

## General Information

## Also Covers:

Panasonic TX-21MD1

Chassis: Euro 2L

CRT: A51EAL55X01

A59ECY13X38

Remote Control:

EUR51920

Door Flap: TKP8E1127

Main Power Button:

TBX8E026

## Matrix

Service Notes	Panasonic TX-25MD1
Service Mode	Panasonic TX-25MD1
Main Diagram	Panasonic TX-25MD1
TX-25MD1	Panasonic TX-25MD1
Signal Diagram	Panasonic TX-25MD1

## Specifications

Information in brackets refers to TX-25AD2

Power Source	220V - 240V AC 50 Hz
Power Consumption	100W (100W)
Aerial Impedance	75 $\Omega$ unbalanced coaxial type
Receiving System	PAL - PAL 60
Receiving Channels	V, VSC, VSC, A, only
Intermediate Frequency	Video: 35.5 MHz Sound: 35.5 MHz Colour: 35.5 MHz
Video/Audio Terminals	Audio: RCA X 2 500mV rms 1V $\pm$
AV1 in	Video: 2" din 1V $\pm$ 75 $\Omega$ Audio: 2" din 500mV rms 10V $\pm$ RGB: 2" din
AV1 Out	Video: 2" din 1V $\pm$ 75 $\Omega$ Audio: 2" din 500mV rms 1V $\pm$
AV2 in	Video: 2" din 1V $\pm$ 75 $\Omega$ Audio: 2" din 500mV rms 10V $\pm$ S-Video: 1" din 1V $\pm$ 75 $\Omega$ 2" din 0.1V $\pm$ 75 $\Omega$
AV2 Out	Video: 2" din 1V $\pm$ 75 $\Omega$ Audio: 2" din 500mV rms 1V $\pm$ S-Video: 1" din 1V $\pm$ 75 $\Omega$ 4" din 0.1V $\pm$ 75 $\Omega$
AV3 in	S-Video: 1" din 1V $\pm$ 75 $\Omega$ 4" din 0.1V $\pm$ 75 $\Omega$
High Voltage	31kV $\pm$ 1kV at zero beam current
Picture Tube	25" 63cm Super Flat FS-112" measured diagonally
Audio Output	2 $\times$ 2W music power 8 $\Omega$ impedance
Internal Speaker	2 $\times$ 2W music power 8 $\Omega$ impedance
Headphones	2 $\times$ 2W music power 8 $\Omega$ impedance
Accessories Supplied	Remote Control 2 $\times$ JMS batteries TV Stand

