

# Service Manual

Colour Television EURO 2 Chassis

**TX-25AD2DP TX-29AD2DP**

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# Service Manual



**Colour Television**

**TX-29AD2DP**

**TX-25AD2DP**

**EURO-2 Chassis**

## Specifications

(Information in brackets {} refer to TX-25AD2DP)

**Power Source :** 220-240V AC 50Hz

**Power Consumption :** 140W { 135W }

**Aerial Impedance :** 75Ω unbalanced, Coaxial Type

**Receiving System :** PAL-I, PAL 60  
M.NTSC, NTSC (AV ONLY)

**Receiving Channels :** UHF E21 - E69

<b>Intermediate Frequency</b>	Video	39.5 MHz
	Sound	33.5 MHz
	Colour	35.07 MHz (PAL)

### Video / Audio Terminals :

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

AV1 OUT	Video (21 pin)	1 Vp-p 75Ω
	Audio (21 pin)	500mV rms, 1 kΩ

AV2 IN	Video (21 pin)	1 Vp-p 75Ω
	Audio (21 pin)	500mV rms, 10 kΩ
	S-Video IN (21 pin)	Y : 1 Vp-p 75Ω
		C : 0.3 Vp-p 75Ω

AV2 OUT	Video (21 pin)	1 Vp-p 75Ω
	Audio (21 pin)	500mV rms, 1 kΩ
	Selectable output (21 pin)	

**AV3 IN**

S-Video IN (4-pin)	Y : 1 Vp-p 75Ω
	C : 0.3 Vp-p 75Ω
Audio (RCA x 2)	500mV rms, 10kΩ
Video (RCA x 1)	1 Vp-p 75Ω

**High Voltage :**

31 kV ±1 kV at zero beam current

**Picture Tube :**

68cm {59cm} Super Flat FST 110° measured diagonally.

**Audio Output :**

Internal Speakers	2 x 20W (Front) (Music Power) 8Ω
	1 x 25W (3D Bass) (Music Power) 6Ω

**External Speakers**

2 x 15W (Rear) (Music Power) 8Ω
1 x 20W (Centre) (Music Power) 8Ω

**Headphones**

8Ω Impedance

**Accessories supplied :**

Remote Control	
2 x UM3 Batteries	
{TV Stand}	
{TS-200DP Speaker pack}	
TS-300DP Speakers & video cabinet	

**Dimensions :**

Height :	570mm {510mm}
Width :	698mm {625mm}
Depth :	483mm {468mm}

**Net Weight**

44kg {35kg}

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

**NOTE :** This service manual should be used in conjunction with the EURO 2 technical guide.

**Panasonic**

**Panasonic (U.K.) LTD.**  
WILLOUGHBY ROAD,  
BRACKNELL,  
BERKS,  
RG12 8FT.

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## Safety Precautions

### General Guide Lines

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the AC outlet.
5. Potentials as high as 32 kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture to the chassis before handling the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## Leakage Current Cold Check

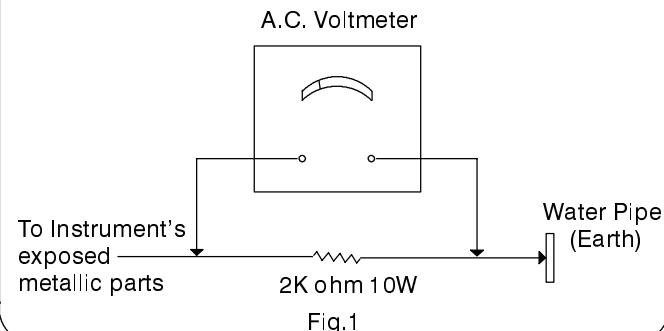
1. Unplug the AC cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control 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 AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2k ohm 10W resistor in series with an exposed metallic part on the receiver and an earth such as a water pipe.

3. Use an AC voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed Metallic part and check the voltage at each point.
5. Reverse the AC plug at the outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1.4 Vrms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

### HOT CHECK CIRCUIT



## 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  $\pm 1\text{kV}$  at zero beam current 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 an X-Radiation possibility, it is essential to use the specified tube.

## Location Of Controls

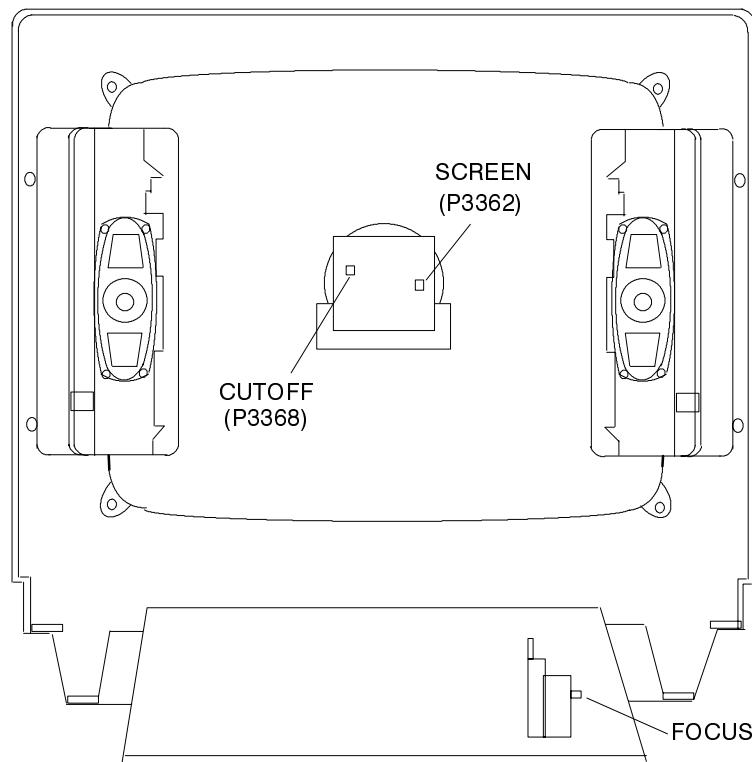
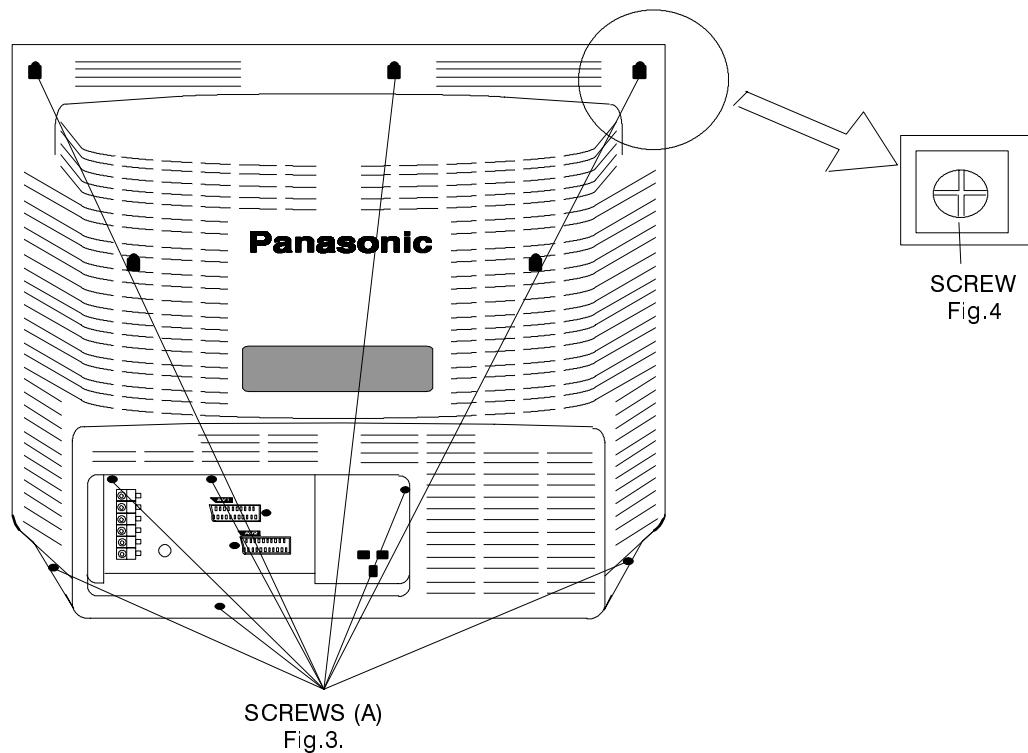


Fig.2

## Service Hints

### How to remove the rear cover

1. Remove the 9 fixing screws (A) as shown in Fig.3/Fig.4.



SCREWS (A)  
Fig.3.

## How to Remove the Control Panel (M-board)

1. Remove the E-board from the cabinet with the M-board attached.
2. Unclip by lifting the front of the M-board vertically.
3. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer.

