

SERVICE MANUAL

KTN-2001 / KTN-1401

Rev. No. : "A"



KORTEK CORPORATION

Information provided by:



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1.PRECAUTIONS

1-1 SAFETY PRECAUTIONS

WARNINGS : Service should not be attempted by anyone unfamiliar with the necessary precautions on this monitor. The following precautions are necessary during servicing.

- 1) For continued safety, do not attempt to modify the circuit board.
- 2) Disconnect the AC Power before servicing.
- 3) When the Monitor is operating, do not touch any heatsink on the Chassis as it is self-heated.

1-1-1 FIRE & SHOCK HARZARD

- 1) During servicing, pay attention to the original wires whether it is uncoated or undressed, especially the wires in the high voltage circuit section. If there is any uncoated or melted wire is found, then please do not try to replace the related parts, and wait for the qualified service person's coming.
- 2) Many electrical, mechanical parts in this monitor have special safety-related characteristics for protection against shock hazard and others. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage wattage,etc.
Replacement parts which have these special characteristics are identified in the manual and supplements by shading on the schematic diagram and the parts list.
- 3) When replacing Chassis, always be certain that all the protective devices are installed properly.
- 4) leakage current check (figure1 1)

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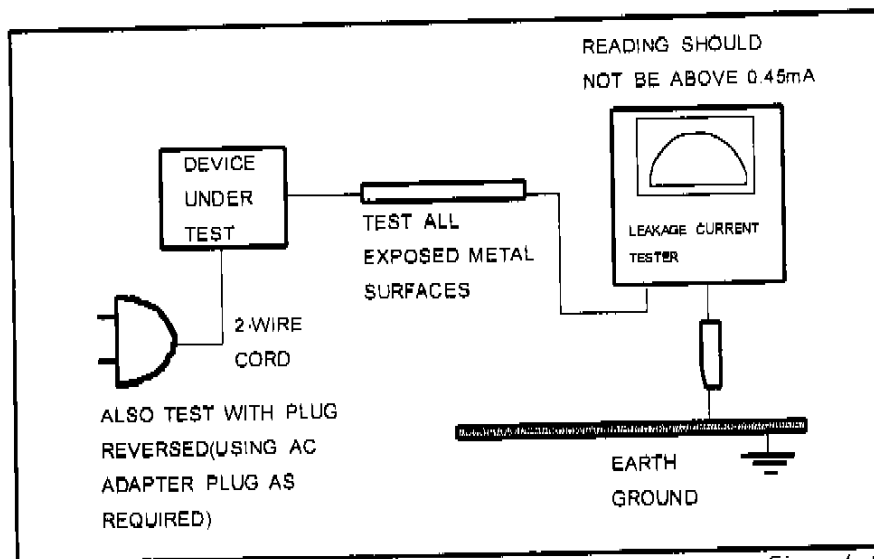


Figure 1

(TEST METHODE)

1-1-2. X-RADIATION

WARNING : *The only potential source of x-radiation is the picture tube, however when the high voltage. Circuitry is operating properly, there is no possibility of an x-radiation problem. The basic precaution is to keep the high voltage at the factory recommended level.*

- 1) To measure the high voltage, use a high-impedance high-voltage meter.
Connect(-) to chassis and (+) to the CRT anode cap.
- 2) Turn the contrast control max. clockwise.
- 3) Measure the high voltage. The high voltage meter should indicate the following factory recommended level
- 4) If the actual level exceeds the max. factory set level, then immediate service is required to prevent the possibility of premature failure of components
- 5) To prevent X-RADIATION possibility, it is essential to use the specified picture tube.
- 6) The nominal high voltage is 24KV and not exceed 27KV at zero beam current at rated voltage.

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1-2. SERVICING PRECAUTION

WARNING 1 : *First, reading "safety precaution" section of this manual. If unforeseen circumstances create conflict between the servicing precautions and safety precaution, always follow the safety precautions.*

WARNING 2 : *A high voltage VR replaced in the wrong direction may cause excessive X-RAY Emitting.*

WARNING 3 : *An electrolytic capacitor installed which the wrong polarity might explode.*

