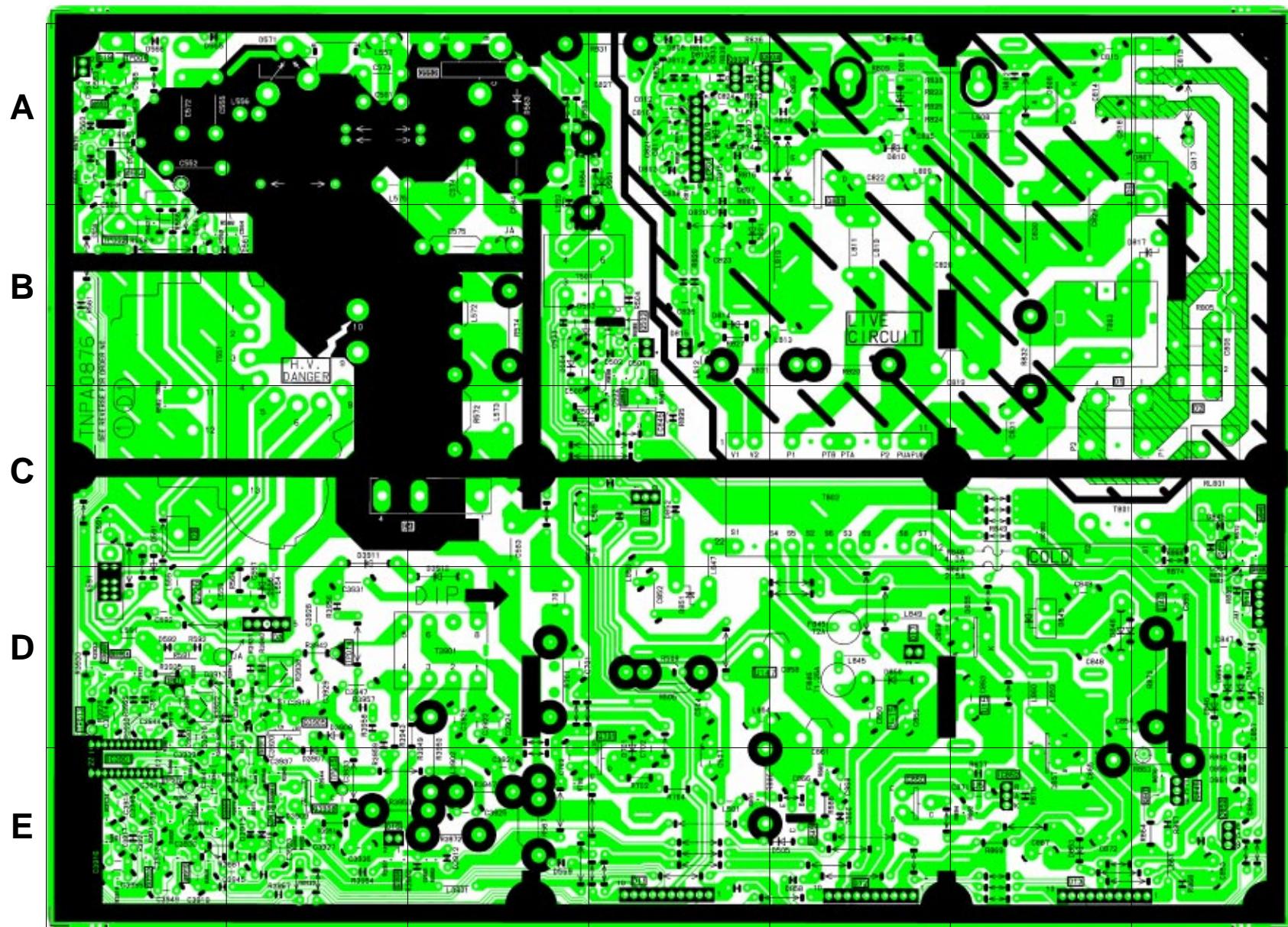
V BOARD 
TNP8EV003

D1011
LN81RPH



D - BOARD TNPA0876

DIODE'S	TRAN'S
D391 D1	Q502 B4
D502 B4	Q552 A3
D503 B3	Q553 A1
D504 B3	Q554 A1
D505 E4	Q701 D4
D556 D2	Q801 B5
D559 E3	Q803 A4
D560 A1	Q804 A4
D561 B2	Q845 E7
D563 A3	Q846 C7
D565 A1	Q847 E7
D566 A1	Q848 D7
D571 A2	Q849 E5
D575 A1	Q850 E5
D591 C1	Q852 E7
D592 D1	Q854 C4
D701 D4	Q3901 E2
D807 A6	Q3902 D1
D808 A4	Q3903 E1
D809 A4	Q3904 D1
D810 A5	Q3905 D2
D812 A4	Q3906 E2
D813 A4	Q3907 E2
D814 B4	Q3908 E2
D815 B4	Q3911 D2
D817 B6	Q3912 E2
D818 A5	Q3916 E1
D819 A4	
D820 B4	T.P.'S
D821 B4	TPDG1 A1
D845 C7	TPDG2 B1
D846 D7	TPDG11 D1
D847 D7	TPDG12 E1
D848 D6	TPDG13 D1
D849 D6	TPDG14 D2
D851 D4	TPDG15 E2
D852 C4	
D853 E6	I.C.'S
D854 D7	IC801 A4
D855 D6	IC845 C4
D856 E7	IC852 E6
D857 E6	IC3901 E1
D858 E5	
D860 E5	
D861 E7	
D3901 D1	
D3907 D2	
D3908 D2	
D3909 E2	
D3910 D3	
D3911 C2	
D3912 E3	
D3915 E2	
D3918 E2	