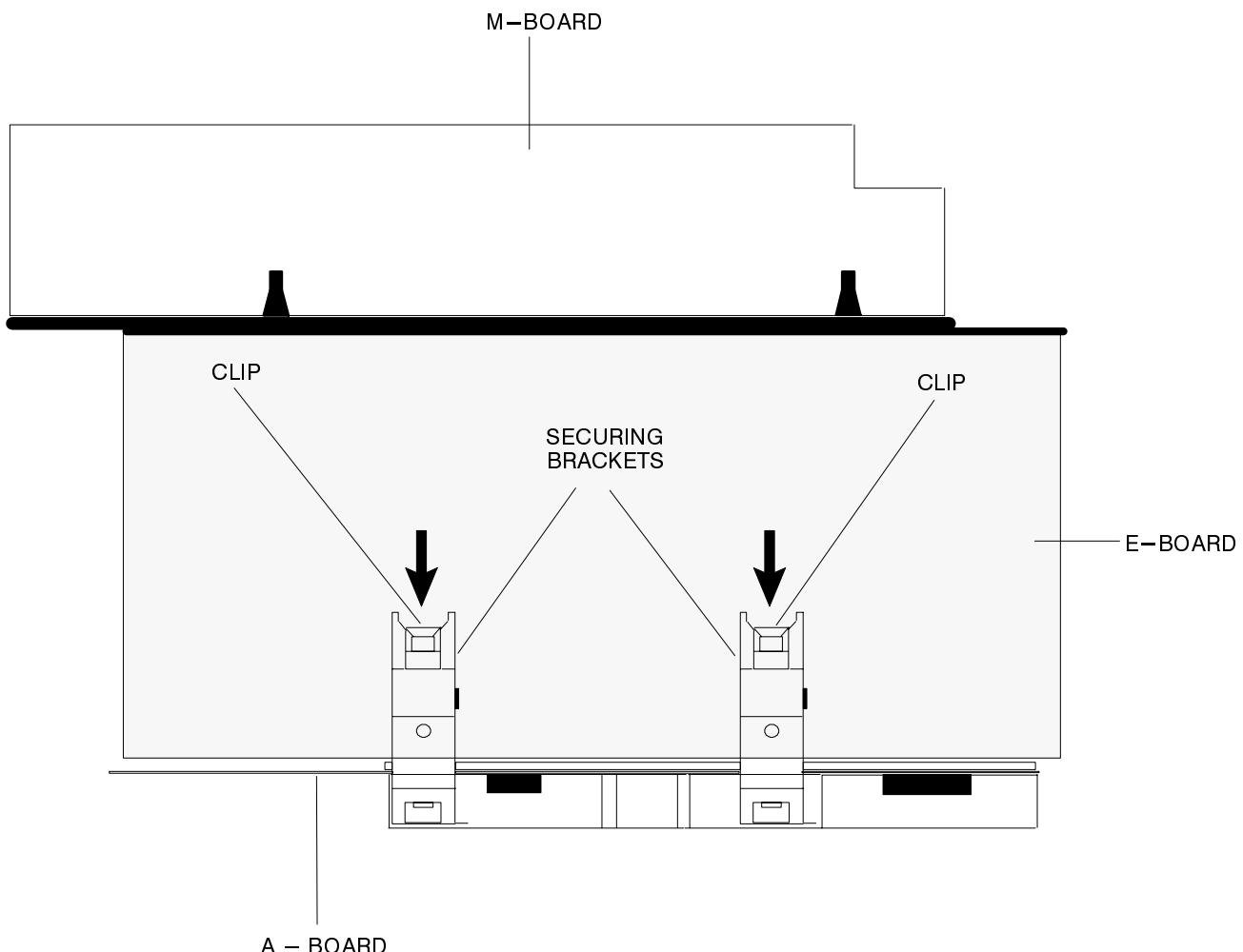


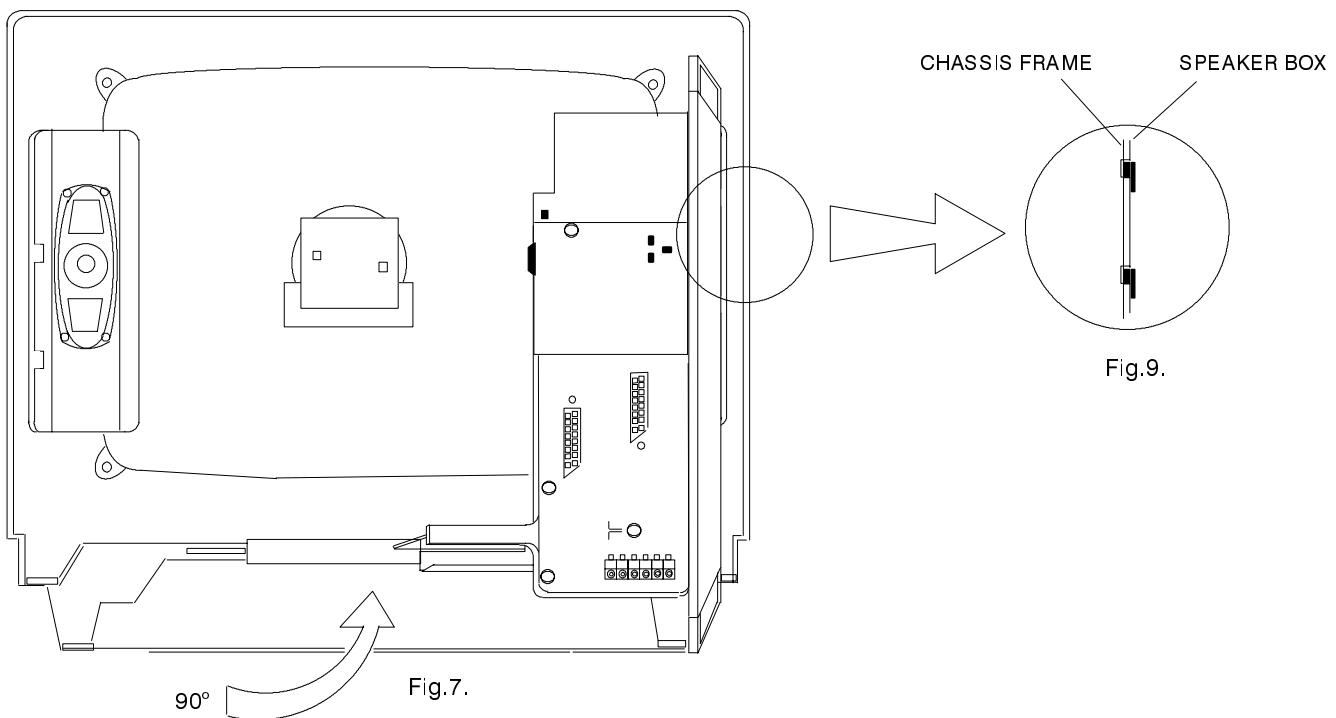
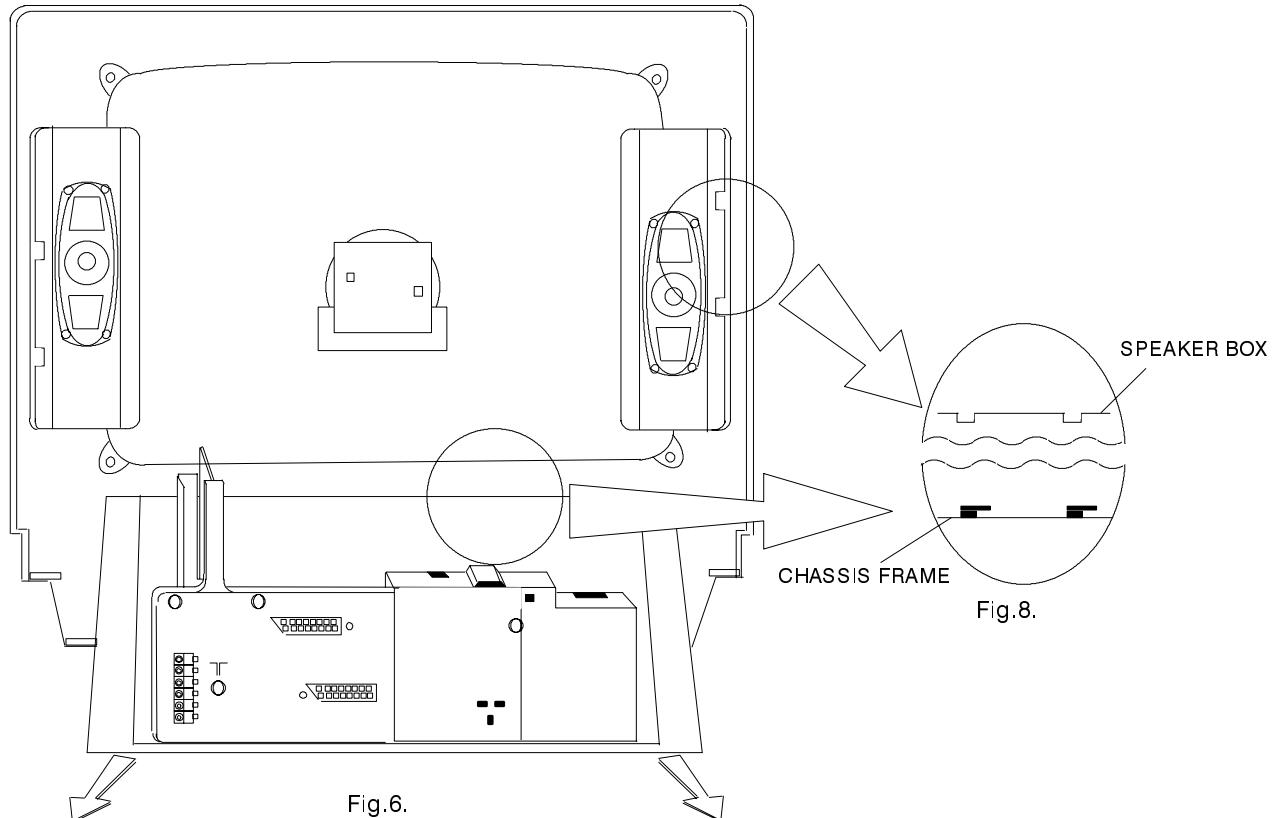
Fig.5

## How to Remove the A – Board

1. Disconnect the four leads from the A – board.
2. Release the A board securing brackets by pushing the clips in the direction shown in Fig.5, and remove the A – board by gently lifting vertically.
3. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer.

## How to move the chassis into the Service position

1. Hold and lift the rear of the E-PCB chassis as shown in Fig.6. and gently pull the chassis toward you.
2. Release the respective wiring clips and turn the chassis through 90°, anti-clockwise, as shown in Fig.7.
3. Clip the chassis onto the speaker box as shown in Fig.8 and Fig.9.
4. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer.



## Service position for the A-Board

1. Remove the A-board from the main chassis (E-board), see Fig. 5, ensuring all leads are disconnected.
  2. Remove the two screws (A) (Fig.10) from the plastic AV cover and unclip the AV cover from the A-board.
  3. Carefully unclip the three metal clips marked B in Fig.10.
  4. Unclip the front metal cover (Fig11) and remove from the A-board.
  5. For ease of servicing remove the rear metal cover by desoldering (Fig.12)
  6. Fit the extension leads to the A-board making sure that the A-board does not touch the E-board (Fig.13).
  7. After servicing ensure all wiring is returned to its original position before returning the receiver to the customer.
- Note :** The extension lead wire kit is supplied as a service kit. (Part number TZS2EP001).

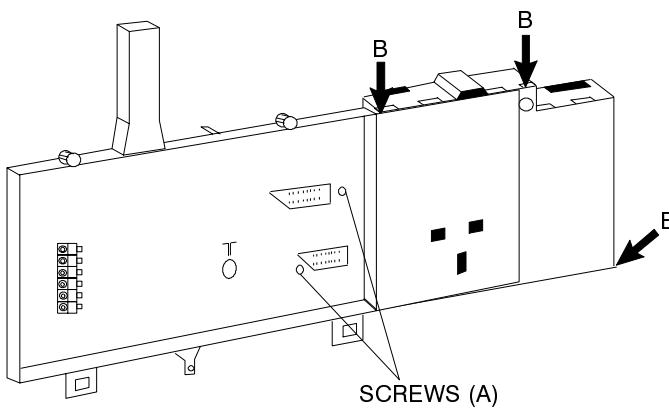


Fig. 10.

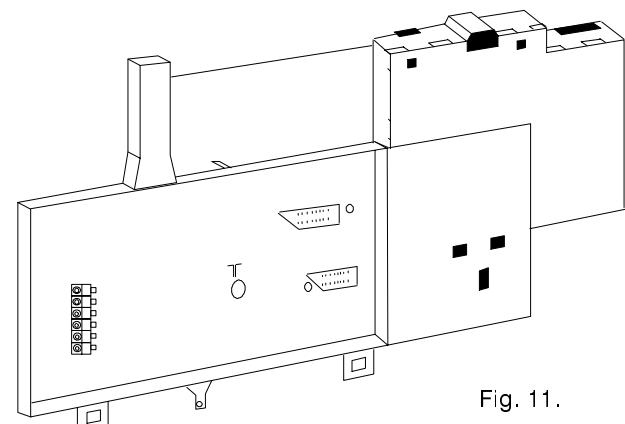


Fig. 11.

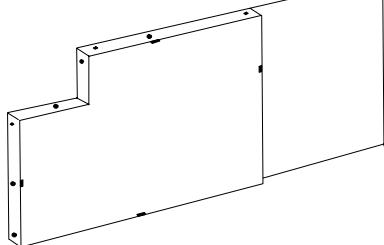


Fig. 12.

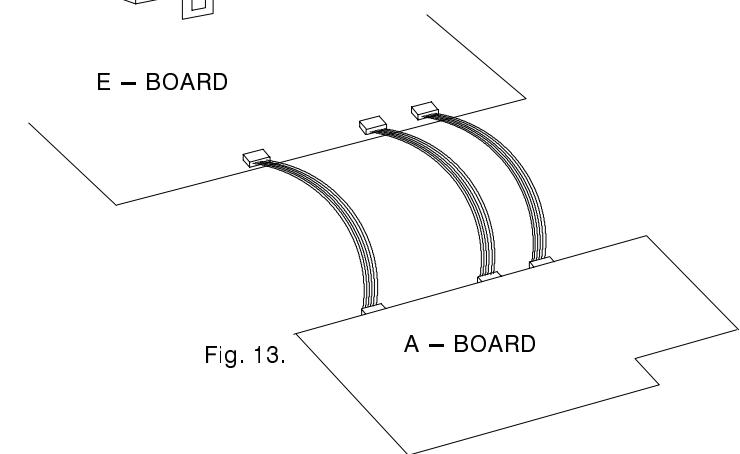
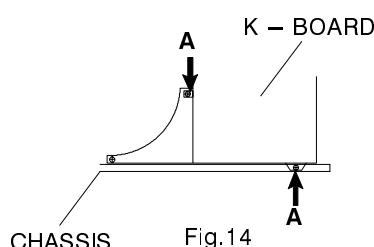


Fig. 13.

## Service Position for the K-Board

SIDE VIEW



CHASSIS

Fig.14

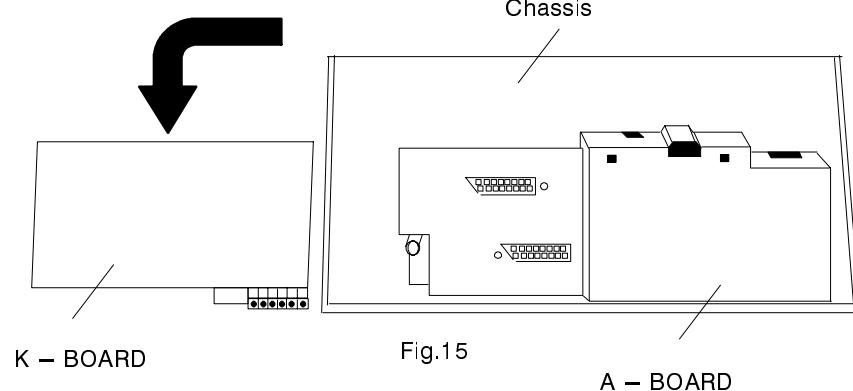


Fig.15

1. Remove the two screws (A) indicated in Fig.14 to release K-Board
2. Slide the K-Board out of the chassis holding position and gently release making sure that the K-board does not touch the E-board.

## Service Mode

The remote control is used for entering and storing adjustments, with the exception of cut-off adjustments which must always be done prior to service adjustment. Perform adjustments in accordance with screen display. The display on the screen also specifies the CCU variants as well as the approx. setting values. The adjustment sequence for the service mode is indicated below.

1. Set the Bass to maximum position, set the Treble to minimum position, press the F button followed by the volume down button on the customer controls at the front of the TV and at the same time press the Reveal button on the remote control, this will place the TV into the Service Mode.
2. Press the RED / GREEN buttons to step down / up through the functions.
3. Press the YELLOW / BLUE buttons to alter the function values.
4. Press the STORE button after each adjustment has been made to store the required values.
5. To exit the Service Mode press the Normalisation button.

**NOTE:** This TV also has the option of using a Memory Pack which enables you to copy the preset TV channels and analogue levels into the Memory Pack and then upload them onto another EURO-2 TV set.

## Using the Memory Pack

### TV to Memory Pack process

1. Plug the memory pack into the lower of the two 21 pin terminals at the back of the TV and switch the TV on. If the TV has only one 21 pin connector then this will be able to accept the memory pack.
2. Go into the Service Mode as explained above. The screen will show:—

Program  
External>>TV

3. Press the blue button on the remote control. The screen will show:—

Program  
TV>>External

4. Press the STORE button on the TV. The screen will show:—

Storing

5. All the tuning information stored inside the TV will now be transferred to the Memory Pack. This process will take 2–3 minutes to complete and when finished the screen will show:—

OK!

### Memory Pack to TV Process

1. Plug the memory pack into the lower of the two 21 pin terminals at the back of the TV and switch the TV on. If the TV has only one 21 pin connector then this will be able to accept the memory pack.
2. Go into the Service Mode as explained above. The screen will show:—

Program  
External>>TV

3. Press the STORE button on the TV. The screen will show:—

Loading

4. All the tuning information stored inside the Memory Pack will now be transferred to the TV. This process will take 2–3 minutes to complete and when finished the screen will show:—

OK!

5. The tuning information from the Memory Pack has now been copied into the TV

6. To exit the Service Mode press the Normalisation button.
7. The process has now been completed and the Memory Pack can now be removed.

## Errors

If an error occurs while using the Memory Pack the TV will detect this and the screen will show:—

Program  
Error!

If this happens then switch off the TV and repeat the process that was being used. If the errors continue to occur then check the connectors between the TV and the memory pack and check the 9V battery inside the memory pack.

## SELF CHECK

Self check is used to automatically check the Bus lines and Hexadecimal code of the TV set.

To enter the Self Check mode press Function down button, on the Preset Panel, at the same time pressing the Status button, on the Remote Control, and the screen will show:—

1 — ok	Tuner	11 — ok	Dolby IC for C/R	21 — ok	P SBLED
2 — ok	VIF	12 — ok	P S MODE	22 — ok	P OFF
3 — ok	EEPROM	13 — ok	P TA0	23 — ok	P DEFL
4 — ok	Sound AV switch1	14 — ok	P TA1	24 — ok	P RAM
5 — ok	Video AV switch1	15 — ok	P TA2		
6 — ok	VDP	16 — ok	P TA3		
7 — ok	TPU	17 — ok	P SDA		
8 — ok	MSP	18 — ok	P SCL1		
9 — ok	Dolby Sub	19 — ok	P SCL 3		
10 — ok	Dolby IC for L/R	20 — ok	P SCL4		

Hex codes

04
CD
84
94
24

If the CCU ports have been checked and found to be incorrect then "—" will appear in place of "OK".