- 1) Servicing precautions are printed on the label, and should be followed closely.
- 2) Always unplug the AC power cord from the AC power source before attempting to remove or reinstall any component or assembly, disconnect PCB plugs or connectors, connect all test Components in parallel which an electrolytic capacitor.
- 3) After servicing, always check that the screw, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
- 4) Check the insulation between the blades of the AC plug and accessible conductive parts(example : metal parts, input terminals)
- 5) Never touch any of the locked B+ voltage. Do not apply AC power to the unit(or any of its Assemblies) unless all solid-state heatsinks are correctly installed.
- 6) Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

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2.Product Specifications

2-1 SPECIFICATIONS

1) KTN-2001

PARAMETER	MIN	TYP	MAX	UNITS
OPERATING VOLTAGE	100	115/230	230	VAC
OPERATING POWER	50	60	70	WATTS
LEAKAGE CURRENT TO CHASSIS GNG AT250VAC,50/60Hz(LINE/NEUT,IN COMMON)		< 0.40	0.45	mA
HI-POT LINE/NEUT, IN COMMON		< 2.0	2.4	mA
OPERATING TEMPERATURE	10		60	DEGREE
REL,HUMIDITY OPERATING	10		90	%
MAGNETIC SHIELD	INTERNAL			
DEGAUSSING	MANUAL TYPE			
VIDEO SIGNAL	+0.7Vpp,Ohm MONITOR TERMINATIONS			
RASTER DIM ADJUST RANGE HORIZONTAL	< 360		> 407	mm
RASTER DIM ADJUST RANGE VERTICAL	< 190		> 309	mm
MODE	15.75 KHz			
PINCUSHION(ALL BRIGHTNESS)			3.0	%
MIS-CONVERGENCE CENTER	0.75		0.8	mm
MIS-CONVERGENCE CORNERS		1.2		mm
VERTICAL				
SCAN RATE		60		Hz
HOLD IN RANG			± 5	Hz
SYNC +5V 74LS LEVELS		5.0	5.0	VOLTAGE
LOW	0.0	0.0	0.6	VOLTAGE
NON-LINEARITY			5	%
HORIZONTAL				
SCAN FREQUENCY	15.74		15.76	Khz
HOLD IN RANG			± 400	Hz
SYNC POLARITY	POSITIVE			
SYNC +5V 74LS LEVELS	5.0	5.0	5.0	VOLTAGE
LOW	0.0	0.0	0.6	VOLTAGE
NON-LINEARITY			5	%
WHITE BAKANCE & LUMINANCE	$X = 281 \pm 20$ $y = 311 \pm 20$ $Y = 30 \pm 3$ F/L $Y = 70 \pm 5$ F/L			