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CONDUCTOR VIEWS

E - BOARD TNPH0176

TRAN'S		DIODE'S	
Q101 A3		D001 A1	D2364 A6
Q103 A3		D002 A1	D3005 B1
Q104 A3		D252 E5	D3006 B2
Q251 D4		D253 E5	D3008 B4
Q252 D4		D254 E5	D3009 A3
Q253 E4		D255 E4	D3010 A3
Q254 E4		D256 E4	D3011 B1
Q281 E3		D281 E4	D3803 A5
Q282 D3		D282 E4	D3804 A5
Q400 B5		D283 E4	D3805 C5
Q401 A4		D284 E2	D3990 A4
Q601 B5		D285 E3	
Q602 B4		D286 E2	I.C.'S
Q603 C4		D400 B5	IC251 E4
Q604 C4		D401 A4	IC281 E2
Q607 C4		D402 A4	IC451 A4
Q608 D4		D403 B4	IC601 C4
Q1001 C7		D404 A4	IC1001 C7
Q1105 C6		D405 A6	IC1101 D5
Q1106 C6		D408 B5	IC1102 E5
Q1107 C6		D411 A4	IC1103 E5
Q1108 A5		D601 B4	IC1104 D5
Q1109 A5		D603 D5	IC1105 B6
Q1110 A5		D605 B5	IC1106 D6
Q1111 C5		D607 B5	IC1901 C6
Q1112 E5		D609 B5	IC2101 B3
Q1113 E5		D610 C4	IC2351 A6
Q1114 C6		D611 C4	IC3001 B1
Q1116 C6		D612 C4	IC3801 A2
Q1118 D6		D615 B5	IC3802 C5
Q1901 C6		D616 B5	IC3805 B5
Q2101 B2		D617 D5	IC3806 D1
Q2102 C2		D618 C4	
Q2103 B2		D620 B5	T.P.'S
Q2301 B2		D651 C4	TPE1 A2
Q2302 A2		D652 C4	TPE2 B3
Q2305 A2		D653 B4	TPE23 D6
Q2307 A3		D1001 C7	
Q2308 A3		D1101 C1	
Q2351 A6		D1102 C1	
Q2352 A6		D1103 C1	
Q3001 C1		D1104 A6	
Q3002 B1		D1105 A6	
Q3003 B2		D1106 B6	
Q3005 D1		D1107 C5	
Q3006 D1		D1108 C6	
Q3007 D1		D1109 D6	
Q3008 D1		D1110 D6	
Q3010 A3		D1111 D6	
Q3011 B2		D1112 D6	
Q3012 B2		D2101 B2	
Q3013 B2		D2102 B2	
Q3014 D1		D2301 A2	
Q3801 A5		D2302 A2	
Q3990 A4		D2351 A6	

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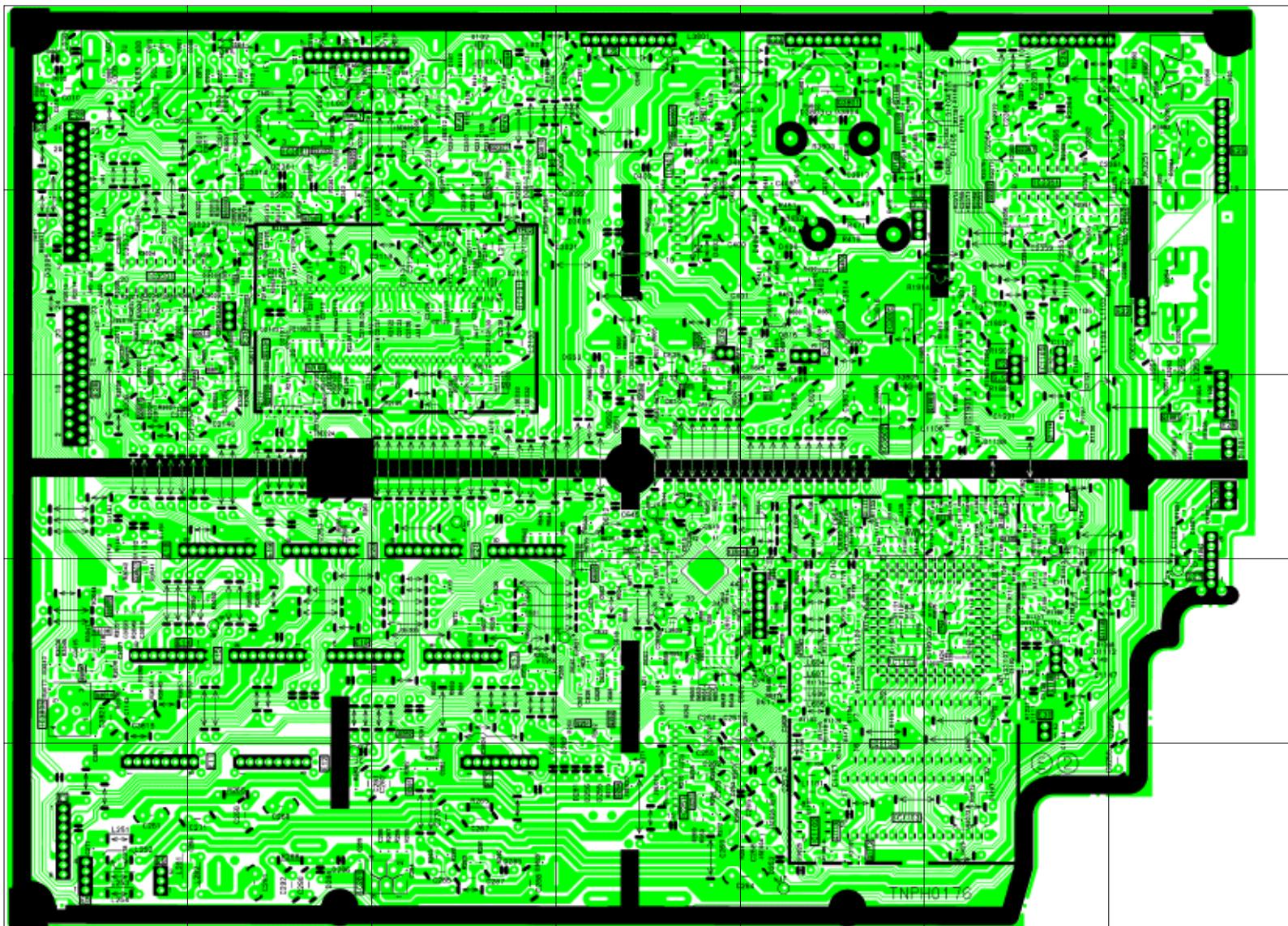
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Y - BOARD TNPA1353