## Adjustment Procedure

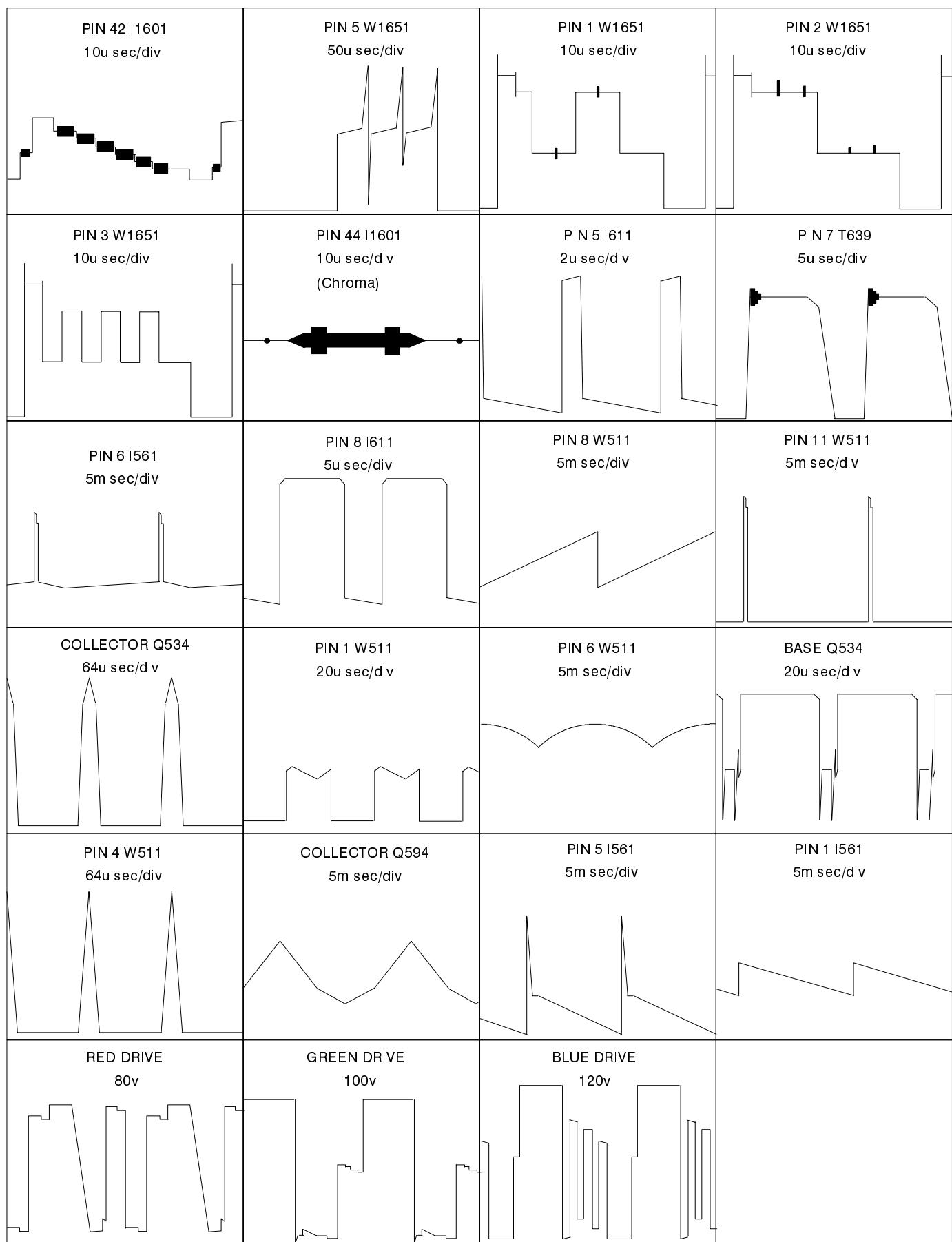
Item/Preparation	Adjustments																																
<b>+B SET-UP</b> 1. Operate the TV set 2. Set the controls: Brightness      minimum Contrast      minimum	1. Set the +B voltage up as follows: Adjust <b>P633</b> so that <b>U147</b> shows 147V $\pm$ 0.5V 2. Confirm the following voltages. (Information in brackets {} refer to TX-25AD2DP) <table> <tbody> <tr><td><b>U5</b> 5</td><td><math>\pm</math> 0.25V</td><td><b>U28</b> 28</td><td><math>\pm</math> 1V</td></tr> <tr><td><b>U8</b> 8</td><td><math>\pm</math> 0.5V</td><td><b>U40</b> 38.5 <math>\pm</math> 1.5V</td><td>{<math>\pm</math> 1V}</td></tr> <tr><td><b>U12</b> 12</td><td><math>\pm</math> 0.5V</td><td><b>U210</b> 209</td><td><math>\pm</math> 10V</td></tr> <tr><td><b>U16</b> 16.0</td><td><math>\pm</math> 0.5V</td><td><b>U5SB</b> 5.0</td><td><math>\pm</math> 0.25V</td></tr> <tr><td><b>U25</b> 24.8</td><td><math>\pm</math> 1V</td><td><b>UM</b> 8</td><td><math>\pm</math> 0.5</td></tr> <tr><td><b>IC2503</b> Pin 3</td><td>5 <math>\pm</math> 0.25V</td><td><b>L2503</b> No Load</td><td>+20 <math>\pm</math> 1V</td></tr> <tr><td><b>IC2508</b> Pin 3</td><td>9 <math>\pm</math> 0.3V</td><td><b>L2503</b> No Load</td><td>-20 <math>\pm</math> 1V</td></tr> <tr><td><b>IC2502</b> Pin 3</td><td>12 <math>\pm</math> 0.5V</td><td></td><td></td></tr> </tbody> </table>	<b>U5</b> 5	$\pm$ 0.25V	<b>U28</b> 28	$\pm$ 1V	<b>U8</b> 8	$\pm$ 0.5V	<b>U40</b> 38.5 $\pm$ 1.5V	{ $\pm$ 1V}	<b>U12</b> 12	$\pm$ 0.5V	<b>U210</b> 209	$\pm$ 10V	<b>U16</b> 16.0	$\pm$ 0.5V	<b>U5SB</b> 5.0	$\pm$ 0.25V	<b>U25</b> 24.8	$\pm$ 1V	<b>UM</b> 8	$\pm$ 0.5	<b>IC2503</b> Pin 3	5 $\pm$ 0.25V	<b>L2503</b> No Load	+20 $\pm$ 1V	<b>IC2508</b> Pin 3	9 $\pm$ 0.3V	<b>L2503</b> No Load	-20 $\pm$ 1V	<b>IC2502</b> Pin 3	12 $\pm$ 0.5V		
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<b>RF AGC</b> 1. Receive a test pattern. 2. Connect an oscilloscope between the tuner RF AGC and ground. 3. Set the oscilloscope gain range to 1V/div.	1. Check that the noise becomes large when the RF AGC VR <b>P4701</b> is turned counterclockwise. After the check adjust to previous setting (clockwise). 2. Gradually turn the RF AGC VR anti-clockwise, and set the RF AGC VR to the point where the RF AGC voltage is just falling to a point where this voltage drops by 0.2V from the maximum value.																																
<b>CUT OFF</b> 1. Receive a black and white signal. 2. Degauss the tube externally. 3. Set the TV into Service Mode . 4. Select Ug2 Test.	1. Confirm which colour has the biggest value 2. Turn the screen VR <b>P3368</b> to minimum. 3. Connect an oscilloscope to the cathode with the biggest value colour. 4. Adjust <b>P3368</b> to get a low light pulse voltage of 150V $\pm$ 5V. 5. Adjust <b>P3362</b> to whichever colour reaches 100 $\pm$ 10V first.																																

## Alignment Settings

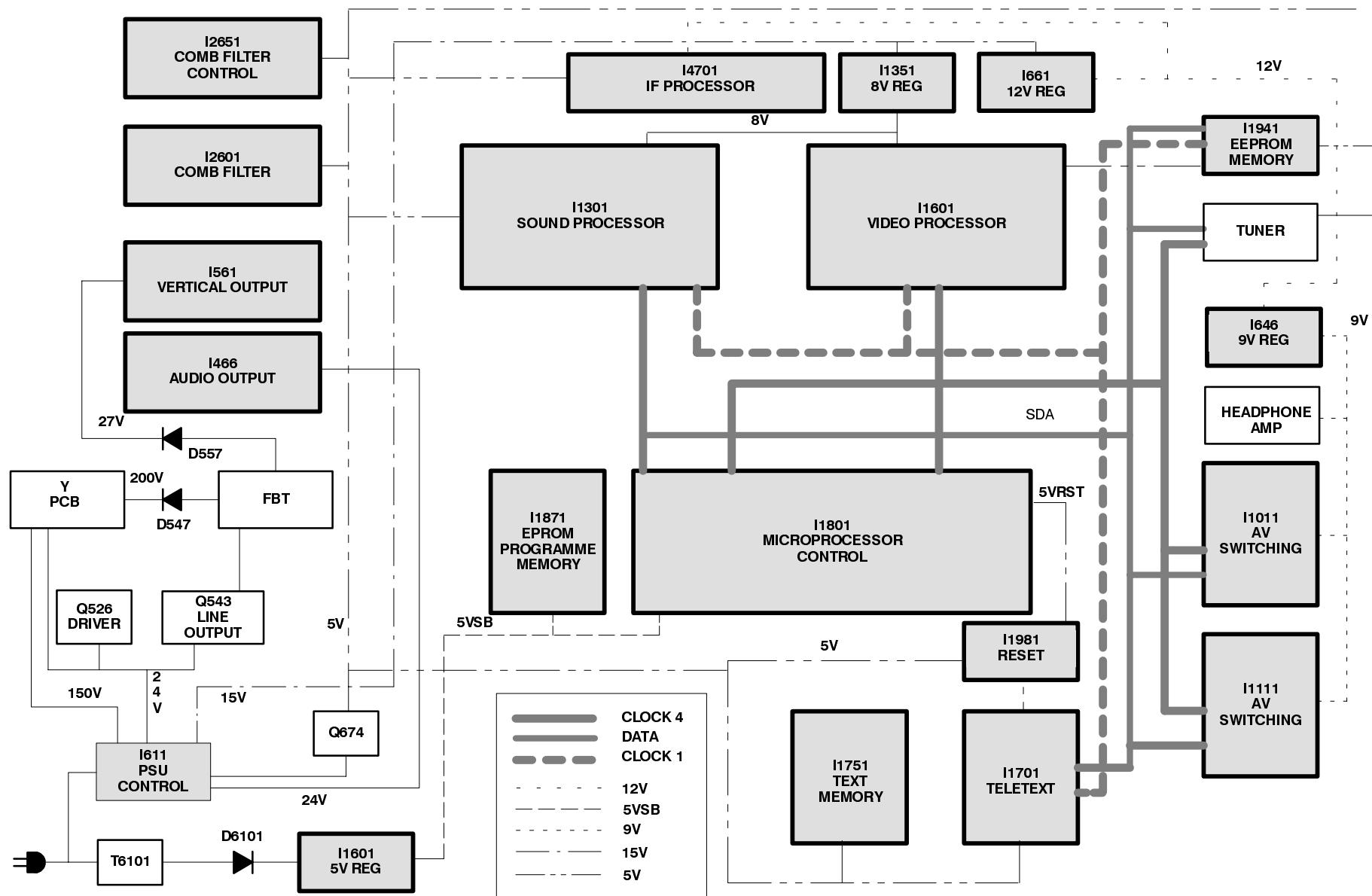
(The figures used below are nominal and used for representative purposes only)

Alignment Function	TX-29AD2DP	TX-25AD2DP	Settings / Special features
1. Vertical amplitude	V-AMP 154	V-AMP 150	
2. Vertical symmetry	V-SYM 018	V-SYM 024	Optimum setting
3. Vertical linearity	V-LIN 015	V-LIN 021	
4. Vert. D.C.	Vert. D.C. 000	Vert.D.C. 000	Not to be adjusted
5. V-Pos.	V. Pos. 015	V. Pos 015	Optimum setting
6. Horizontal amplitude	H-AMP 055	H-AMP 067	
7. Horizontal position	H-POS 002	H-POS 002	Optimum setting
8. Text Position	TEXT POSITION 048	TEXT POSITION 048	Optimum setting
9. EW-amplitude	E-W-AMP 1 106	E-W-AMP 1 048	Optimum setting
10. EW-amplitude	E-W-AMP 2 037	E-W-AMP 2 044	Optimum setting
11. Trapezium-comp	TRAPEZ-1 144	TRAPEZ-1 060	Optimum setting
12. Trapezium- comp	TRAPEZ-2 034	TRAPEZ-2 056	Optimum setting
13. Colour VCO	Colour VCO 034	Colour VCO 034	Press either Blue or Yellow buttons to effect automatic adjustment
14. Cut-off DC	Cut-off DC 028	Cut-off DC 028	Not to be adjusted.
15. Ug2 Test	Ug 2 Test 040 007 090	Ug 2 Test 040 007 090	To adjust the screen settings. Turn P3362 until a colour reaches $25 \pm 5$ , place an oscilloscope probe on the cathode with the highest output and adjust P3368 so the oscilloscope trace reads 150V 0-peak, then turn P3362 up so the highest numbered box on the TV screen reads $100 \pm 010$ .
16. Cutoff	Cutoff 052 061 040	Cutoff 052 061 040	Press the GREEN button to step through the settings. Adjust for optimum.
17. White	White 205 218 255	White 205 218 255	Press the GREEN button to step through the settings. Adjust for optimum.