KORTEK Corporation**KTN-2001/1401****2) KTN-1401**

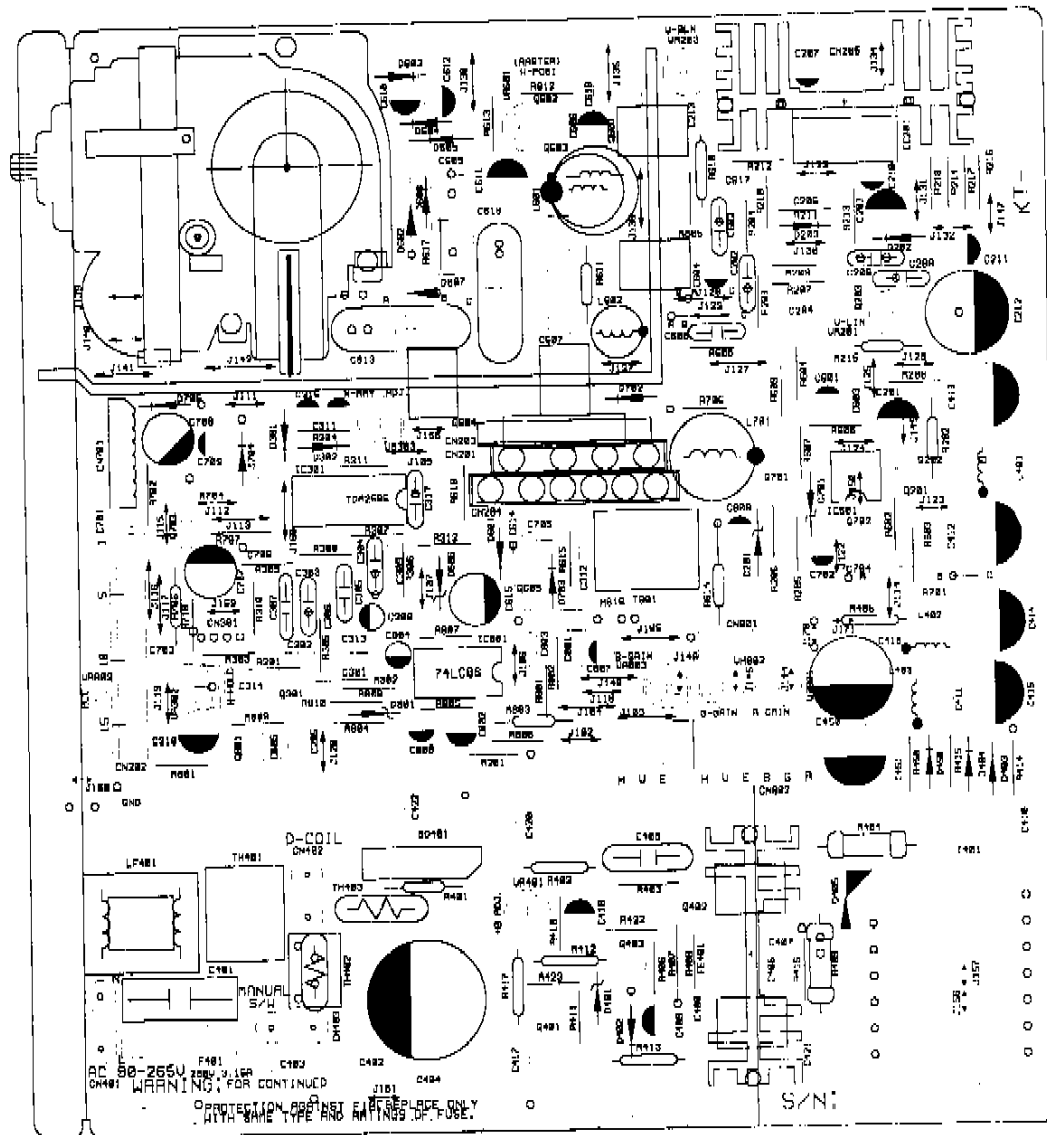
PARAMETER	MIN	TYP	MAX	UNITS
OPERATING VOLTAGE	100	115/230	230	VAC
OPERATING POWER	40	50	60	WATTS
LEAKAGE CURRENT TO CHASSIS GNG AT250VAC,50/60Hz(LINE/NEUT,IN COMMON)		< 0.40	0.45	mA
HI-POT LINE/NEUT, IN COMMON		< 2.0	2.4	mA
OPERATING TEMPERATURE	10		60	DEGREE
REL,HUMIDITY OPERATING	10		90	%
MAGNETIC SHIELD	INTERNAL			
DEGAUSSING	MANUAL TYPE			
VIDEO SIGNAL	+0.7Vpp,75 Ohm MONITOR TERMINATIONS			
RASTER DIM ADJUST RANGE HORIZONTAL	< 250		> 285	mm
RASTER DIM ADJUST RANGE VERTICAL	< 118		> 214	mm
MODE	15.75 KHz			
PINCUSHION(ALL BRIGHTNESS)			3.0	%
MIS-CONVERGENCE CENTER	0.64		0.7	mm
MIS-CONVERGENCE CORNERS		1.0		mm
VERTICAL				
SCAN RATE		60		Hz
HOLD IN RANG			± 5	Hz
SYNC +5V 74LS LEVELS		5.0	5.0	VOLTAGE
LOW	0.0	0.0	0.6	VOLTAGE
NON-LINEARITY			5	%
HORIZONTAL				
SCAN FREQUENCY	15.74		15.76	KHz
HOLD IN RANG			± 400	Hz
SYNC POLARITY	POSITIVE			
SYNC +5V 74LS LEVELS	5.0	5.0	5.0	VOLTAGE
LOW	0.0	0.0	0.6	VOLTAGE
NON-LINEARITY			5	%
WHITE BAKANCE & LUMINANCE	$X = 281 \pm 20$ $y = 311 \pm 20$ $Y = 40 \pm 3$ F/L $Y = 70 \pm 5$ F/L			