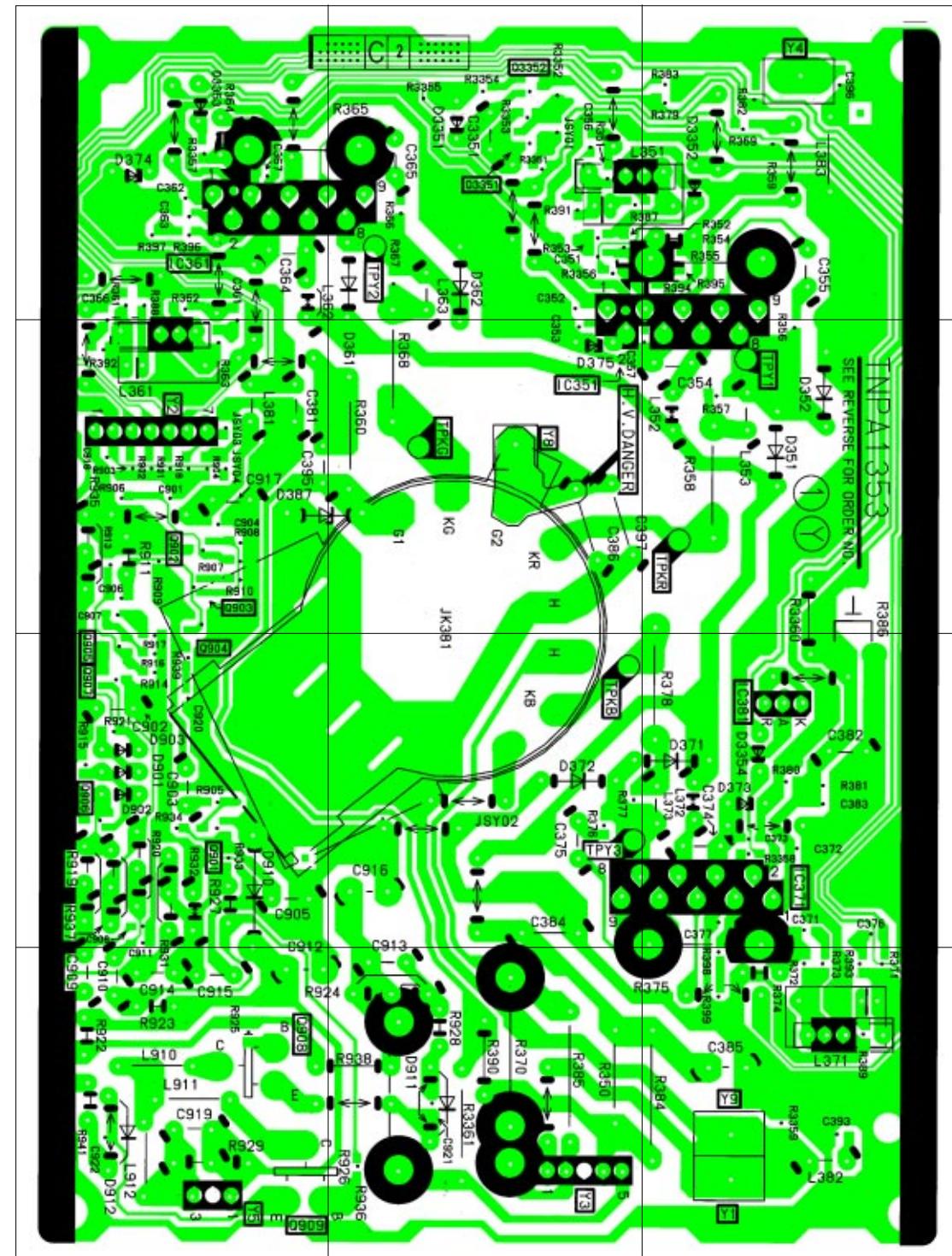
TRAN'S	
Q901	C1
Q902	B1
Q903	B1
Q904	C1
Q906	C1
Q908	D1
Q909	D1
Q3351	A2
Q3352	A2
DIODE'S	
D351	B3
D352	B3
D361	A2
D362	A2
D371	C3
D372	C2
D373	C3
D374	A1
D375	B2
D387	B1
D901	C1
D902	C1
D903	C1
D910	C1
D911	D2
D3351	A2
D3352	A3
D3353	A1
D3354	C3
T.P.'S	
TPY1	B3
TPY2	A2
TPY3	C2
TPKR	B3
TPKG	B2
TPKB	C2
I.C.'S	
IC351	B2
IC361	A1
IC371	C3
IC381	C3