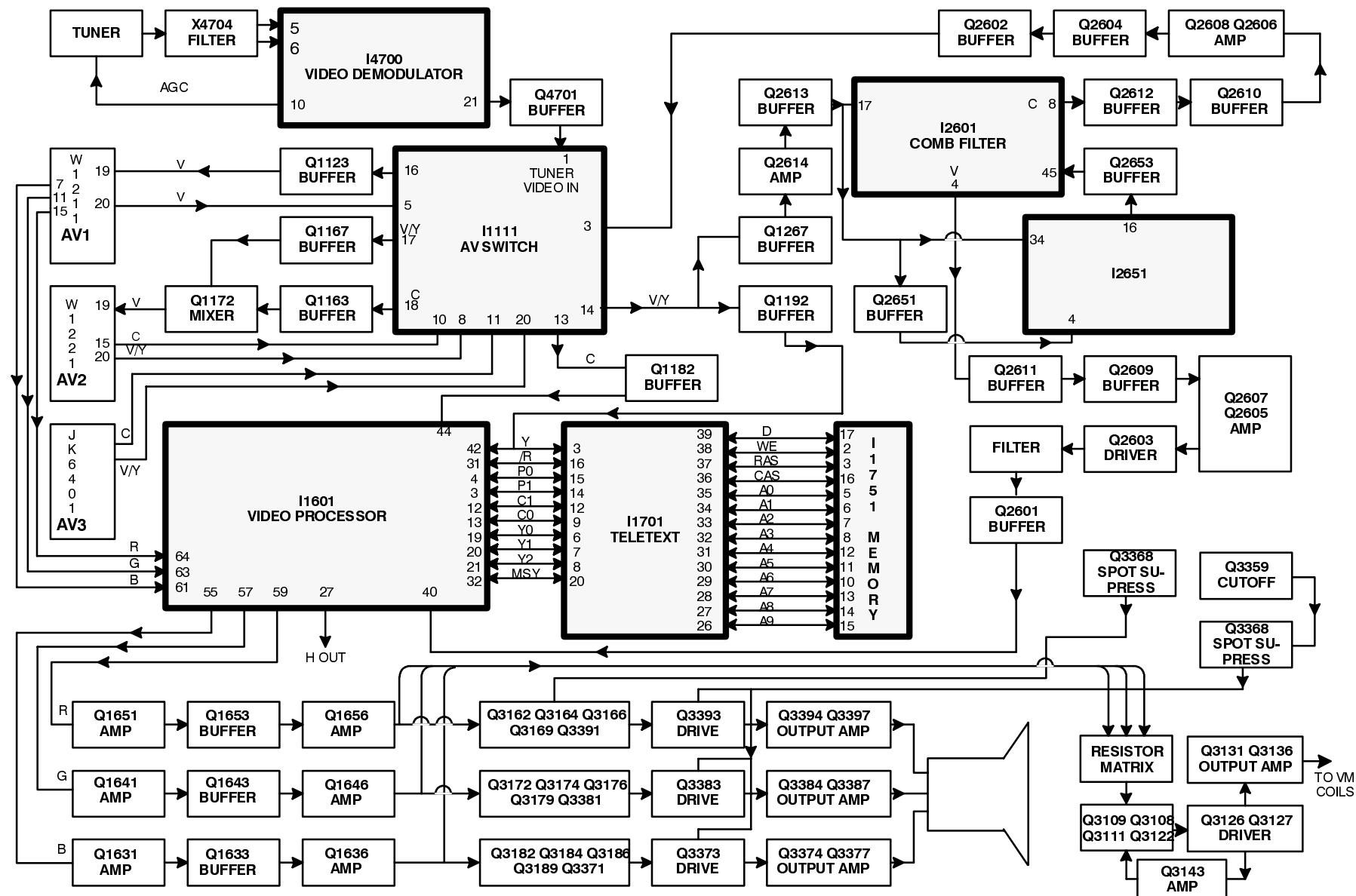
## WAVEFORM PATTERN TABLE



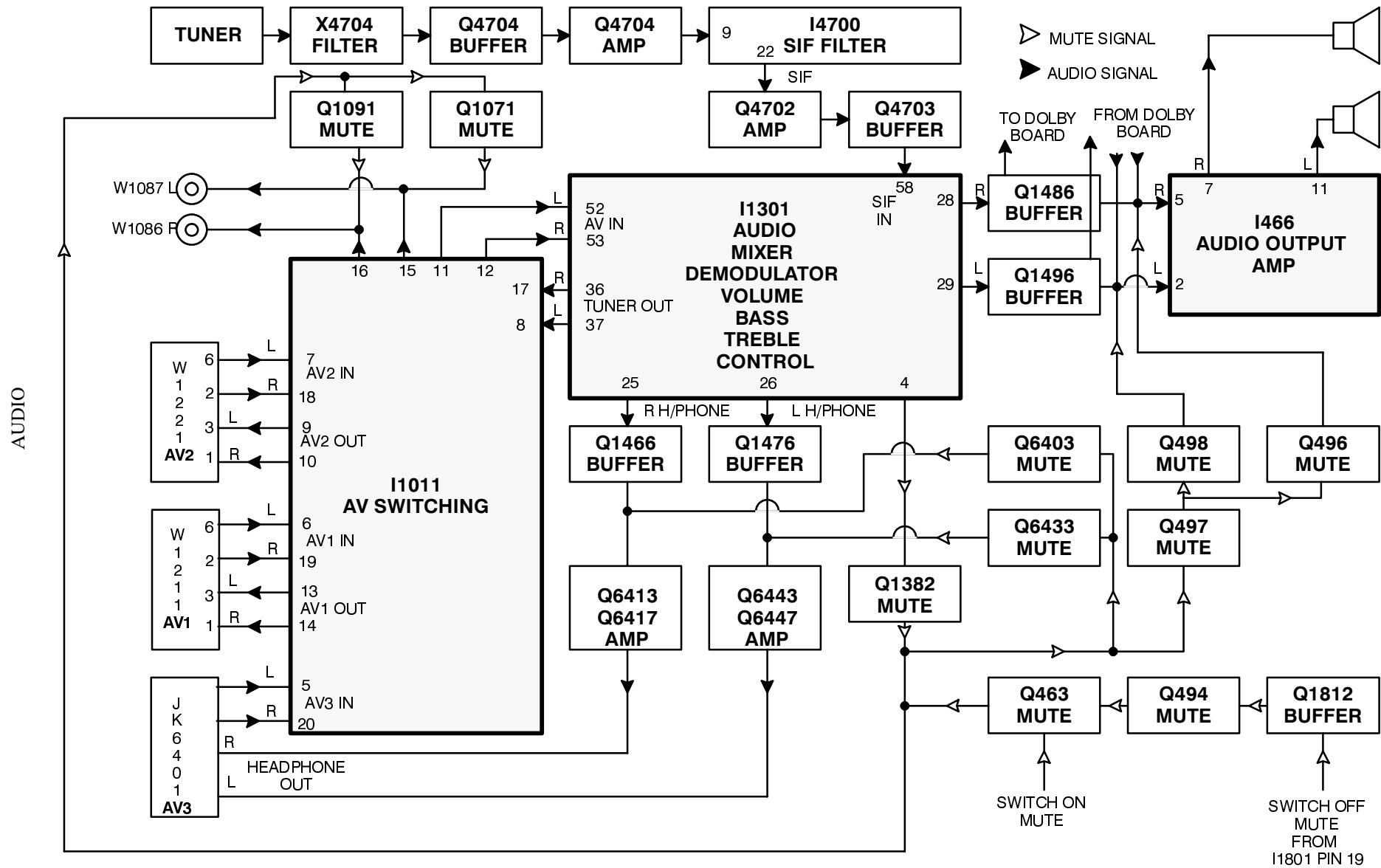
# POWER SUPPLY AND CONTROL BLOCK DIAGRAM



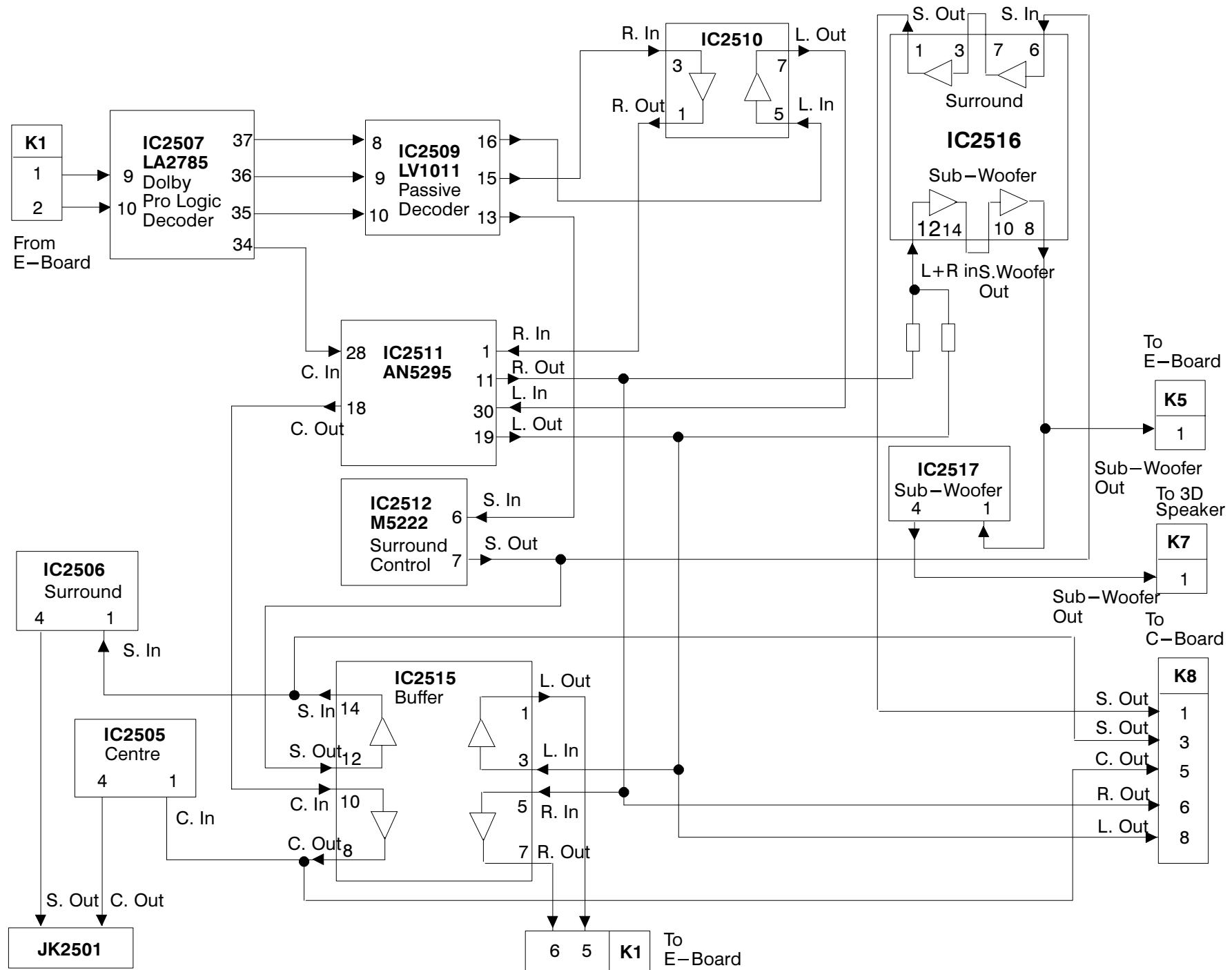
## VIDEO BLOCK DIAGRAM



## AUDIO BLOCK DIAGRAM



# DOLBY PRO LOGIC PROCESSING



## SCHEMATIC DIAGRAM FOR MODELS TX-29/25AD2DP (EURO-2S 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.

## Notes

### 1. RESISTOR

All resistors are carbon 1/4W resistor, unless marked.  
Unit of resistance is OHM ( $\Omega$ ) ( $K=1,000$ ,  $M=1,000,000$ ).

### 2. CAPACITOR

All capacitors are ceramic 50V capacitors, unless marked, the unit of capacitance is  $\mu F$  unless otherwise stated.

### 3. COIL

Unit of inductance is  $\mu H$ , unless otherwise stated.

### 4. TEST POINT

: Test Point position



: Waveform Test Point position



### 5. EARTH SYMBOL

: Chassis Earth (Cold)



: Line Earth (Hot)



### 6. VOLTAGE MEASUREMENT

Voltage is measured by a DC voltmeter.

Measurement conditions are as follows:

Power source	AC 220–240V, 50Hz
Receiving Signal	Colour Bar signal (RF)
All customer controls	Maximum position

### 7.

: Indicates the Video signal path



: Indicates the Audio signal path



: Indicates the Vertical/Horizontal signal path

### 8. This schematic diagram is the latest at the time of printing and is subject to change without notice.

## Precautions

- Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
- Do not short-circuit the hot and cold circuits as electrical components may be damaged.
- 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.
- Make sure to disconnect the power plug before removing the chassis.

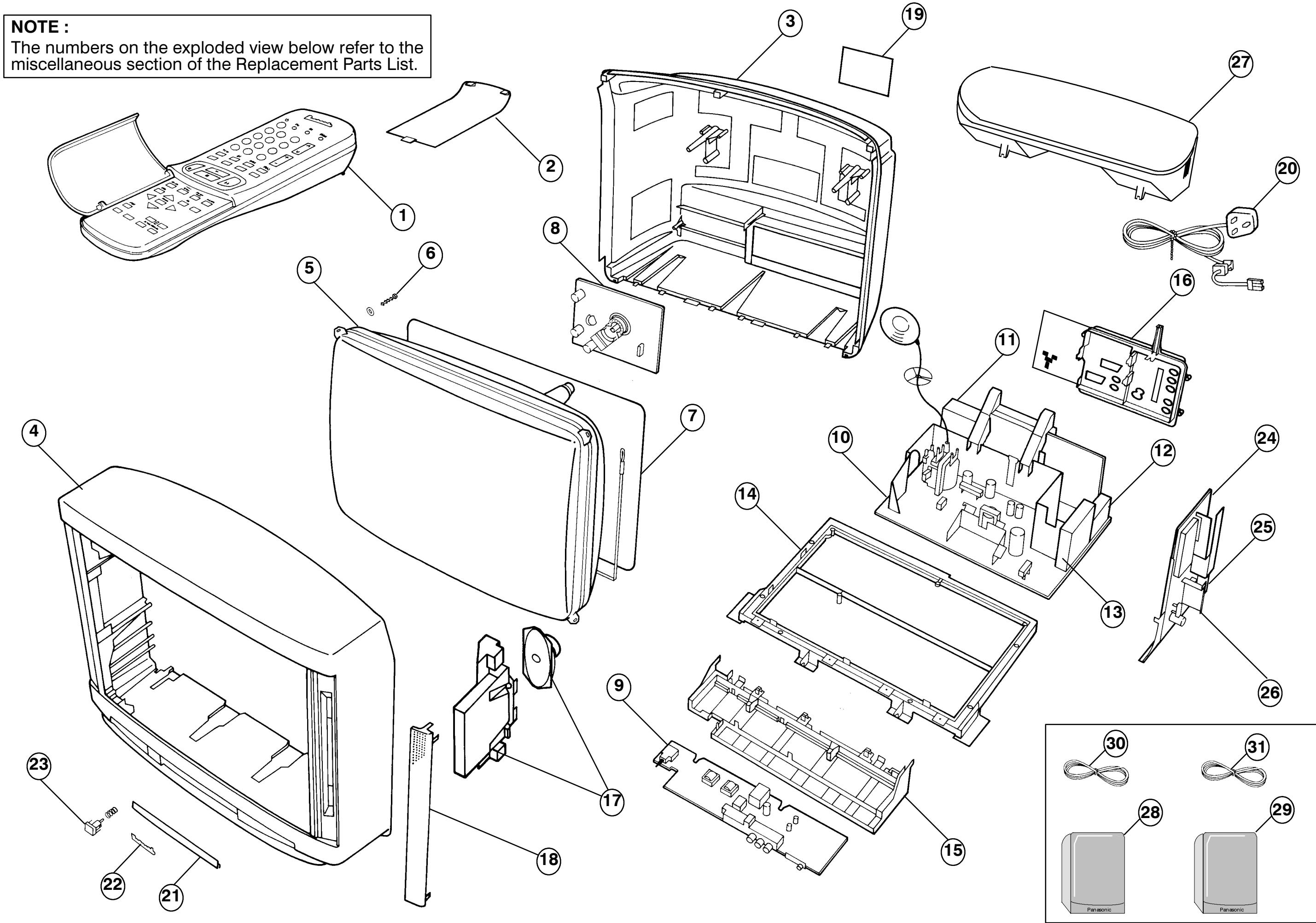
## Remarks

- The Power 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.