## Service Adjustments

## Safety Precautions

## X-Radiation Warning

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 at zero

## Recommended Safety Parts

Part No.	Description
TQB8E2125	Instruction Book
TLK8E05120	Degauss Coil
TNP8EM012AA	M.P.C.B.
TNP117039AA	B.P.C.B.
TSX8E0017	Power Cord
ECKC2H471J	Ceramic 500V 470pF
ECWH12H562	Ceramic 500V 5600pF
ECWH12H103J	Film 1250V 10nF
ECWF2H105J	500V 1000nF
ECKC3D152J	Ceramic 2KV 1.5nF
ECKC2H101J	Ceramic 500V 100pF
ECKC2H151J	Ceramic 500V 150pF
ECOS2GG181NG	Elect 400V 180 $\mu$ F
ECQE6104K	Film 600V 100mF
ECKC2H561J	Ceramic 500V 560pF
ECKC3D471JB	Ceramic 2KV 470pF
ECKC2H472J	Ceramic 500V 4.7nF
ECKC2A471J	Ceramic 1KV 470pF
ECKC2H681J	Ceramic 500V 680pF
ECKC2H821J	Ceramic 500V 820pF
ECKC2H331J	Ceramic 500V 330pF
F54 F661,	
TR5-T2000	Fuse
TR5-T1250	Fuse
2153.15H	Fuse
ERDS1FY222	Carbon 0.5W 5% 2K2 $\Omega$
ERQ14AJ820	Metal 0.25W 5% 82 $\Omega$
ERDS1FVJ390	Carbon 0.5W 5% 39 $\Omega$
ERDS1FYJ101	Carbon 0.5W 5% 100 $\Omega$
ERDS1FYJ181	Carbon 0.5W 5% 180 $\Omega$
ERQ12HJ102	Metal 0.5W 5% 1K $\Omega$
ERQ14AJ3R9	Fusible 0.25W 5% 3R9 $\Omega$
ERQ12HKR39	Metal 0.5W 5% R39 $\Omega$
ERQ12AJ101	Fusible 0.5W 5% 100 $\Omega$
R1126,	
ERQ14AJ100	Metal 0.25W 5% 10 $\Omega$
ERQ14AJ3R3	Metal 0.25W 5% 3R3 $\Omega$
ERF10ZK6R8	10W 5% 6R8 $\Omega$
ERW2PKR47	Wire Wound 10% 0R47 $\Omega$
ERQ1ABJ101	Fusible 1W 5% 100 $\Omega$
ERQ12HKR22	Fusible 0.5W 5% 0R22 $\Omega$
ERQ12HJ1R5	Fusible 0.5W 5% 1R5 $\Omega$
ERO25CKF1801	Metal 0.25W 1% 1K8 $\Omega$
ERW12PKR56	Wire Wound 0.5W 10% R56 $\Omega$
ERO25CKF1002	Metal 0.25W 1% 10K $\Omega$
ERF10ZK5R6	Wire 10W 5% 5R6 $\Omega$
ERG2FJ183	Metal 0.5W 5% 18K $\Omega$
ERG3FJ393	Metal 0.25W 5% 39K $\Omega$
ERO25CKF1400	Metal 0.25W 1% 140 $\Omega$
ERO25CKF3921	Metal 0.25W 1% 3R92K $\Omega$
ERD75TAJ825	Carbon 0.75W 5% 8M2 $\Omega$
ERO25CKF3301	Metal 0.25W 1% 3K3 $\Omega$
ERO25CKF3900	Metal 0.25W 1% 3R9K $\Omega$
ERG3FJ101	Metal 3W 5% 100 $\Omega$
ESB91232A	Switch
ZTFH65005A	Transformer
ETS39AH127AC	Transformer

beam current, if the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of immediate component failure.

- 3: To prevent an X-Radiation possibility, it is essential to use the specified tube.

## 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 the Function Down button on the Pre-set Panel, at the same time pressing the Status button on the remote control, the screen will show:

1 — ok	Tuner	11 — ok	Dolby IC for CR
2 — ok	VIF	12 — ok	P.S. MODE
3 — ok	EEPROM	13 — ok	P.TA0
4 — ok	Sound AV switch1	14 — ok	P.TA1
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.SCL3
10 — ok	Dolby IC for LR	20 — ok	P.SCL4

21 — ok	P.SBLED	Hex codes
22 — ok	P.OFF	04
23 — ok	P.DEFL	CC
24 — ok	P.RAM	84
		94
		24

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

## Adjustments

## +B Set-up

## Preparation

- 1: Operate the TV set.  
2: Set the brightness and contrast to minimum.

## Procedure

- 1: Set the +B voltage up as follows: adjust P633 so that U147 shows 147V  $\pm$  0.5V.  
2: Confirm the following voltages (information in brackets refers to TX-25AD2):

U5:	5 $\pm$ 0.1/-0.25v
U8:	8 $\pm$ 0.5v (0.9v)

U12:	12 $\pm$ 0.5v
U16:	16 $\pm$ 0.5v/-1v
U25:	24.8 $\pm$ 1.0v
U28:	28 $\pm$ 1.0v
U40:	38.5 $\pm$ 1.5/-1.0v
U210:	209 $\pm$ 10v
U5SB:	5 $\pm$ 0.25v
UM:	8 $\pm$ 0.5 (+0.5/-0.9v)

## RF AGC

## Preparation

- 1: Receive a test pattern.  
2: connect an oscilloscope between the tuner RF AGC and ground.  
3: Set the oscilloscope gain range

The above figures are nominal and used for representative purposes only.

to 1V/div.

## Procedure

- 1: Check that the noise becomes large when the RF AGC VR VR4701 is turned counter-clockwise. After the check turn it 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.

## Cut Off

## Preparation

- 1: Receive a black and white signal.  
2: Degauss the tube externally.  
3: Set the TV into Service Mode 1.  
4: Select Ug2 test.