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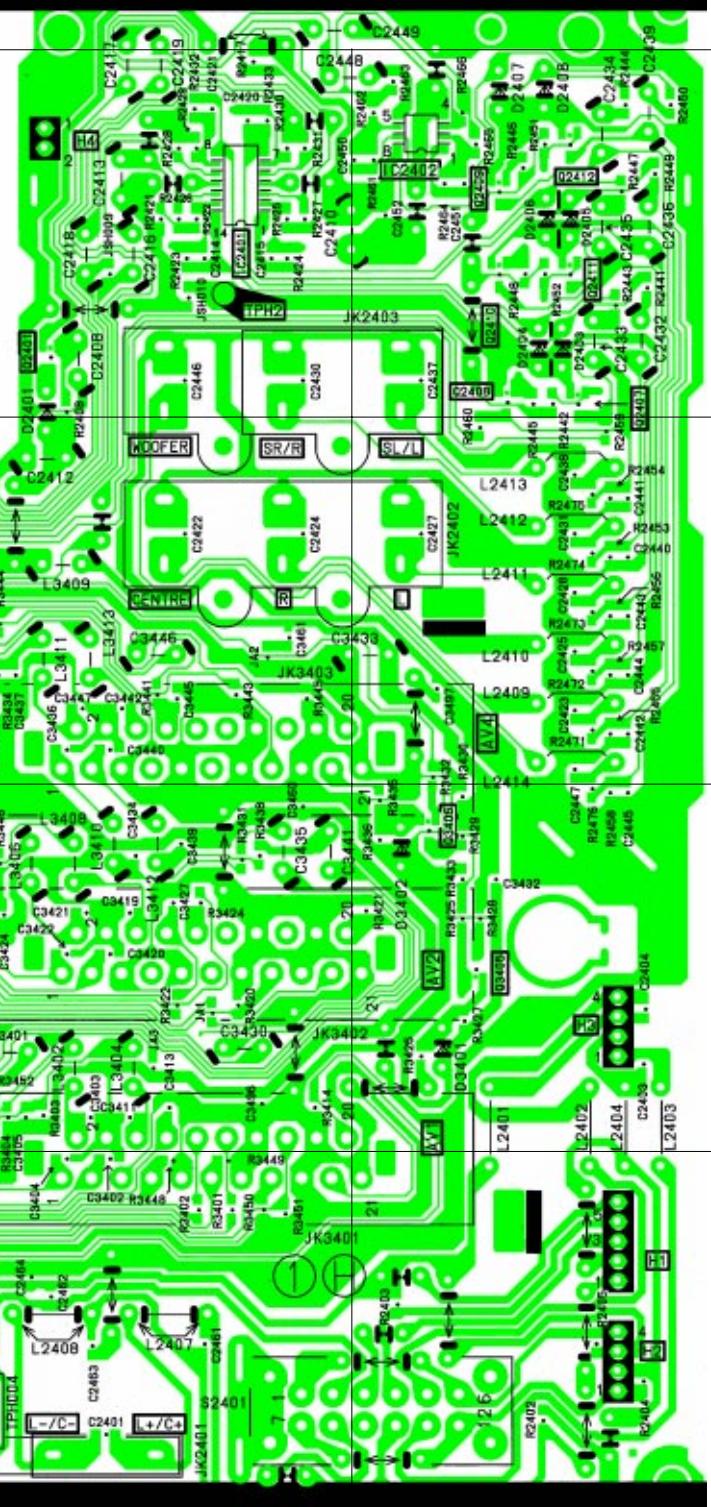
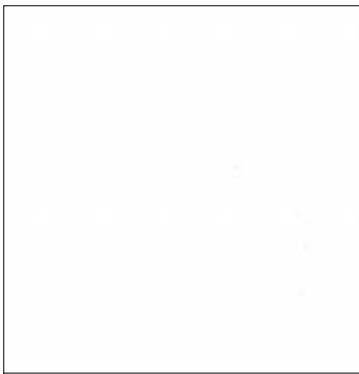
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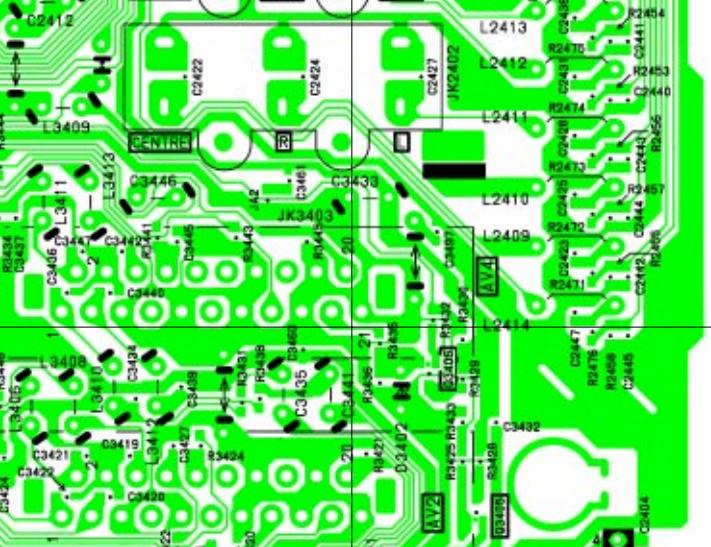
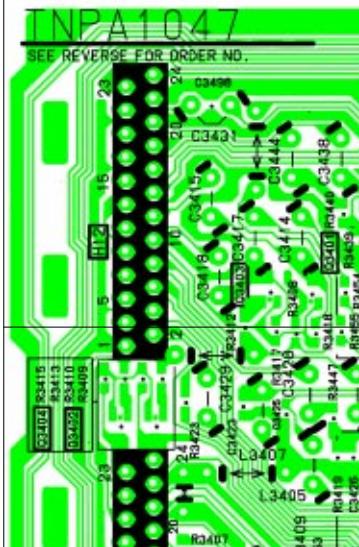
H - BOARD TNPA1047