# PARTS LOCATION

**NOTE :**

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



## REPLACEMENT PARTS LIST

**Important Safety Notice**

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

**COMMON PARTS FOR TX-29AD2DP AND TX-25AD2DP**

Ref No.	Part No.	Description				
<b>MISCELLANEOUS COMPONENTS</b>						
1)	EUR51921	REMOTE CONTROL				
2)	UR51EC780	BATTERY COVER (REMOTE)				
3)	*****	SEE DIFFERENCE LIST				
4)	*****	SEE DIFFERENCE LIST				
5)	*****	SEE DIFFERENCE LIST				
6)	*****	SEE DIFFERENCE LIST				
7)	*****	SEE DIFFERENCE LIST				
8)	*****	SEE DIFFERENCE LIST				
9)	TNP8EM012AB	M P.C.B.	$\Delta$			
10)	*****	SEE DIFFERENCE LIST				
11)	*****	SEE DIFFERENCE LIST				
12)	U944E/L	TUNER				
13)	TNP117039AA	B P.C.B.	$\Delta$			
14)	TMX8E012	CHASSIS FRAME				
15)	TMW8E016-1	CONTROL BLOCK FRAME				
16)	TKP8E1145-1	AV BRACKET				
17)	EAGG1218E2	SPEAKER				
18)	*****	SEE DIFFERENCE LIST				
19)	*****	SEE DIFFERENCE LIST				
20)	TSX8E0017	POWER CORD	$\Delta$			
21)	TKP8E1141	DOOR LID				
22)	*****	SEE DIFFERENCE LIST				
23)	TBX8E032	POWER BUTTON				
24)	TNPA0370AA	K P.C.B.	$\Delta$			
25)	TNPA0458	J P.C.B.	$\Delta$			
26)	TNP8EC002AA	C P.C.B.	$\Delta$			
27)	EAB10102B2	DOLBY 3D BASS SPEAKER				
28)	EAS8E050-A	FRONT SPEAKER COMPLETE				
29)	EAS8E002-A	REAR SPEAKER COMPLETE				
30)	TSX8E0014S	DOLBY SPEAKER WIRE 3METRE	$\Delta$			
31)	TSX8E0015S	DOLBY SPEAKER WIRE 12METRE	$\Delta$			
	TNA10801	VIF PACK				
	UM-3DEP-2P	BATTERY				
	TBM8E1532	PRESET LABEL				
	TBM8E1585	AV DOLBY LABEL				
	TEK6940	LID CATCHER				
	TKK8E026	SPEAKER REFLECTOR				
	TKP8E1143	PANEL LEFT				
	TKP8E1155	100HZ PANEL L				
	TMW8E017	L.E.D.HOLDER				
	TPD8E562	CUSHION				
	TQB8E2134-1	INST BOOK	$\Delta$			
	01303423	LOUDSPEAKER				
	TKN8E007	DOLBY SPEAKER GRILLE				
	TKU8E00150-B	DOLBY SPEAKER CASE-REAR	$\Delta$			
	SON403935511	DOLBY WOOFER SCREW				
	TBM8E1354	DOLBY REAR SPEAKER LABEL				
	TBM8E1373	DOLBY SPEAKER BADGE				
	ERC12GK825	SOLID 0.5W 10% 8M2 $\Omega$				
<b>LINKS</b>						
BC1	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
BC2	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
BC4	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
BC5	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
B11	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
B12	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	

Ref No.	Part No.	Description				
B15	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
B16	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
B17	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
B18	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
B19	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0 $\Omega$	
<b>CAPACITORS</b>						
C201	ECEA1HFQ101	ELECT	50V	100 $\mu$ F		
C202	ECQB1H103J	FILM	50V	10nF		
C203	ECA1CM221GB	ELECT	16V	220pF		
C204	ECQB1H104J	FILM	50V	100nF		
C206	222236516334	FILM	160V	330nF		
C209	ECQB1H104J	FILM	50V	100nF		
C226	ECQB1H104J	FILM	50V	100nF		
C228	ECKC1H102J	CERAMIC	50V	1000pF		
C461	ECKC1H821J	CERAMIC	50V	820pF		
C462	ECA1EM101GB	ELECT	25V	100pF		
C463	ECA1EM471GB	ELECT	25V	470pF		
C464	ECQM1H104J	FILM	50V	100nF		
C465	ECA1CM470GB	ELECT	16V	47pF		
C466	ECEA1HU222	ELECT	50V	2200pF		
C467	ECQB1H103J	FILM	50V	10nF		
C470	222236516684	FILM	160V	100nF		
C471	ECA1HM010GB	ELECT	50V	1pF		
C472	ECA1CM330GB	ELECT	16V	33pF		
C473	ECEA1EGE222	ELECT	25V	2200pF		
C474	ECQB1H562K	FILM	50V	5.6nF		
C476	ECA1HM4R7GB	ELECT	50V	4.7pF		
C477	ECA1HM010GB	ELECT	50V	1pF		
C479	222236576104	FILM	760V	100nF		
C480	222236516684	FILM	160V	100nF		
C481	ECA1HM010GB	ELECT	50V	1pF		
C482	ECA1CM330GB	ELECT	16V	33pF		
C483	ECEA1EGE222	ELECT	25V	2200pF		
C484	ECQB1H562K	FILM	50V	5.6nF		
C486	ECA1HM4R7GB	ELECT	50V	4.7pF		
C487	ECA1HM010GB	ELECT	50V	100pF		
C489	222236576104	FILM	760V	100nF		
C492	ECA1CM102B	ELECT	16V	1000pF		
C495	ECA1EM101GB	ELECT	25V	100pF		
C496	ECA1CM100GB	ELECT	16V	10pF		
C501	ECKC1H103JB	CERAMIC	50V	10nF		
C511	ECQM1H393J	FILM	50V	0.039 $\mu$ F		
C521	ECEA1HU101	ELECT	50V	100pF		
C524	222236516105	FILM	160V	1 $\mu$ F		
C525	ECKC1H271J	CERAMIC	50V	270pF		
C527	ECQM2683JZ	FILM	250V	68nF		
C531	ECQM2564KZ	FILM	250V	560nF		
C534	ECWH12H562J	CERAMIC	500V	5600pF		$\Delta$
C536	ECWH12H103J	FILM	1250V	10nF		$\Delta$
C537	ECQF4273JZH	FILM	400V	0.027 $\mu$ F		
C541	ECWF2H105J	FILM	500V	1000nF		$\Delta$
C543	ECEA2VU2R2	ELECT	350V	2.2pF		
C544	ECKC3D152J	CERAMIC	2KV	1.5nF		$\Delta$
C547	ECKC2H101J	CERAMIC	500V	100pF		$\Delta$
C548	ECEA2EU220	ELECT	250V	22pF		
C549	ECEA2AU2R2	ELECT	100V	2.2pF		
C557	ECKC2H101J	CERAMIC	500V	100pF		$\Delta$
C558	ECA1VM102GB	ELECT	35V	1000pF		
C561	ECEA1VU222	ELECT	35V	2200pF		
C562	222236576104	FILM	760V	100nF		







Ref No.	Part No.	Description		
C3136	ECKC2H471J	CERAMIC	500V	470pF
C3139	ECA1HM101GB	ELECT	50V	1pF
C3141	ECA1CM471GB	ELECT	16V	470p
C3143	ECA1CM100GB	ELECT	16V	10pF
C3144	ECA1CM470GB	ELECT	16V	47pF
C3146	ECEA2EU220	ELECT	250V	22pF
C3152	ECEA2EU220	ELECT	250V	22pF
C3153	ECA1VM101GB	ELECT	35V	1pF
C3167	ECUV1H100DCX	S.M.CAP	50V	10pF
C3168	ECUV1H103ZFX	S.M.CAP	50V	10nF
C3169	ECA1CM100GB	ELECT	16V	10pF
C3177	ECUV1H150JCX	S.M.CAP	50V	15pF
C3178	ECUV1H103ZFX	S.M.CAP	50V	10nF
C3179	ECA1CM100GB	ELECT	16V	10pF
C3187	ECUV1H270JCX	S.M.CAP	50V	27pF
C3188	ECUV1H103ZFX	S.M.CAP	50V	10nF
C3189	ECA1CM100GB	ELECT	16V	10pF
C3356	ECA1CM220GB	ELECT	16V	22pF
C3357	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3362	TACA1103P2KV	I.C.		
C3363	TACA1103P2KV	I.C.		
C3366	ECEA2EU220	ELECT	250V	22pF
C3367	ECQM2104KZ	FILM	250V	100nF
C3369	ECA1HM010GB	ELECT	50V	1pF
C3371	ECUV1H150JCX	S.M.CAP	50V	15pF
C3373	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3377	ECUV1H681JCX	S.M.CAP	50V	680pF
C3383	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3387	ECUV1H681JCX	S.M.CAP	50V	680pF
C3392	ECA1CM471GB	ELECT	16V	470p
C3393	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3397	ECUV1H681JCX	S.M.CAP	50V	680pF
C3398	ECKC1H102J	CERAMIC	50V	1000pF
C4701	ECUV1H151JCX	S.M.CAP	50V	150pF
C4702	ECUV1H331JCX	S.M.CAP	50V	330pF
C4703	ECEA1HKAR47	ELECT	50V	0.47pF
C4704	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4705	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4706	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4707	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4708	ECEA1CKA100	ELECT	16V	10pF
C4709	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4710	ECEA1CKA100	ELECT	16V	10pF
C4711	ECUV1H390JPX	S.M.CAP	50V	39pF
C4712	ECUV1H150JCX	S.M.CAP	50V	15pF
C4713	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4714	ECEA1EKA100	ELECT	25V	10pF
C4715	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4716	ECEA1CKA100	ELECT	16V	10pF
C4717	ECUV1H683ZFX	S.M.CAP	50V	68nF
C4718	ECUV1H102KBX	S.M.CAP	50V	1nF
C4719	ECEA1HKAR47	ELECT	50V	0.47pF
C4720	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4721	ECEA1HKA2R2	ELECT	50V	2.2pF
C4722	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4723	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4724	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4725	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4726	ECEA1CKA470	ELECT	16V	47pF
C4727	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4728	ECEA1CKA100	ELECT	16V	10pF
C4733	ECUV1H270JPX	S.M.CAP	50V	27pF
C4735	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4736	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4737	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4738	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4739	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4740	ECUV1H104ZFX	S.M.CAP	50V	100nF
C4742	ECUV1H100DCX	S.M.CAP	50V	10pF
C4743	ECUV1H100DCX	S.M.CAP	50V	10pF
C4745	ECUV1H102KBX	S.M.CAP	50V	1nF
C4746	ECUV1H104ZFX	S.M.CAP	50V	100nF

Ref No.	Part No.	Description		
C4747	ECUV1H102KBX	S.M.CAP	50V	1nF
C4748	ECUV1H102KBX	S.M.CAP	50V	1nF
C4749	ECUV1H102KBX	S.M.CAP	50V	1nF
C4790	ECEA1HKA010	ELECT	50V	1pF
C6101	ECEA1HU471	ELECT	50V	470pF
C6102	ECQM1H334J	FILM	50V	330nF
C6103	ECQM1H104J	FILM	50V	100nF
C6104	ECA0JM222GB	ELECT	6.3V	2.2nF
C6106	ECEA1HU101	ELECT	50V	100pF
C6301	ECA1CM470GB	ELECT	16V	47pF
C6303	ECUV1H103ZFX	S.M.CAP	50V	10nF
C6401	ECA1HM101GB	ELECT	50V	1pF
C6402	ECA1HM101GB	ELECT	50V	1pF
C6403	ECUV1H103ZFX	S.M.CAP	50V	10nF
C6406	ECA1HM4R7GB	ELECT	50V	4.7pF
C6407	ECUV1H102KBX	S.M.CAP	50V	1nF
C6408	ECA1HM4R7GB	ELECT	50V	4.7pF
C6409	ECUV1H561JCX	S.M.CAP	50V	560pF
C6410	ECUV1H561JCX	S.M.CAP	50V	560pF
C6417	ECA1CM471GB	ELECT	16V	470p
C6418	ECUV1H103ZFX	S.M.CAP	50V	10nF
C6436	ECA1HM4R7GB	ELECT	50V	4.7pF
C6437	ECUV1H102KBX	S.M.CAP	50V	1nF
C6438	ECA1HM4R7GB	ELECT	50V	4.7pF
C6447	ECA1CM471GB	ELECT	16V	470p
C6448	ECUV1H103ZFX	S.M.CAP	50V	10nF
C6491	ECUV1H271JCX	S.M.CAP	50V	270pF
C6591	ECUV1H271JCX	S.M.CAP	50V	270pF
C6811	ECKCNS332J	CERAMIC	1.2KV	3.3nF
C6812	ECQU2A154MN	FILM	250V	150nF
C6815	ECQU2A224MN	FILM	250V	220nF

## DIODES

D206	MA4300	DIODE
D465	MA165TA5	DIODE 1SS133T-77
D466	MA165TA5	DIODE 1SS133T-77
D467	MA165TA5	DIODE 1SS133T-77
D468	MA165TA5	DIODE 1SS133T-77
D471	MA700TA5	DIODE
D481	MA700TA5	DIODE
D491	MA167TA5	DIODE
D507	MA723TA5	DIODE
D508	MA723TA5	DIODE
D521	MA170	DIODE
D526	MA165TA5	DIODE 1SS133T-77
D527	EU02	DIODE
D536	ERB0615	DIODE TYPD0753VAG
D537	TVSRU2AM	DIODE
D544	TVSRC2V1	DIODE
D547	AU02V0	DIODE
D548	MA165TA5	DIODE 1SS133T-77
D549	MA167TA5	DIODE
D557	EU02	DIODE
D561	ERA15-02V3	DIODE
D562	MA165TA5	DIODE 1SS133T-77
D563	MA165TA5	DIODE 1SS133T-77
D564	MTZJ33B	DIODE
D566	MA2082ALFS	DIODE
D567	MA4062	DIODE
D568	MA2100LFS	DIODE
D569	MA2082ALFS	DIODE
D591	MA4360	DIODE
D613	RBV-608LF-B	DIODE
D622	MA171TA5	DIODE
D624	BYT56K15/10	DIODE
D630	MA165TA5	DIODE 1SS133T-77
D636	MA167TA5	DIODE
D651	RG4CLFL1	DIODE
D656	EU02	DIODE
D661	ERD32-02L7	DIODE

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Ref No.	Part No.	Description
D671	ERD32-02L7	DIODE
D674	MA4120	DIODE
D678	MA4027	DIODE
D681	EU02	DIODE
D686	RU4AMLF-M1	DIODE
D1019	PMLL5242B	DIODE
D1020	PMLL5242B	DIODE
D1023	PMLL5242B	DIODE
D1024	PMLL5242B	DIODE
D1033	PMLL5242B	DIODE
D1034	PMLL5242B	DIODE
D1036	PMLL5242B	DIODE
D1038	PMLL5242B	DIODE
D1070	PMLL5242B	DIODE
D1080	RLS72TE-11	DIODE OR PMLL4148
D1081	RLS72TE-11	DIODE OR PMLL4148
D1082	RLS72TE-11	DIODE OR PMLL4148
D1090	PMLL5242B	DIODE
D1121	PMLL5242B	DIODE
D1123	PMLL5242B	DIODE
D1156	PMLL5242B	DIODE
D1158	PMLL5242B	DIODE
D1172	PMLL5242B	DIODE
D1221	PMLL5232B	DIODE
D1222	PMLL5232B	DIODE
D1270	PMLL5242B	DIODE
D1273	PMLL5242B	DIODE
D1282	PMLL5242B	DIODE
D1284	PMLL5242B	DIODE
D1381	PMLL5239B	DIODE
D1382	RLS72TE-11	DIODE OR PMLL4148
D1601	RLS72TE-11	DIODE OR PMLL4148
D1614	RLS72TE-11	DIODE OR PMLL4148
D1617	RLS72TE-11	DIODE OR PMLL4148
D1623	RLS72TE-11	DIODE OR PMLL4148
D1624	RLS72TE-11	DIODE OR PMLL4148
D1672	RLS72TE-11	DIODE OR PMLL4148
D1681	RLS72TE-11	DIODE OR PMLL4148
D1682	RLS72TE-11	DIODE OR PMLL4148
D1717	RLS72TE-11	DIODE OR PMLL4148
D1941	PMLL5232B	DIODE
D2421	ISS355TE-17	DIODE
D2422	ISS355TE-17	DIODE
D2480	ISS355TE-17	DIODE
D2502	EG01CV0	DIODE
D2503	EU02	DIODE
D2504	TVSEH1V0	DIODE
D2505	MA4075	DIODE
D2506	EU02	DIODE
D2507	EU02	DIODE
D2510	EU02	DIODE
D2511	RU4AMLF-M1	DIODE
D2512	ISS355TE-17	DIODE
D2513	ISS254T-77	DIODE
D2514	ISS355TE-17	DIODE
D2515	ISS355TE-17	DIODE
D2517	ISS254T-77	DIODE
D2518	ISS254T-77	DIODE
D2519	ISS254T-77	DIODE
D2520	ISS254T-77	DIODE
D2520	ISS355TE-17	DIODE
D2521	ISS254T-77	DIODE
D2522	ISS254T-77	DIODE
D2523	ISS254T-77	DIODE
D2524	MA4120	DIODE
D2525	MA4120	DIODE
D2526	MA4120	DIODE
D2527	MA4120	DIODE
D2528	UDZTE-1712B	DIODE
D2529	ISS355TE-17	DIODE
D2530	ISS355TE-17	DIODE
D2531	ISS355TE-17	DIODE