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2-2 PCB DIMENSIONS

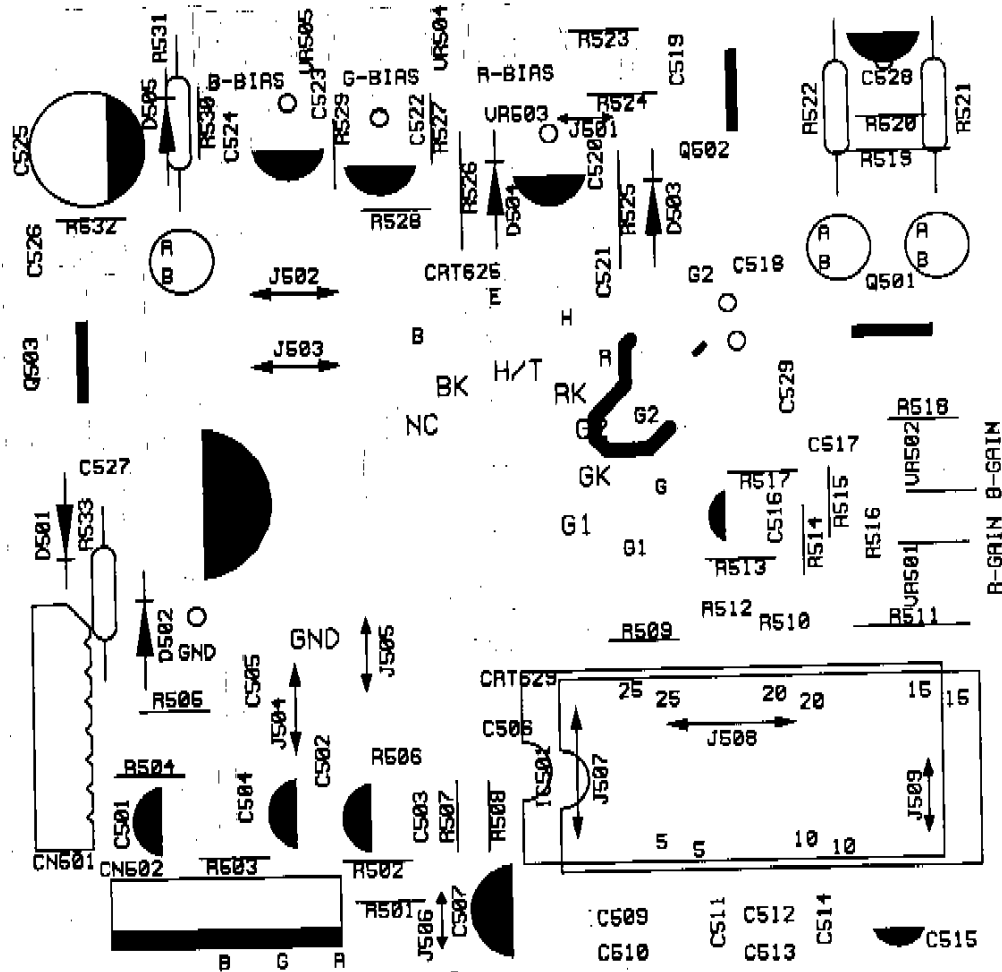
1) MAIN PCB



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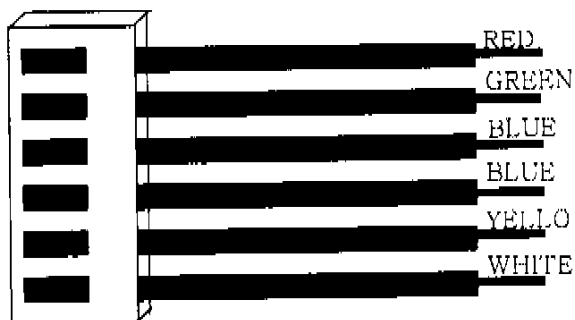
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2) SOCKET PCB