TRAN'S	
Q2401	A2
Q2407	A3
Q2408	A3
Q2409	A3
Q2410	A3
Q2411	A3
Q2412	A3
Q3401	B1
Q3402	C1
Q3403	B1
Q3404	C1
Q3405	C3
Q3406	C3
DIODE'S	
D2401	A2
D2403	A3
D2404	A3
D2405	A3
D2406	A3
D2407	A3
D2408	A3
D3401	C3
D3402	C3
T.P.'S	
TPH1	D1
TPH2	A2
TPH3	D1
TPH004	D1
TPH005	D1
I.C.'S	
IC2401	A2
IC2402	A3

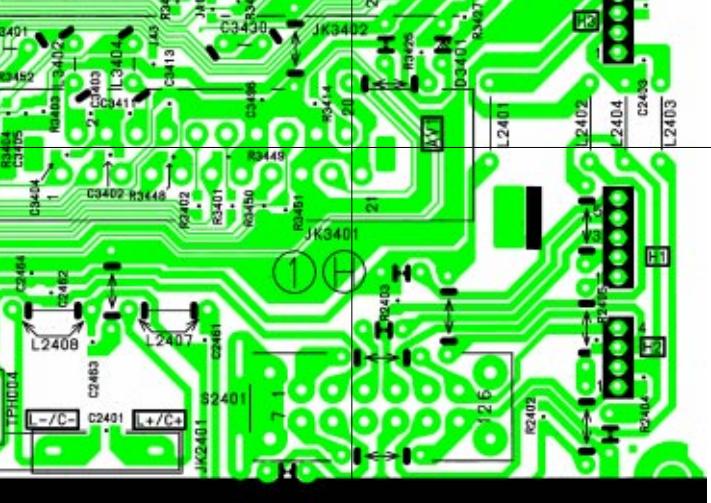
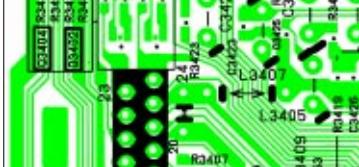
A



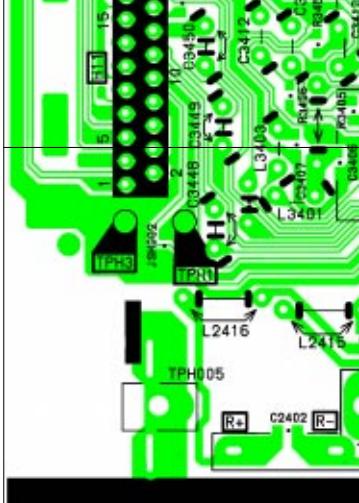
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C