Ref No.	Part No.	Description
D2801	1SS254T-77	DIODE
D3126	RLS72TE-11	DIODE OR PMLL4148
D3127	RLS72TE-11	DIODE OR PMLL4148
D3133	RLS72TE-11	DIODE OR PMLL4148
D3138	RLS72TE-11	DIODE OR PMLL4148
D3368	RLS72TE-11	DIODE OR PMLL4148
D3372	MA165TA5	DIODE 1SS133T-77
D3373	RLS72TE-11	DIODE OR PMLL4148
D3374	RLS72TE-11	DIODE OR PMLL4148
D3377	RLS72TE-11	DIODE OR PMLL4148
D3382	MA165TA5	DIODE 1SS133T-77
D3383	RLS72TE-11	DIODE OR PMLL4148
D3384	RLS72TE-11	DIODE OR PMLL4148
D3387	RLS72TE-11	DIODE OR PMLL4148
D3391	MA165TA5	DIODE 1SS133T-77
D3392	MA165TA5	DIODE 1SS133T-77
D3393	RLS72TE-11	DIODE OR PMLL4148
D3394	RLS72TE-11	DIODE OR PMLL4148
D3397	RLS72TE-11	DIODE OR PMLL4148
D6101	TVSS1WBS20	DIODE
D6103	RLS72TE-11	DIODE OR PMLL4148
D6106	RLS72TE-11	DIODE OR PMLL4148
D6301	LN81RPHL	DIODE
D6381	RLS72TE-11	DIODE OR PMLL4148
D6382	RLS72TE-11	DIODE OR PMLL4148
D6391	RLS72TE-11	DIODE OR PMLL4148
D6392	RLS72TE-11	DIODE OR PMLL4148
D6491	RLS72TE-11	DIODE OR PMLL4148
D6492	RLS72TE-11	DIODE OR PMLL4148
D6591	RLS72TE-11	DIODE OR PMLL4148
D6592	RLS72TE-11	DIODE OR PMLL4148

## FUSES

F547	TR5-T2000	FUSE	▲
F656	TR5-T1250	FUSE	▲
F661	TR5-T2000	FUSE	▲
F671	TR5-T2000	FUSE	▲
F6811	2153.15H	FUSE	▲
F68111	EYF52BC	FUSE HOLDER	
F68112	EYF52BC	FUSE HOLDER	

## SOCKETS

H1871 832AG11D-ESL I.C.SOCKET

## INTEGRATED CIRCUITS

IC2501	STR10006-M	SWITCHABLE POWER SUPPLY
IC2502	L78M12MRB	12V REGULATOR
IC2503	L78M05MRB	5V REGULATOR
IC2505	TDA2030AV	AUDIO AMPLIFIER
IC2506	TDA2030AV	AUDIO AMPLIFIER
IC2507	LA2785	DOLBY ENCODER
IC2508	AN7809FLB	9V REGULATOR
IC2509	LV1011	DOLBY MATRIX
IC2510	BA15218	DIODE
IC2511	AN5295K	AUDIO CONTROL
IC2512	M5222P	SURROUND VOLUME CONTROL
IC2513	SC442013B	MICRO PROCESSOR
IC2514	MN1280R	RESET
IC2515	AN6554	OPERATIONAL AMPLIFIER
IC2516	AN6554	OPERATIONAL AMPLIFIER
IC2517	TDA2030AV	AUDIO AMPLIFIER
I466	LA4282	AUDIO OUTPUT
I561	TDA8175-3	VERTICAL OUTPUT
I611	TDA4605-3	SWITCHABLE POWER SUPPLY
I646	L78M09MRB	9V REGULATOR



**TX-29AD2DP**  
**TX-25AD2DP**

Ref No.	Part No.	Description			
J2	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
J12	EXCELSA39V	COIL			
J23	EXCELSA39V	COIL			
J204	EXCELSA35T	COIL			
<b>COILS</b>					
L204	ELER220KA	COIL			
L206	EXCELSA35T	COIL			
L231	EXCELSA24T	COIL			
L507	ELESN331KA	COIL			
L511	297-23477	TRANSFORMER			
L538	297-23293	COIL			
L541	ELH5L7002	COIL			
L542	ELC08D055	COIL			
L554	ELER220KA	COIL			
L594	297-017696	COIL			
L624	EXCELSA35T	COIL			
L626	EXCELSR35S	COIL			
L650	EXCELDLR35C	COIL			
L661	EXCELDLR35V	COIL			
L671	EXCELDLR35V	COIL			
L686	EXCELSA35T	COIL			
L1037	TSC925-4	CHOKE			
L1301	EXCELDLR35V	COIL			
L1303	EXCELDLR35V	COIL			
L1351	ELEV4R7KA	COIL			
L1413	ELEV6R8KA	COIL			
L1601	ELEV4R7KA	COIL			
L1606	EXCELDLR35V	COIL			
L1611	ELEV4R7KA	COIL			
L1619	EXCELDLR35V	COIL			
L1622	ELEV4R7KA	COIL			
L1634	EXCEMT101BT	COIL			
L1644	EXCEMT101BT	COIL			
L1652	ELEV4R7KA	COIL			
L1654	EXCEMT101BT	COIL			
L1687	ELEMV1R5MA	COIL			
L1691	EXCEMT101BT	COIL			
L1692	EXCEMT101BT	COIL			
L1693	EXCEMT101BT	COIL			
L1694	EXCEMT101BT	COIL			
L1701	ELEV4R7KA	COIL			
L1714	EXCELDLR35V	COIL			
L1751	EXCELDLR35V	COIL			
L1801	ELEV4R7KA	COIL			
L1837	EXCELDLR35V	COIL			
L1845	ELEV3R3KA	COIL			
L1857	ELEV3R3KA	COIL			
L1859	ELEV3R3KA	COIL			
L1871	EXCELDLR35V	COIL			
L1878	ELEV3R3KA	COIL			
L1888	ELEV4R7KA	COIL			
L1931	ELEV4R7KA	COIL			
L1941	EXCELDLR35V	COIL			
L1972	EXCELDLR35V	COIL			
L1974	EXCELDLR35V	COIL			
L1977	EXCELDLR35V	COIL			
L2501	EXCELSA35T	COIL			
L2502	EXCELSA35T	COIL			
L2503	EXCELSA35T	COIL			
L2504	EXCELSA35T	COIL			
L2505	5770206400	COIL			
L2506	5770206400	COIL			
L2507	5770206400	COIL			
L2508	ELESN100KA	COIL			
L2509	ELESN100KA	COIL			
L2510	ELESN100KA	COIL			
L2511	EXCELSA35T	COIL			
L2512	EXCELSA35T	COIL			
L2513	EXCELSA35T	COIL			

Ref No.	Part No.	Description
L2514	5770206400	COIL
L3161	SDL-4101	COIL
L3171	SDL-4101	COIL
L3181	SDL-4101	COIL
L4701	TLTR33K991R	COIL
L4703	TLTR39K991R	COIL
L4704	TLT022K991R	COIL
L4705	EIV7EN200B	COIL
L4706	EIV7EN201B	COIL
L4707	TLT100K991R	COIL
L4709	TLT181K991R	COIL
L6403	ELEBT6R8KA	COIL
L6404	ELEBT6R8KA	COIL
L6417	ELEBT6R8KA	COIL
L6447	ELEBT6R8KA	COIL
L6811	ELF18D424F	COIL
L6812	ELF18D424F	COIL
<b>CONTROLS</b>		
P633	EVMEASA00B52	CONTROL 500Ω
P3362	RH092GDJ6J	VARIABLE RESISTOR
P3368	EVN65UA00B24	CONTROL 20KΩ
P4701	EVNDXAA03B53	CONTROL 5KΩ
<b>TRANSISTORS</b>		
Q463	BC557B	TRANSISTOR
Q465	BC547B	TRANSISTOR
Q494	BC547B	TRANSISTOR
Q496	BC547B	TRANSISTOR
Q497	BC557B	TRANSISTOR
Q498	BC547B	TRANSISTOR
Q506	2SK301TA	TRANSISTOR
Q526	2SD836-AL	TRANSISTOR
Q534	BU2508AXRL	TRANSISTOR
Q591	BC557B	TRANSISTOR
Q592	BC557B	TRANSISTOR
Q593	BC547B	TRANSISTOR
Q594	2SD1265A	TRANSISTOR
Q624	2SK1118LB	TRANSISTOR
Q651	TFD312SOF632	DIODE
Q667	BC547B	TRANSISTOR
Q674	BUZ71AF1	TRANSISTOR
Q681	BC557B	TRANSISTOR
Q682	2SA1535LB	TRANSISTOR
Q1071	BC817-25	TRANSISTOR
Q1091	BC817-25	TRANSISTOR
Q1123	BC847B	TRANSISTOR OR 2SD601ATX
Q1163	BC847B	TRANSISTOR OR 2SD601ATX
Q1167	BC857B	TRANSISTOR OR 2SB709ATX
Q1172	BC847B	TRANSISTOR OR 2SD601ATX
Q1182	BC847B	TRANSISTOR OR 2SD601ATX
Q1192	BC847B	TRANSISTOR OR 2SD601ATX
Q1221	BC847B	TRANSISTOR OR 2SD601ATX
Q1222	BC847B	TRANSISTOR OR 2SD601ATX
Q1382	BC857B	TRANSISTOR OR 2SB709ATX
Q1466	BC860B	TRANSISTOR
Q1476	BC860B	TRANSISTOR
Q1486	BC860B	TRANSISTOR
Q1496	BC860B	TRANSISTOR
Q1612	BC847B	TRANSISTOR OR 2SD601ATX
Q1631	BC847B	TRANSISTOR OR 2SD601ATX
Q1633	BC847B	TRANSISTOR OR 2SD601ATX
Q1636	BC857B	TRANSISTOR OR 2SB709ATX
Q1641	BC847B	TRANSISTOR OR 2SD601ATX
Q1643	BC847B	TRANSISTOR OR 2SD601ATX
Q1646	BC857B	TRANSISTOR OR 2SB709ATX
Q1651	BC847B	TRANSISTOR OR 2SD601ATX
Q1653	BC847B	TRANSISTOR OR 2SD601ATX
Q1656	BC857B	TRANSISTOR OR 2SB709ATX

Ref No.	Part No.	Description
Q1663	BC847B	TRANSISTOR OR 2SD601ATX
Q1664	BC847B	TRANSISTOR OR 2SD601ATX
Q1667	BC847B	TRANSISTOR OR 2SD601ATX
Q1673	BC847B	TRANSISTOR OR 2SD601ATX
Q1812	BC847B	TRANSISTOR OR 2SD601ATX
Q1816	BC847B	TRANSISTOR OR 2SD601ATX
Q1822	BC847B	TRANSISTOR OR 2SD601ATX
Q1824	BC847B	TRANSISTOR OR 2SD601ATX
Q1827	BC857B	TRANSISTOR OR 2SB709ATX
Q1831	BC847B	TRANSISTOR OR 2SD601ATX
Q2480	BC847B	TRANSISTOR OR 2SD601ATX
Q2501	BC557B	TRANSISTOR
Q2502	2SA684R	TRANSISTOR
Q2503	BC847B	TRANSISTOR OR 2SD601ATX
Q2504	BC847B	TRANSISTOR OR 2SD601ATX
Q2505	BC857B	TRANSISTOR OR 2SB709ATX
Q2506	BC847B	TRANSISTOR OR 2SD601ATX
Q2507	BC847B	TRANSISTOR OR 2SD601ATX
Q2508	BC857B	TRANSISTOR OR 2SB709ATX
Q2509	BC847B	TRANSISTOR OR 2SD601ATX
Q2510	BC857B	TRANSISTOR OR 2SB709ATX
Q2511	BC847B	TRANSISTOR OR 2SD601ATX
Q2512	BC857B	TRANSISTOR OR 2SB709ATX
Q2513	BC847B	TRANSISTOR OR 2SD601ATX
Q2514	BC847B	TRANSISTOR OR 2SD601ATX
Q2515	BC857B	TRANSISTOR OR 2SB709ATX
Q2516	BC847B	TRANSISTOR OR 2SD601ATX
Q2518	BC847B	TRANSISTOR OR 2SD601ATX
Q2801	BC847B	TRANSISTOR OR 2SD601ATX
Q3108	BC847B	TRANSISTOR OR 2SD601ATX
Q3109	BC847B	TRANSISTOR OR 2SD601ATX
Q3111	BC857B	TRANSISTOR OR 2SB709ATX
Q3122	BC847B	TRANSISTOR OR 2SD601ATX
Q3126	BC847B	TRANSISTOR OR 2SD601ATX
Q3127	BC857B	TRANSISTOR OR 2SB709ATX
Q3131	2SB940APLB	TRANSISTOR
Q3136	2SD1264APLB	TRANSISTOR
Q3143	BC847B	TRANSISTOR OR 2SD601ATX
Q3162	BC857B	TRANSISTOR OR 2SB709ATX
Q3164	BC847B	TRANSISTOR OR 2SD601ATX
Q3166	BC857B	TRANSISTOR OR 2SB709ATX
Q3169	BC857B	TRANSISTOR OR 2SB709ATX
Q3172	BC857B	TRANSISTOR OR 2SB709ATX
Q3174	BC847B	TRANSISTOR OR 2SD601ATX
Q3176	BC857B	TRANSISTOR OR 2SB709ATX
Q3179	BC857B	TRANSISTOR OR 2SB709ATX
Q3182	BC857B	TRANSISTOR OR 2SB709ATX
Q3184	BC847B	TRANSISTOR OR 2SD601ATX
Q3186	BC857B	TRANSISTOR OR 2SB709ATX
Q3189	BC857B	TRANSISTOR OR 2SB709ATX
Q3359	BC847B	TRANSISTOR OR 2SD601ATX
Q3368	2SB710A-XR	TRANSISTOR
Q3371	BC857B	TRANSISTOR OR 2SB709ATX
Q3373	2SC4714RL2	TRANSISTOR
Q3374	2SC3063RL	TRANSISTOR
Q3377	2SA1698RL	TRANSISTOR
Q3381	BC857B	TRANSISTOR OR 2SB709ATX
Q3383	2SC4714RL2	TRANSISTOR
Q3384	2SC3063RL	TRANSISTOR
Q3387	2SA1698RL	TRANSISTOR
Q3391	BC857B	TRANSISTOR OR 2SB709ATX
Q3392	2SA1309ATA	TRANSISTOR
Q3393	2SC4714RL2	TRANSISTOR
Q3394	2SC3063RL	TRANSISTOR
Q3397	2SA1698RL	TRANSISTOR
Q4701	BC847B	TRANSISTOR OR 2SD601ATX
Q4702	BC847B	TRANSISTOR OR 2SD601ATX
Q4703	BC847B	TRANSISTOR OR 2SD601ATX
Q4704	BF370-126	TRANSISTOR
Q4705	BF370-126	TRANSISTOR
Q6111	BC847B	TRANSISTOR OR 2SD601ATX
Q6114	BC847B	TRANSISTOR OR 2SD601ATX