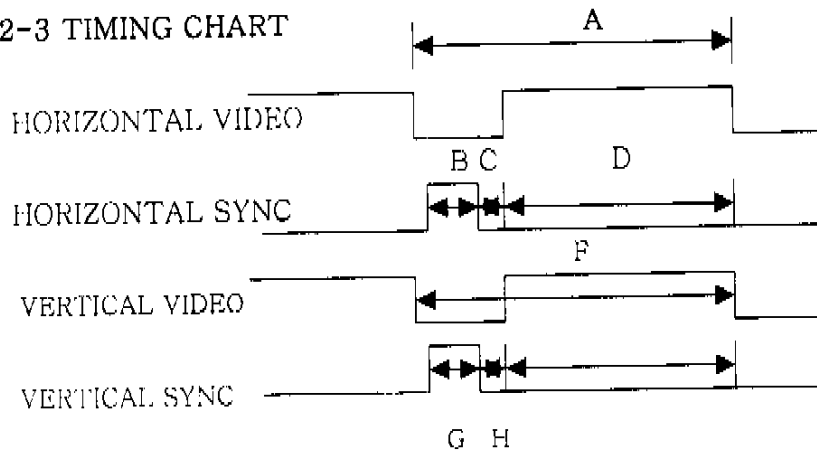


2-2-1 6PIN SIGNAL CABLE CONNECTOR

2-2-2 PIN DESCRIPTION



PIN - NO	PIN- NAME
PIN 1	RED
PIN 2	BLUE
PIN 3	GREEN
PIN 4	BLACK
PIN 5	YELLOW
PIN 6	WHITE

KORTEK Corporation**KTN-2001/1401****2-3 TIMING CHART**

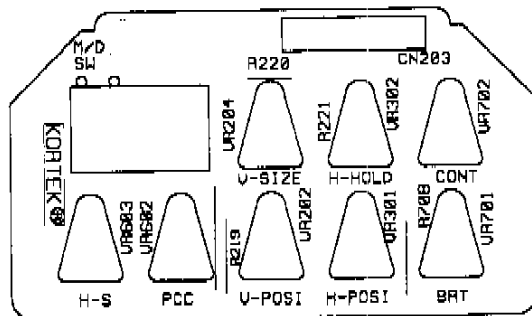
NO		1	
MODE		STANDARD	
RESOLUTION	H	624	
	V	200	
SYNC POLARITY	H	POS	
	V	POS	
H	FREQUENCY	kHz	15.750
	PERIOD	μ s	62.4
	SYNC	μ s	5.5
	B/P	μ s	5.8
	ACTIVE	μ s	43.0
V	FREQUENCY	Hz	60
	PERIOD	ms	16.62
	SYNC	ms	0.98
	F/P	ms	1.06
	ACTIVE	ms	12.94
PIXEL FREQUENCY		MHz	14.465
INTERACE		NO	

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3. OPERATING INSTRUCTIONS

3-1 LOCATION FUNCTION OF CONTROL PCB ASS'Y



4. DJUSTMENT

4-1 ADJUSTMENT CONTROL

1) Orientation

When servicing, always face the monitor to the east.

2) Warm-up time

The monitor must be on for 30 minutes before starting alignment. Warm-up time is especially critical in color temperature and white balance adjustments.

3) Signal

Analog 0.714vpp positive at 75Ω , internal termination.

4) B+ line adjustment

Signal in; adjust in order to 110 v

5) Screen adjust (FBT) : Adjust G2 V/R for BACK RAST into 0.5F/L at the max of Brightness

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4-2 DISPLAY CONTROL ADJUSTMENTS [*() for KTN-1401]

A. SELECT H-SIZE FUNCTION, ADJUST TO THE HORIZONTAL SIZE IS

360 mm \pm 3mm *(250 mm) ----- (V/R603)

B. SELECT V-SIZE FUNCTION, ADJUST TO THE VERTICAL SIZE IS

190mm \pm 3mm *(118mm) ----- (V/R204)