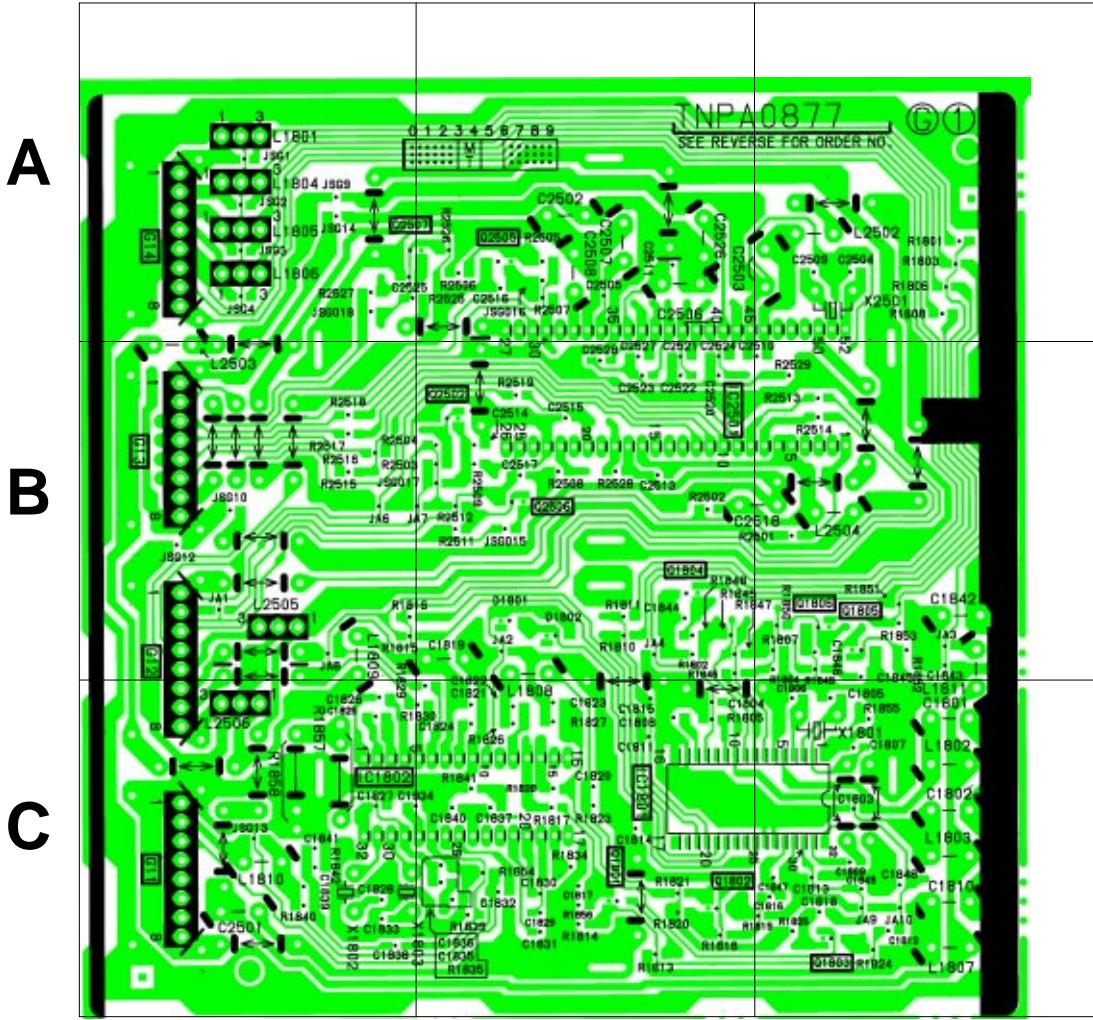


D



G - BOARD TNPA0877

TRAN'S	
Q1801	C2
Q1802	C2
Q1803	C3
Q1804	B2
Q1805	B3
Q1806	B3
Q2502	B2
Q2505	A2
Q2506	B2
Q2507	A1
I.C.'S	
IC1801	C2
IC1802	C1
IC2501	B2
DIODE'S	
D1801	B2
D1802	B2



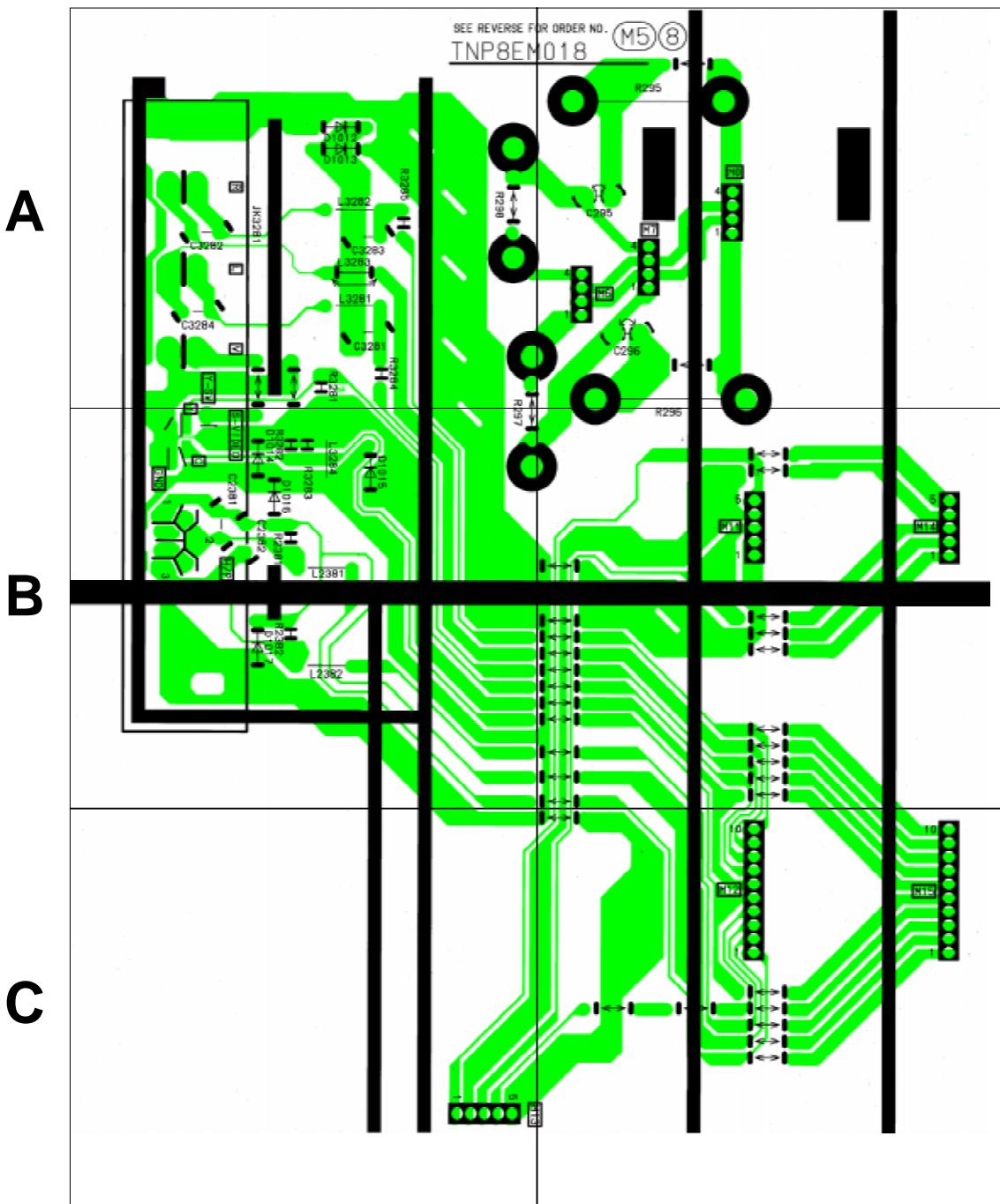
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M - BOARD TNP8EM018