## Procedure

- 1: Confirm which colour has the biggest value.  
2: Turn the screen VR P3368 to minimum.  
3: Connect an oscilloscope to the cathode with the biggest value colour.  
4: Adjust P3368 to get a low light pulse voltage of 150v  $\pm$  5v.  
5: Adjust P3362 to whichever colour reaches 100  $\pm$  10 first.

## Comb Filter

## Preparation

- 1: Receive a PAL colour bar signal.

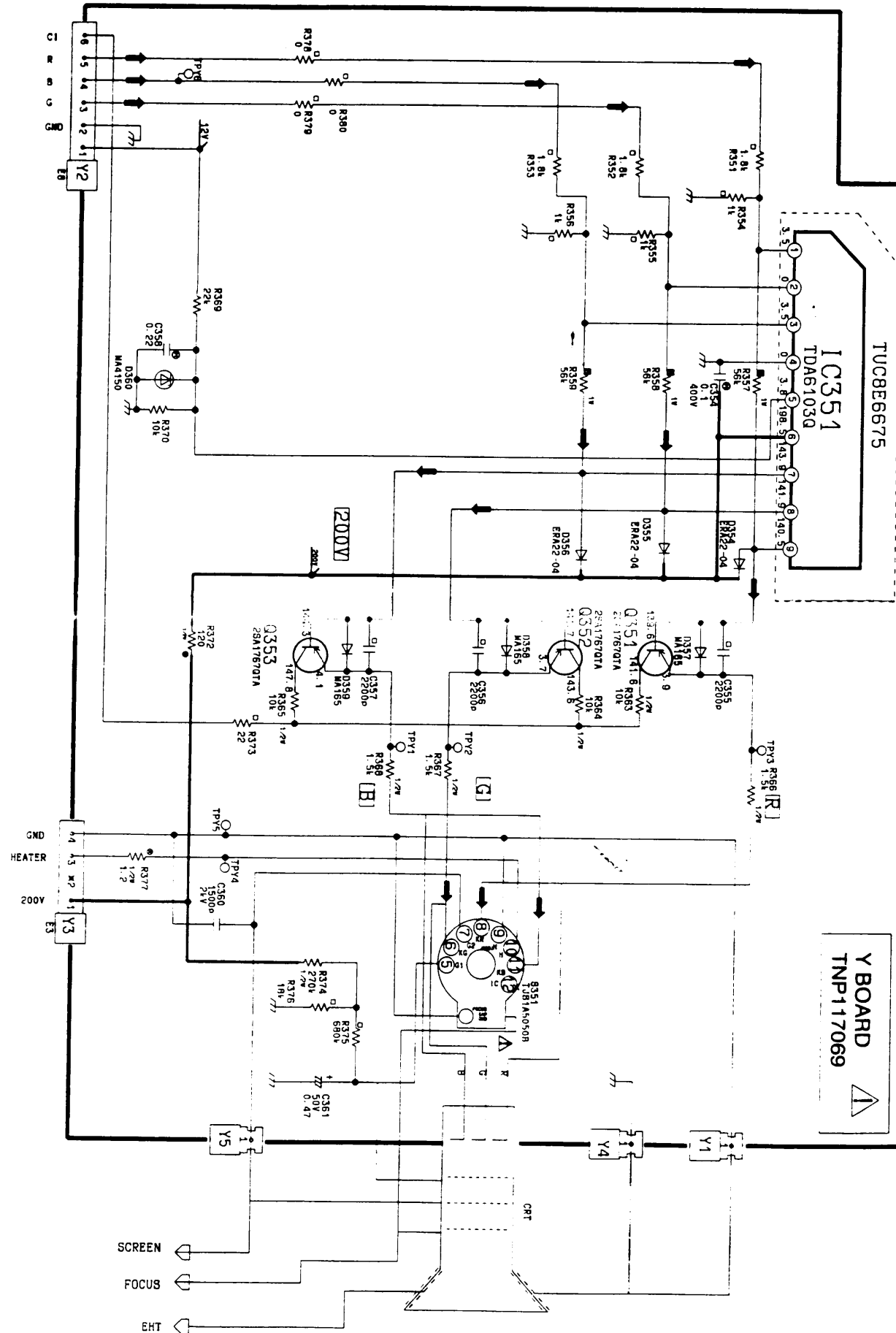
## Procedure

- 1: Confirm input video signal (pin 4 W2601 is 1Vp-p).  
2: Adjust P2601 to obtain 2Vp-p at TPF1.