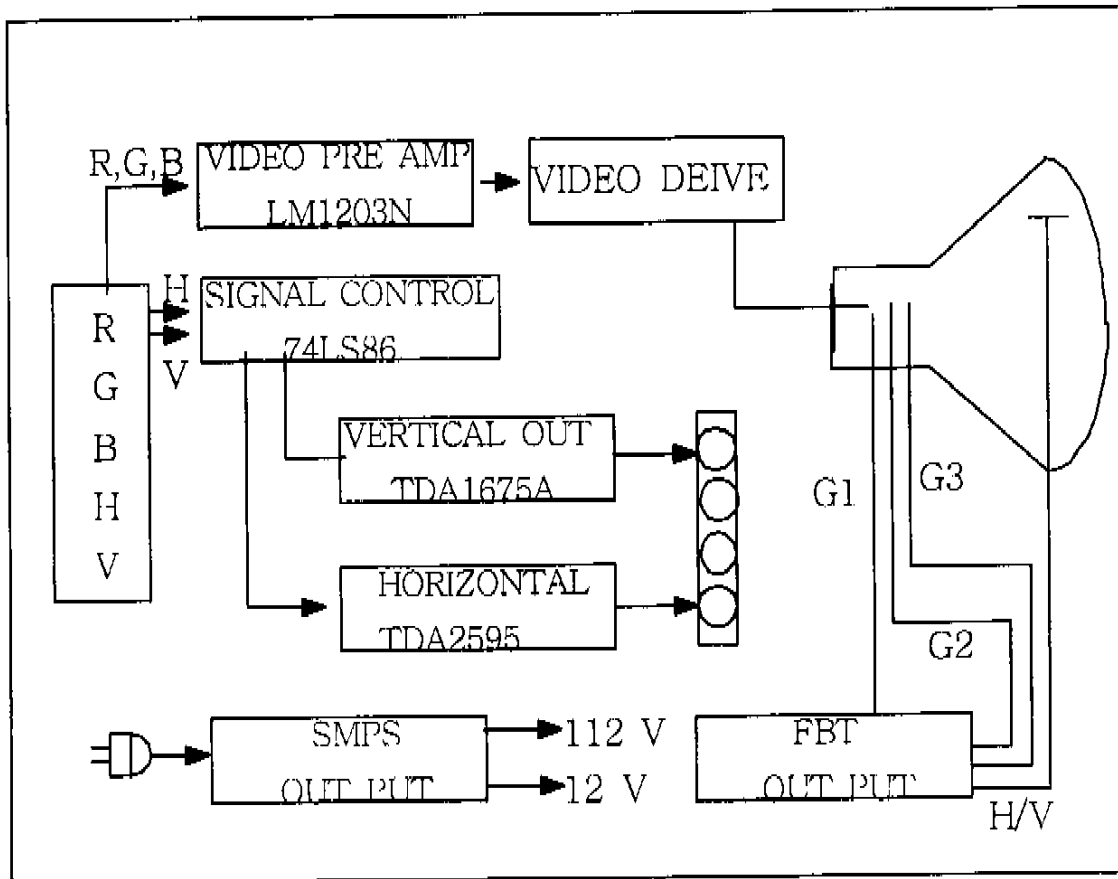
C. SELECT H-POSI FUNCTION, ADJUST TO CENTER THE PATTERN WITHIN THE

RASTER ----- (V/R301)

D. SELECT V-POSI FUNCTION, ADJUST TO CENTER THE PATTERN WITHIN THE

RASTER ----- (V/R202)

E. ADJUSTMENT FOCUS2 VR ON FBT TO THE OPTIMUM.

KORTEK Corporation**KTN-2001/1401****5. BLOCK DIAGRAM**

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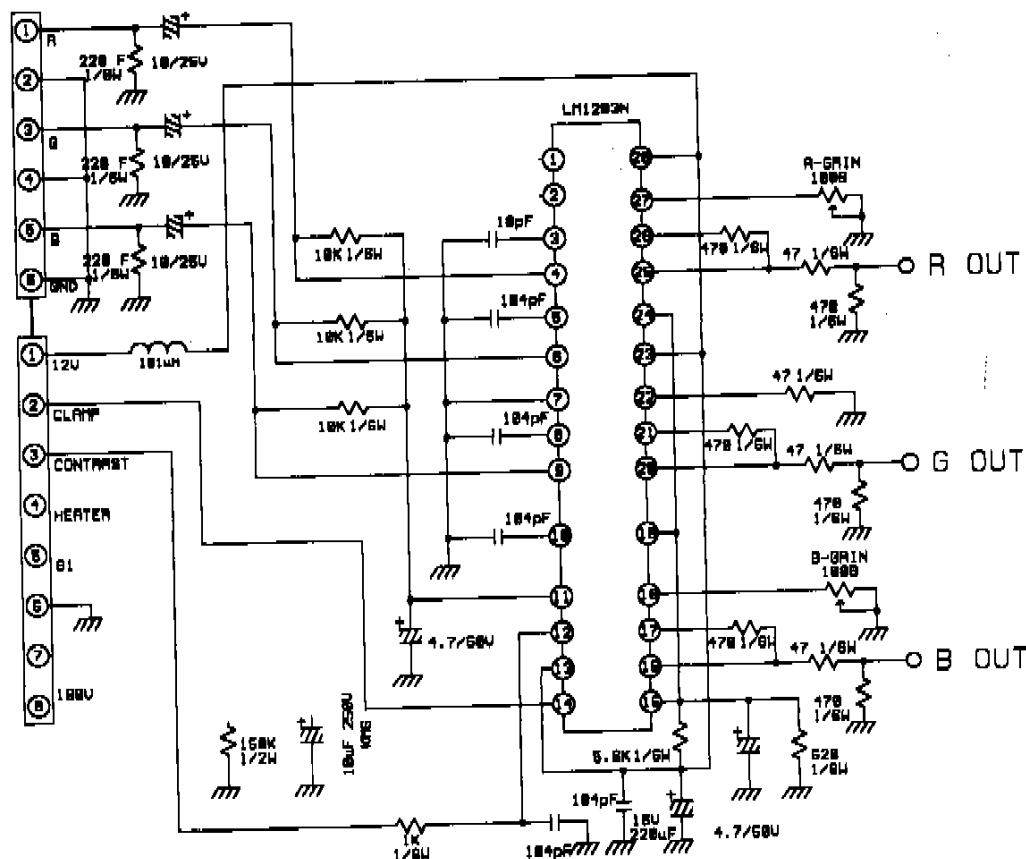
6. GENERAL THEORY OF OPERATION