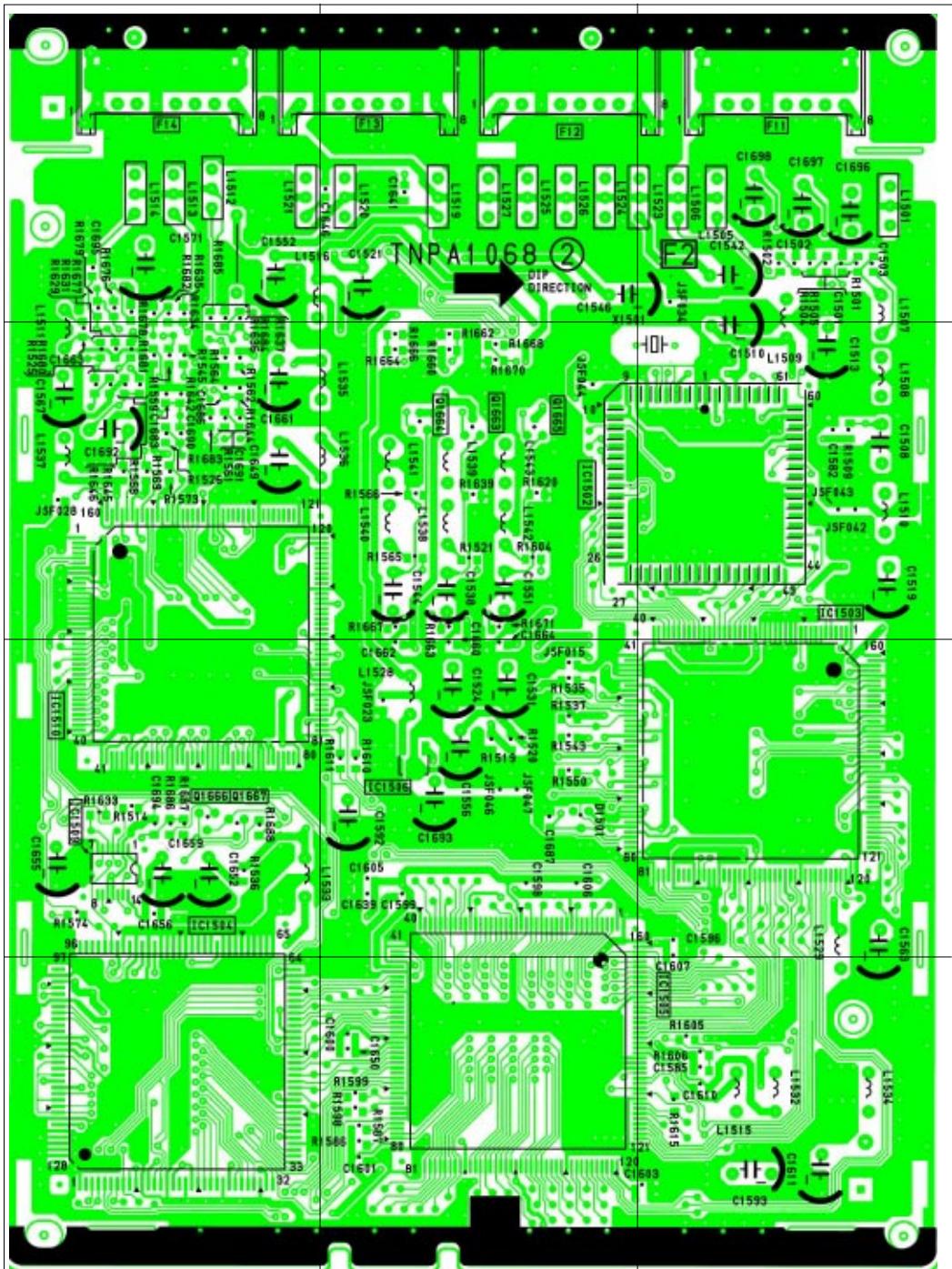
DIODE'S	
D1012	A1
D1013	A1
D1014	B1
D1015	B1
D1016	B1
D1017	B1



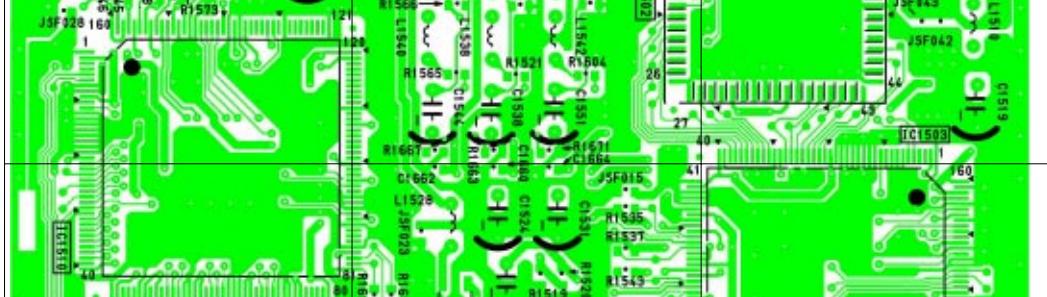
F - BOARD TNPA1068

TRAN'S	
Q1663	B2
Q1664	B2
Q1665	B2
Q1666	C1
Q1667	C1
I.C.'S	
IC1502	B3
IC1503	C3
IC1504	D1
IC1505	D2
IC1506	C2
IC1509	C1
IC1510	C1