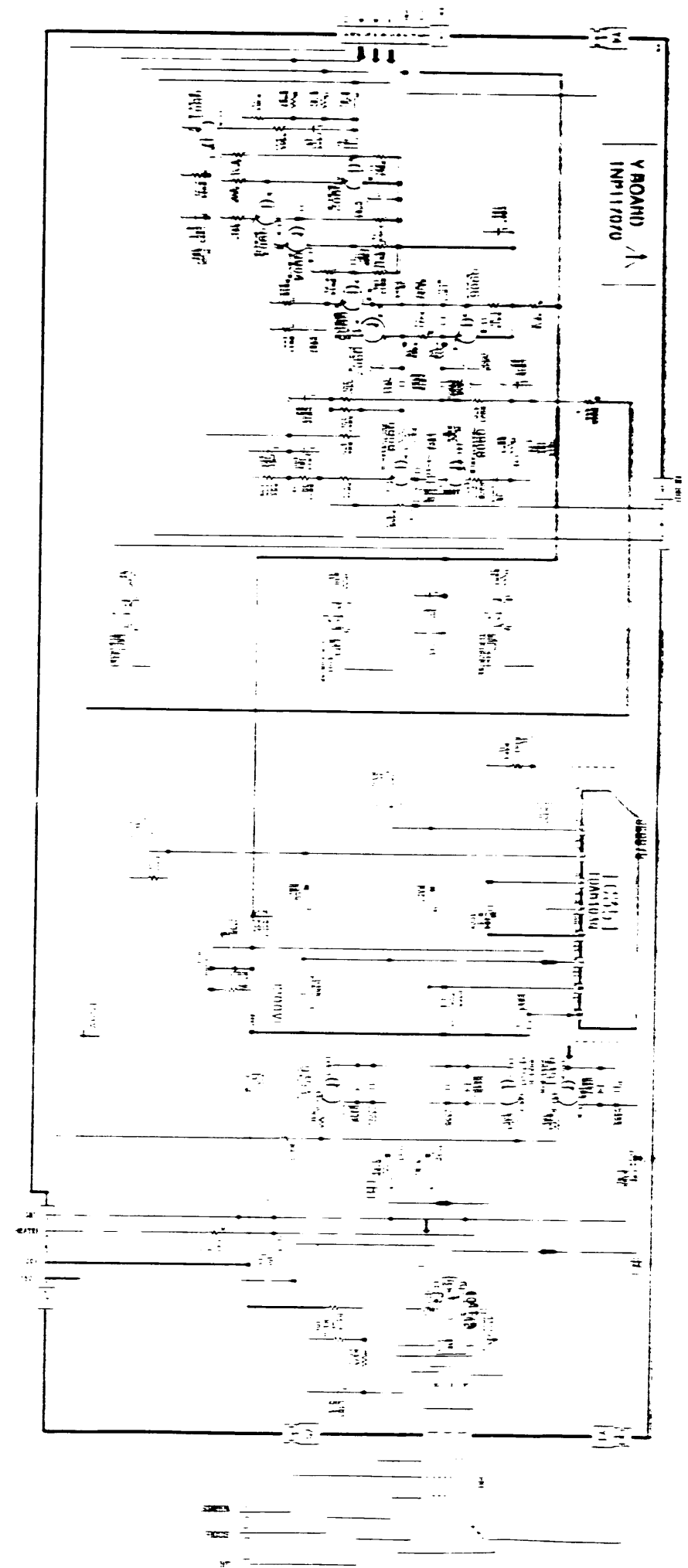
## Recommended Safety Parts Cont'd.