Ref No.	Part No.	Description
Q6403	BC847B	TRANSISTOR OR 2SD601ATX
Q6413	BC847B	TRANSISTOR OR 2SD601ATX
Q6417	BC857B	TRANSISTOR OR 2SB709ATX
Q6433	BC847B	TRANSISTOR OR 2SD601ATX
Q6443	BC847B	TRANSISTOR OR 2SD601ATX
Q6447	BC857B	TRANSISTOR OR 2SB709ATX
<b>RESISTOR</b>		
RL6101	TSE10818	RELAY
R201	ERD25TJ223	CARBON 0.25W 5% 22KΩ
R206	ERG2ANJ223	METAL 2W 5% 22KΩ
R259	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R462	ERD25TJ101	CARBON 0.25W 5% 100Ω
R463	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R466	ERD25TJ153	CARBON 0.25W 5% 15KΩ
R470	ERD25TJ270	CARBON 0.25W 5% 27Ω
R471	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R472	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R473	ERD25TJ270	CARBON 0.25W 5% 27Ω
R477	ERD25TJ105	CARBON 0.25W 5% 1MΩ
R478	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R479	ERDS1TJ2R2	CARBON 0.5W 5% 2.2Ω
R480	ERD25TJ270	CARBON 0.25W 5% 27Ω
R481	ERD25TJ102	CARBON 0.25W 5% 1KΩ
R482	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R483	ERD25TJ270	CARBON 0.25W 5% 27Ω
R484	ERD25TJ273	CARBON 0.25W 5% 27KΩ
R485	ERD25TJ561	CARBON 0.25W 5% 560Ω
R486	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R487	ERD25TJ105	CARBON 0.25W 5% 1MΩ
R488	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R489	ERDS1TJ2R2	CARBON 0.5W 5% 2.2Ω
R490	ERD25TJ563	CARBON 0.25W 5% 56KΩ
R491	ERQ14AJ100	METAL 0.25W 5% 10Ω ▲
R492	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R493	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R494	ERD25TJ684	CARBON 0.25W 5% 680KΩ
R496	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R497	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R498	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R499	ERD25TJ473	CARBON 0.25W 5% 47KΩ
R501	ERD25TJ470	CARBON 0.25W 5% 47Ω
R507	ERD25TJ2R2	CARBON 0.25W 5% 2R2Ω
R521	ERQ14AJ3R3	METAL 0.25W 5% 3R3Ω ▲
R526	ERD25TJ560	CARBON 0.25W 5% 56Ω
R527	ERDS1TJ152	CARBON 0.5W 5% 1K5Ω
R528	ERDS1TJ152	CARBON 0.5W 5% 1K5Ω
R531	ERF10ZK6R8	WIRE 10W 5% 6R8Ω ▲
R532	ERW2PKR47	WIREWOUND2W 10%R47Ω ▲
R533	ERDS1TJ220	CARBON 0.5W 5% 22Ω
R541	ERG1ANJ152	METAL 1W 5% 1K5Ω
R542	ERQ1ABJ101	FUSABLE 1W 5% 100Ω ▲
R543	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R546	ERDS1TJ184	CARBON 0.5W 5% 180K
R548	ERD25TJ223	CARBON 0.25W 5% 22KΩ
R549	ERDS1TJ224	CARBON 0.5W 5% 220KΩ
R557	ERQ12HKR22	FUSIBLE 0.5W 5% R22Ω ▲
R559	ERDS1TJ100	CARBON 0.5W 5% 10Ω
R561	ERQ12HJ1R5	FUSIBLE 0.5W 5% 1R5Ω ▲
R563	ERD25TJ104	CARBON 0.25W 5% 100KΩ
R564	ERD25TJ223	CARBON 0.25W 5% 22KΩ
R566	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R567	ERD25TJ472	CARBON 0.25W 5% 4K7Ω
R568	ERD25TJ1R5	CARBON 0.25W 5% 1R5Ω
R569	ERDS1TJ221	CARBON 0.5W 5% 220Ω
R572	ERO25CKF1801	METAL 0.25W 1% 1K8Ω ▲
R573	ERO25CKF1801	METAL 0.25W 1% 1K8Ω ▲
R574	ERW12PKR56	WIREWOUND0.5W 10% R56Ω ▲
R576	ERD25TJ682	CARBON 0.25W 5% 6K8Ω











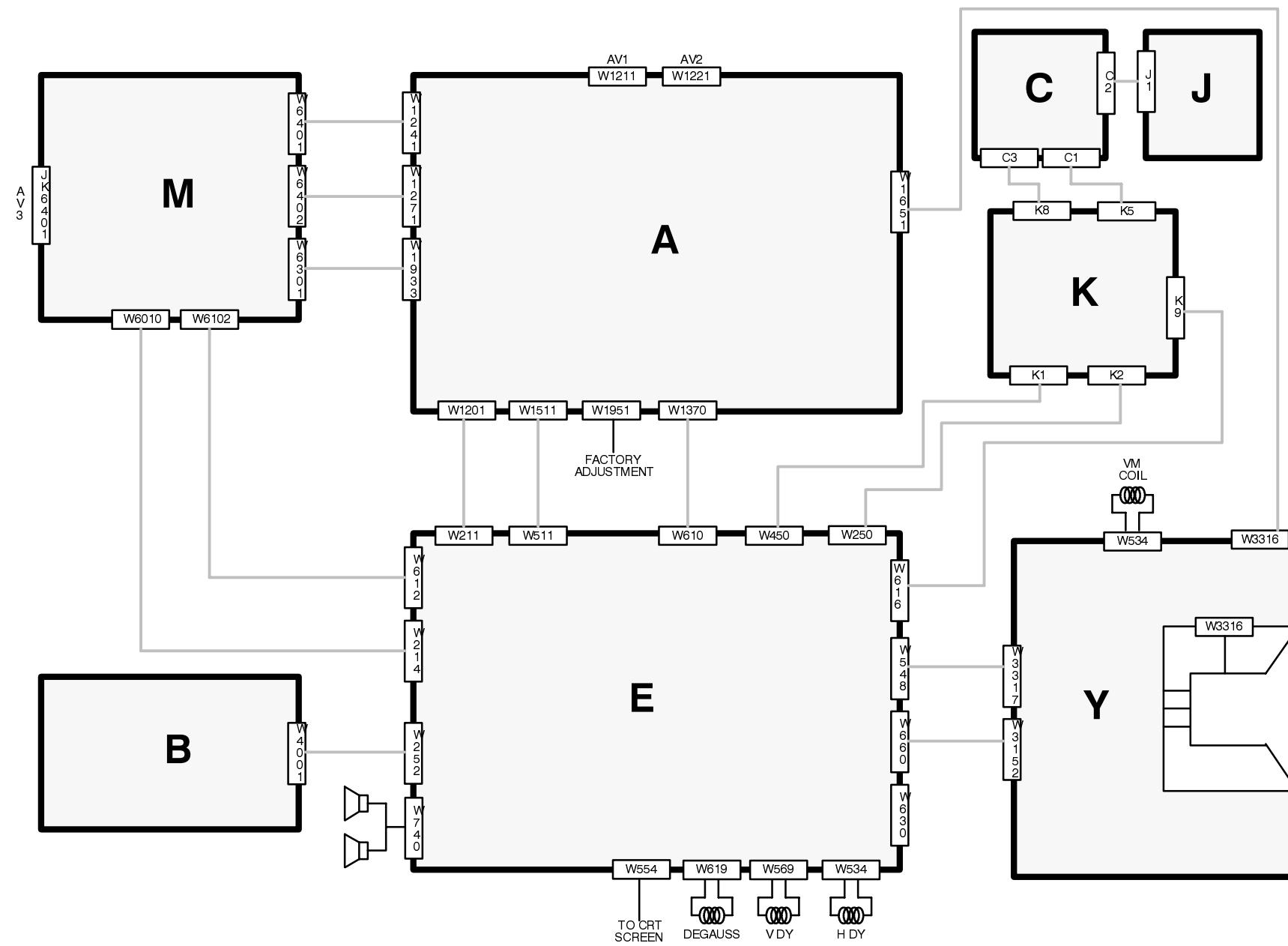
**DIFFERENCES FOR MODEL TX-29AD2DP**

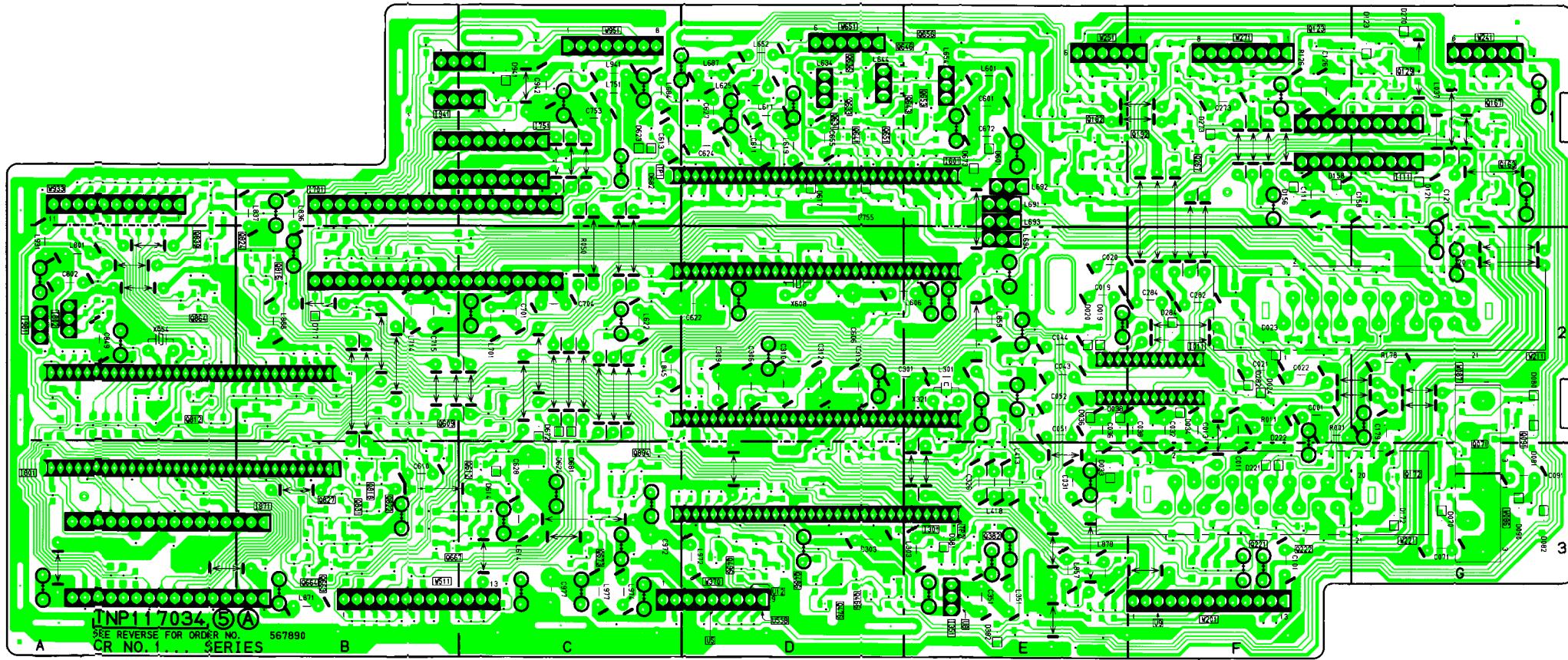
Ref No.	Part No.	Description	
<b>MISCELLANEOUS COMPONENTS</b>			
3)	TKU8E00270	BACK COVER	Δ
4)	TKY8E080-1	CABINET	Δ
5)	A68ESF002X11	CRT	Δ
6)	THT1009R	CRT FIXING SCREW	
7)	TLK8E05125	DEGAUSS COIL	
8)	TNP117037AQ	Y P.C.B.	Δ
10)	TNP197087AY	E P.C.B.	Δ
11)	TNP117034BC	A P.C.B.	Δ
18)	TKP8E1144	SPEAKER NET	
19)	TBM8E1581	MODEL LABEL	
22)	TBM173052	PANASONIC BADGE	
	TPC8E4570	OUTER CARTON	
	TPC8E4582	DOLBY CARTON	
	TS-300DP	DOLBY SPK PACK/VIDEO CABINET	
<b>CAPACITORS</b>			
C538	ECWF2H514J	FILM	500V 510nF
C3101	ECUV1H030CCX S.M.CAP		50V 3pF
<b>INTEGRATED CIRCUITS</b>			
I1871	27C09A-AD2DP	EPROM	
I1941	X24C0701AH	EAROM	

**DIFFERENCES FOR MODEL TX-25AD2DP**

Ref No.	Part No.	Description	
<b>MISCELLANEOUS COMPONENTS</b>			
3)	TKU8E00280	BACK COVER	Δ
4)	TKY8E100	CABINET	Δ
5)	A59ESF002X11	CRT	Δ
6)	THE492-4	CRT FIXING SCREW	
7)	TLK8E05120	DEGAUSS COIL	
8)	TNP117037AP	Y PCB.	Δ
10)	TNP197087AX	E P.C.B.	Δ
11)	TNP117034BB	A P.C.B.	Δ
18)	TKP8E1146	SPEAKER NET	
19)	TBM8E1582	MODEL LABEL	
22)	TBM153022	PANASONIC BADGE	
	TPC8E4571	OUTER CARTON	
	TPC8E4581	DOLBY CARTON	
	TS-2850	TV STAND	
	TS-200DP	DOLBY SPK PACK	
<b>CAPACITORS</b>			
C538	ECWF2H474J	FILM	500V 470nF
C3101	ECUV1H020CCX S.M.CAP		50V 2pF
<b>INTEGRATED CIRCUITS</b>			
I1871	27C05A-AD2DP	EPROM	
I1941	X24C0701AG	EAROM	