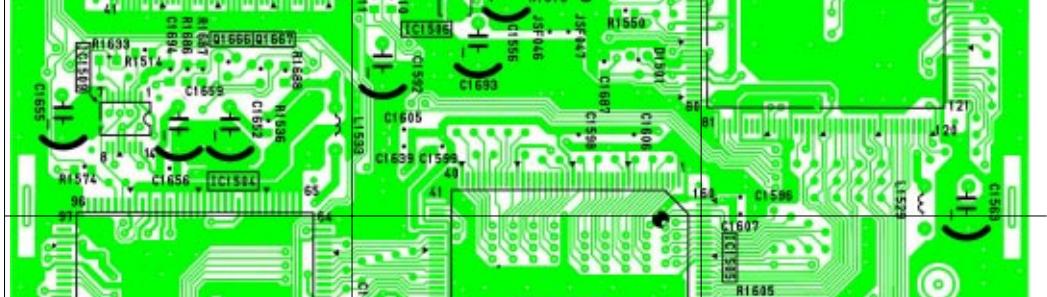
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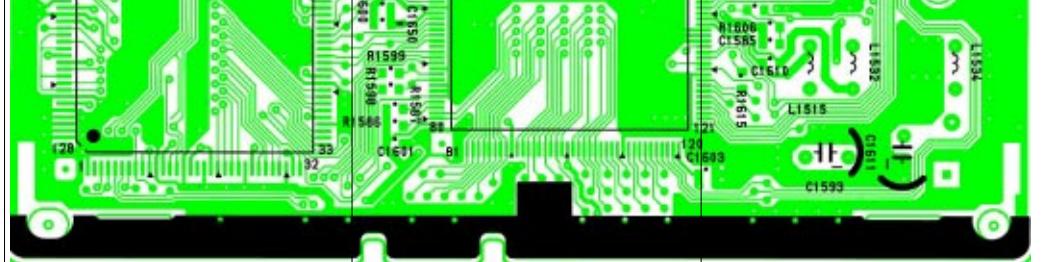
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C



D



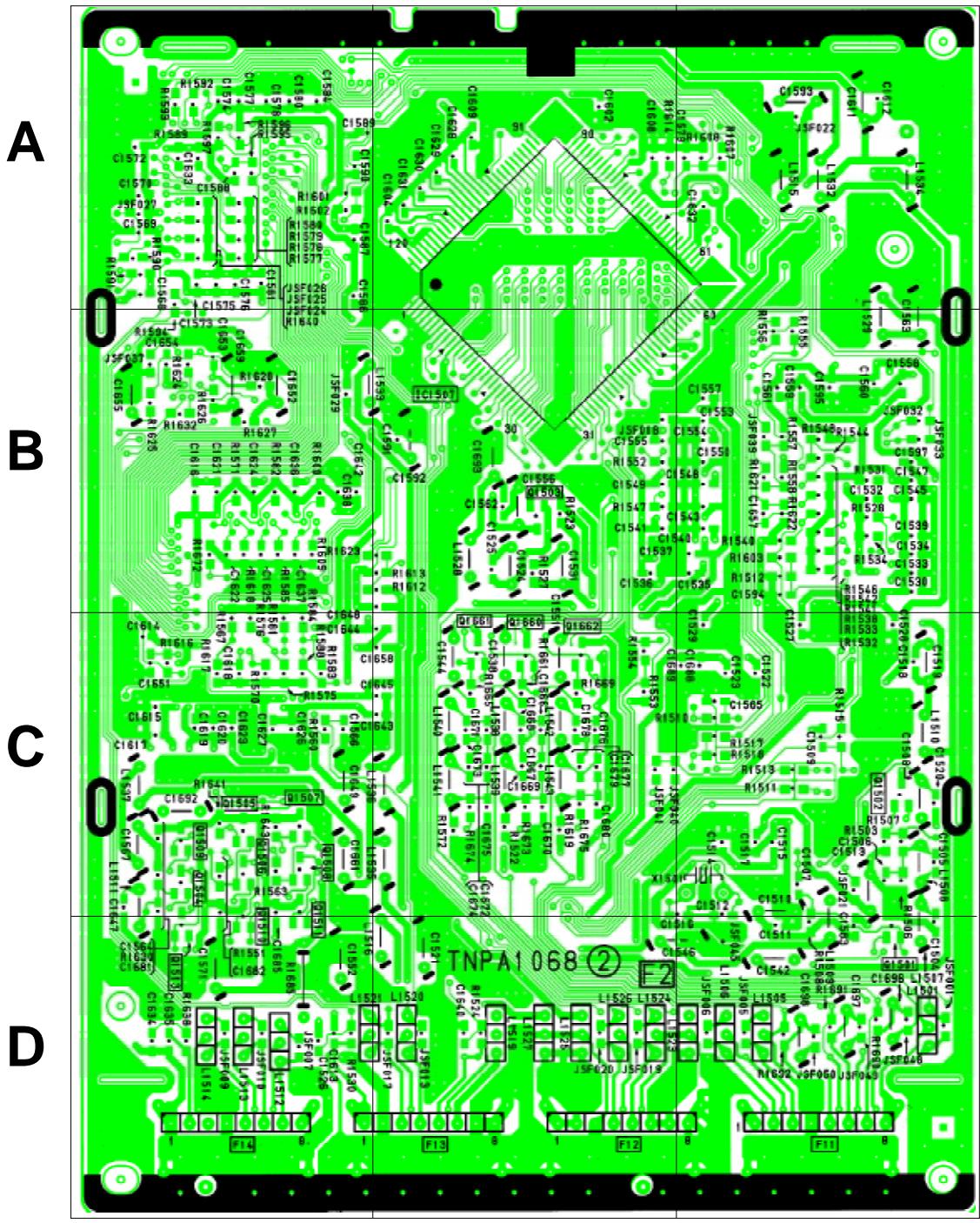
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F - BOARD TNPA1068

TRAN'S	
Q1501	D3
Q1502	C3
Q1503	B2
Q1504	C1
Q1505	C1
Q1506	C1
Q1507	C1
Q1508	C1
Q1509	C1
Q1510	D1
Q1511	D1
Q1519	D1
Q1660	C2
Q1661	C2
Q1662	C2
I.C.'S	
IC1507	B2



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TRAN'S
Q1011 D4
Q1012 D6
I.C.'S
IC1011 E6