Item	Part No.	Description
<b>TX-25MD1</b>		
3	TKU8E00270	Rear Cover
4	TKY8E080	Cabinet
5	A68ESF002X11	CRT
8	TNP117037AQ	Y.P.C.B.
10	TNP197087AW	E.P.C.B.
11	TNP117034BA	A.P.C.B.
C538	ECWF2H514J	Film 500V 510nF
<b>TX-21MD1</b>		
3	TKU8E00280	Rear Cover
4	TKY8E100	Cabinet
5	A59ESF002X11	CRT
8	TNP117037AP	Y.P.C.B.
10	TNP197087AV	E.P.C.B.
11	TNP117034AZ	A.P.C.B.
C538	ECWF2H474J	Film 500V 470nF

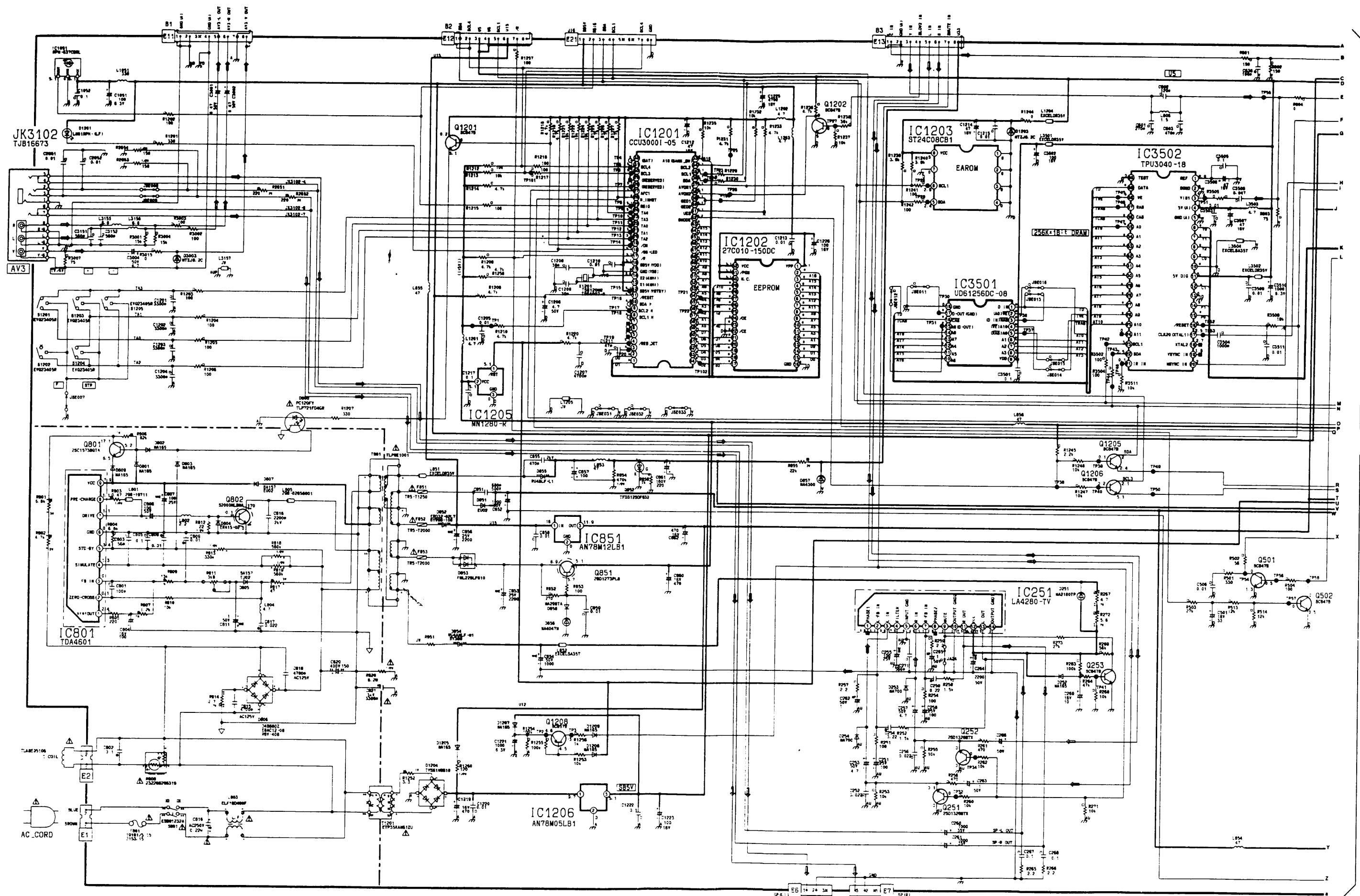
## CRT Diagram



## CRT Diagram (With Velocity Modulation)



## Main Diagram



Continued at 1

### Main Diagram Cont'd.

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