## WIRING BLOCK DIAGRAM



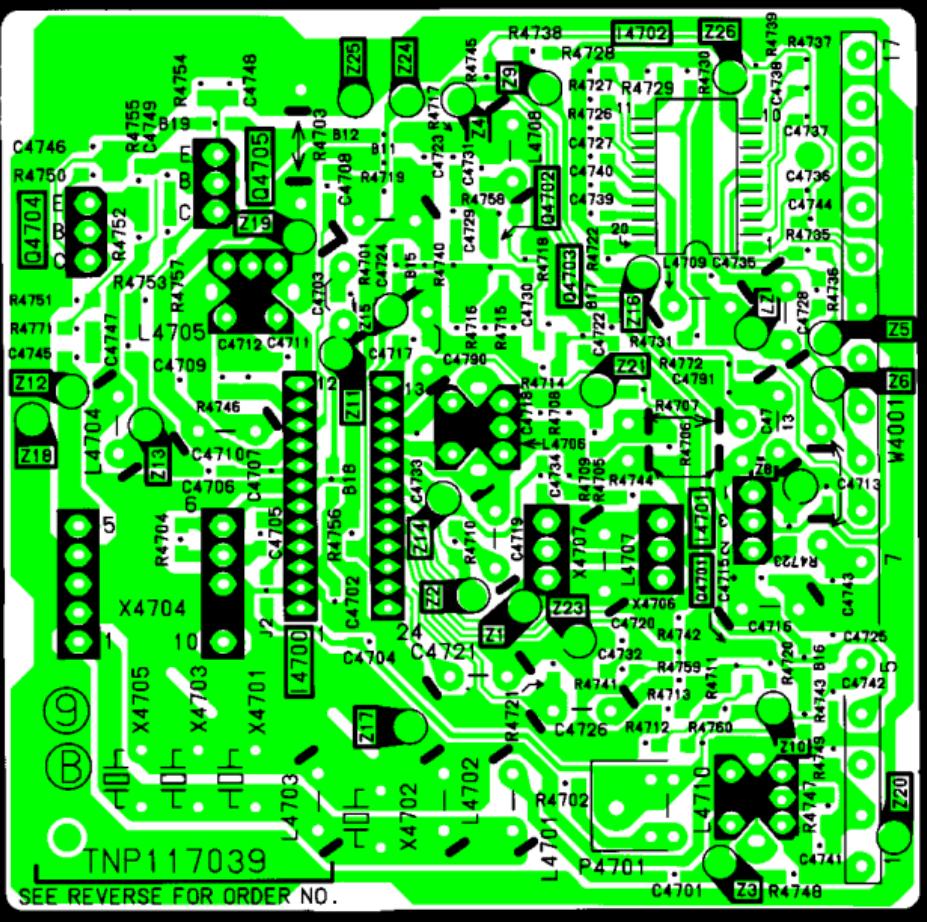


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SEE REVERSE FOR ORDER NO.  
CR NO. 1... SERIES

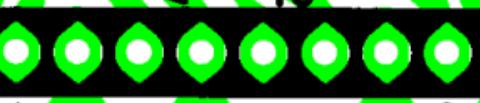
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TNP117039

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TNP8EC002

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R2805 R2822

R2804

14

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R2811

R2810

R2813

R2812

R2807

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R2809

JC2

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JC1

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R2814

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R2801

C2803

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R2816

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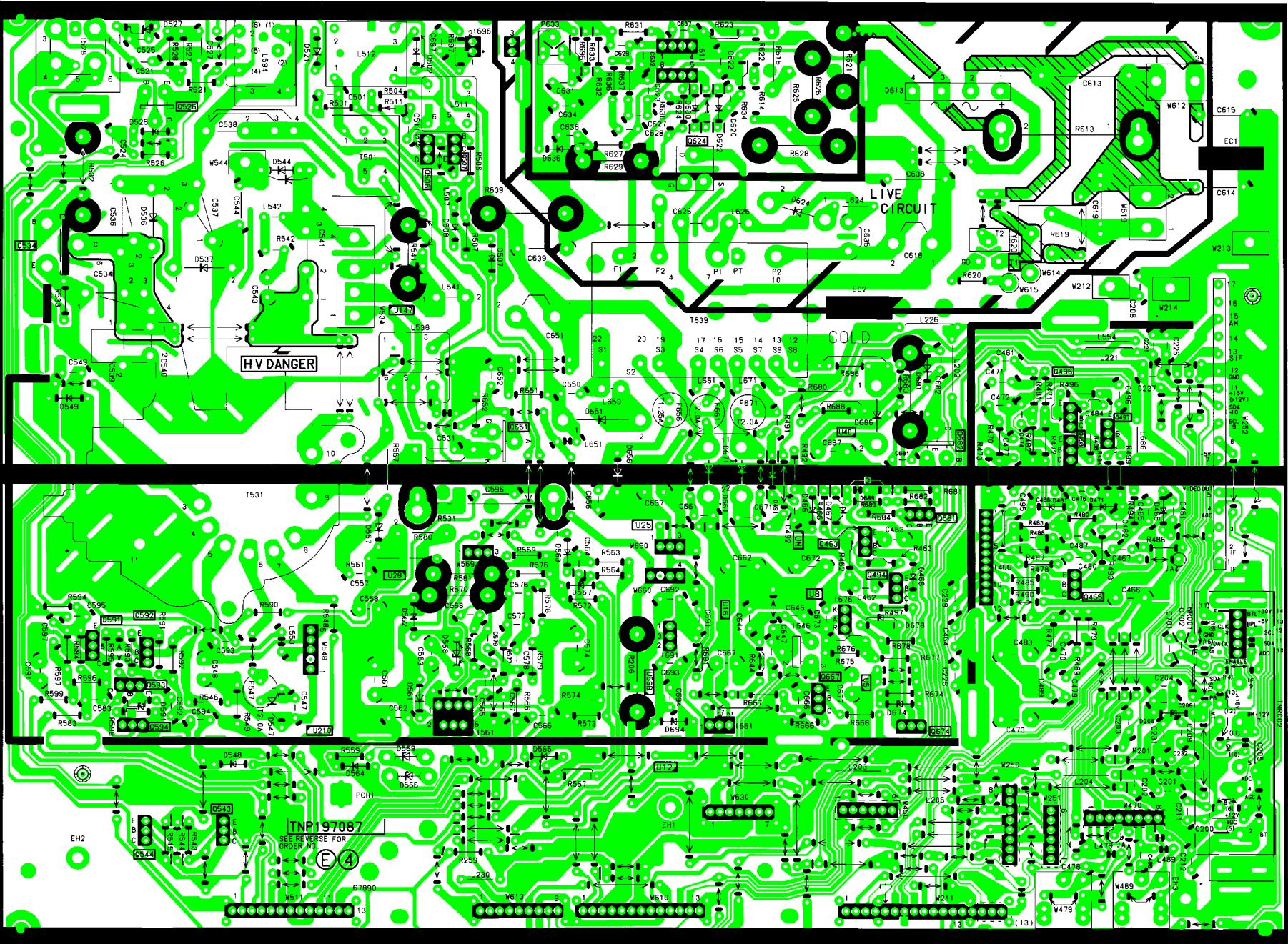
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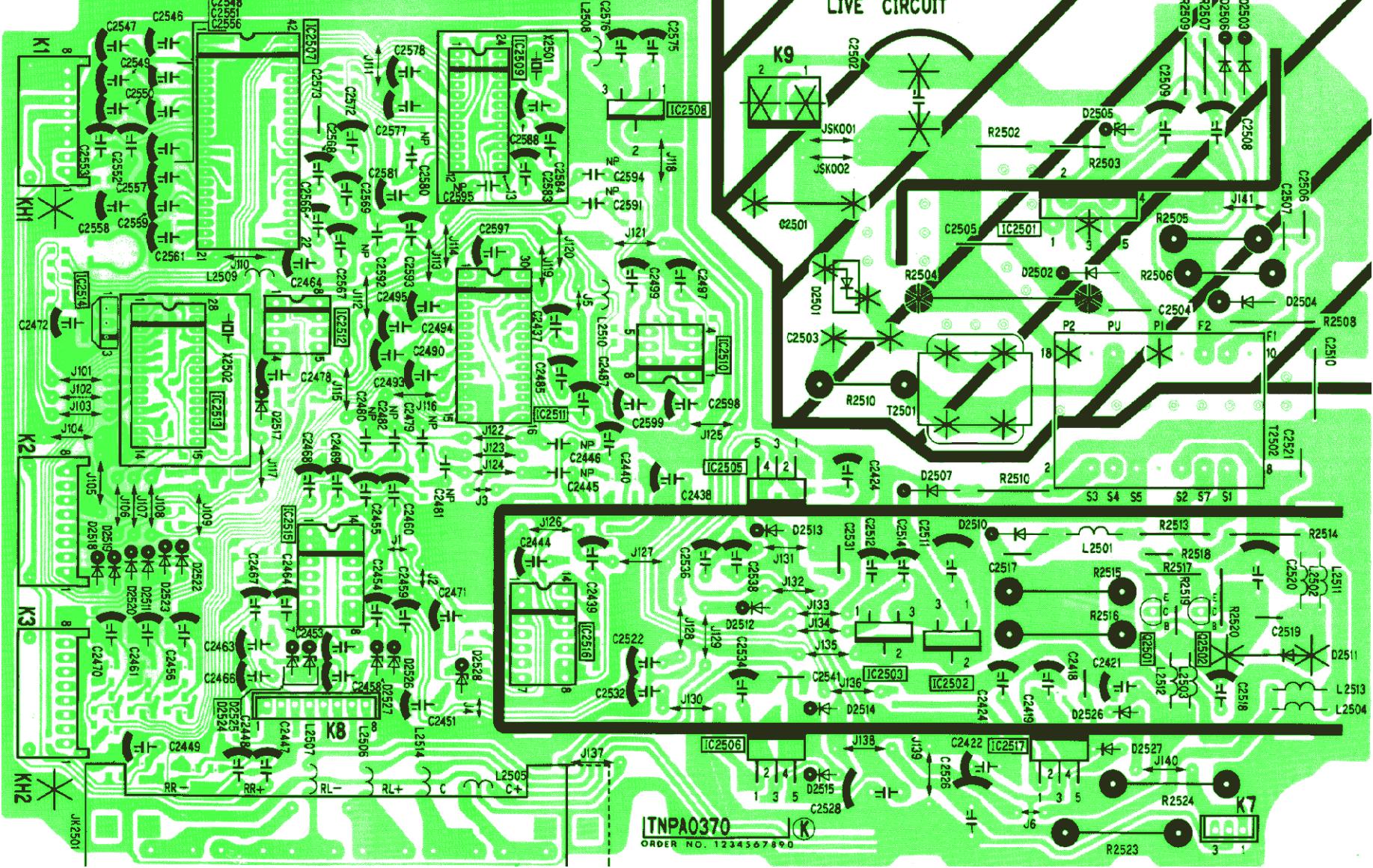
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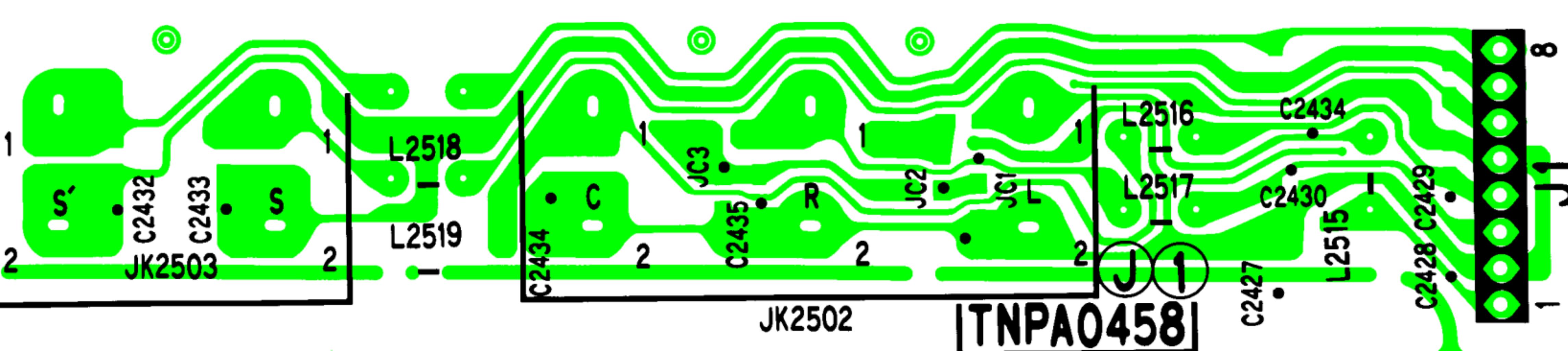
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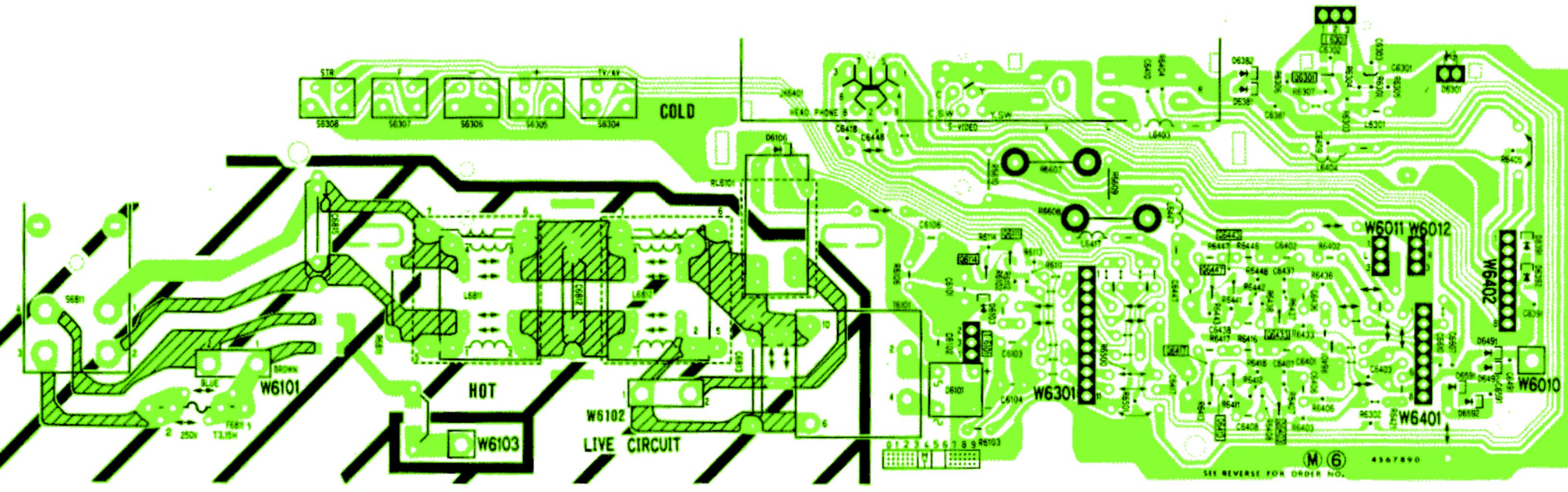
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**TNP117037**

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67890

**HIGH VOLTAGE  
DANGER**

CRNo.3... SERIES

**544/86493.e**