6-1 BLOCK DIAGRAM

Above is the block diagram of the monitor as a whole. Each major section is presented in a block. The individual circuit that make up the section is covered later and are not shown here. This simple block diagram will allow you a fundamental understanding of the complete monitor. This will help when covering the sections individually. The process from video signal to video display starts with the video signal generated from the source. The signal is composed of information that is fed into various sections of the monitor. The following diagrams are based on 14"/20" CGA monitor and are included for reference only. Actual circuit may be different. Please see update schematic and parts list enclosed.

6-2 VIDEO DRIVE SECTION

VIDEO DRIVE SECTION



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Video signal (0.7V PP) supplied from "CN905 PIN1(RED), 3(GREEN), 5(BLUE)" is supplied to IC501 PIN4, 6, and amplified through 9C501, C502, C503. PIN 5,"C511, PIN 8 C512, PIN 3 C513 and PIN 10 C514 are a capacitor for filter.

IC501 performs VIDEO PRE AMP and its amplitude is determined by DC BIAS of PIN 11 CHIP. PIN12 (CONTRAST) controls its output video level.

Video signal passing through the DCBIAS and the Contrast control is output to PIN 25 (RED) PIN 20 (GREEN) and PIN 16 (BLUE), and supplied to Video output circuit.

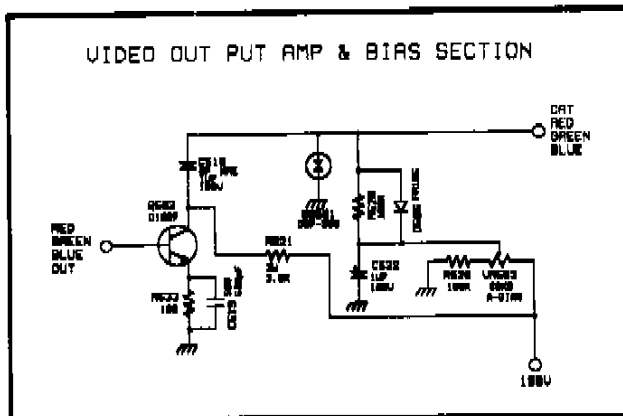
PIN17, 21, 26 are resistor for Video Drive Control.

PIN 13, 23 and 28 are the Vcc input drives used to provide the power to LM1203IC.

They supply the power of 1.4 V down-converted through R510 and R511 distribution resistance to PIN 15, 19 and 24 (B, G, R-CLAMP+). PIN 18, 22 and 27 are B, G and R-Drive. PIN 22 is fixed (G-Drive is fixed as a reference), and PIN 18 and 27 control gains.

Refer to LM1203 Date Book for details.

6-3 VIDEO OUT PUT AMP & BIAS SECTION



Signal supplied from video PRE AMP is sent to Q501 base. The amplitude of Q501 is determined by EMITTER RESISTOR R518 and COLLECTOR RESISTOR R522. Circuit of C517 is configured for prevention from and compensation of loss of high frequency.

VIDEO OUT PUT AMP is composed of three circuits of R, G and B. The above description is about RED circuit. For the description of Green and Blue circuit, see the entire circuit because Location no. of the parts are differently applied.

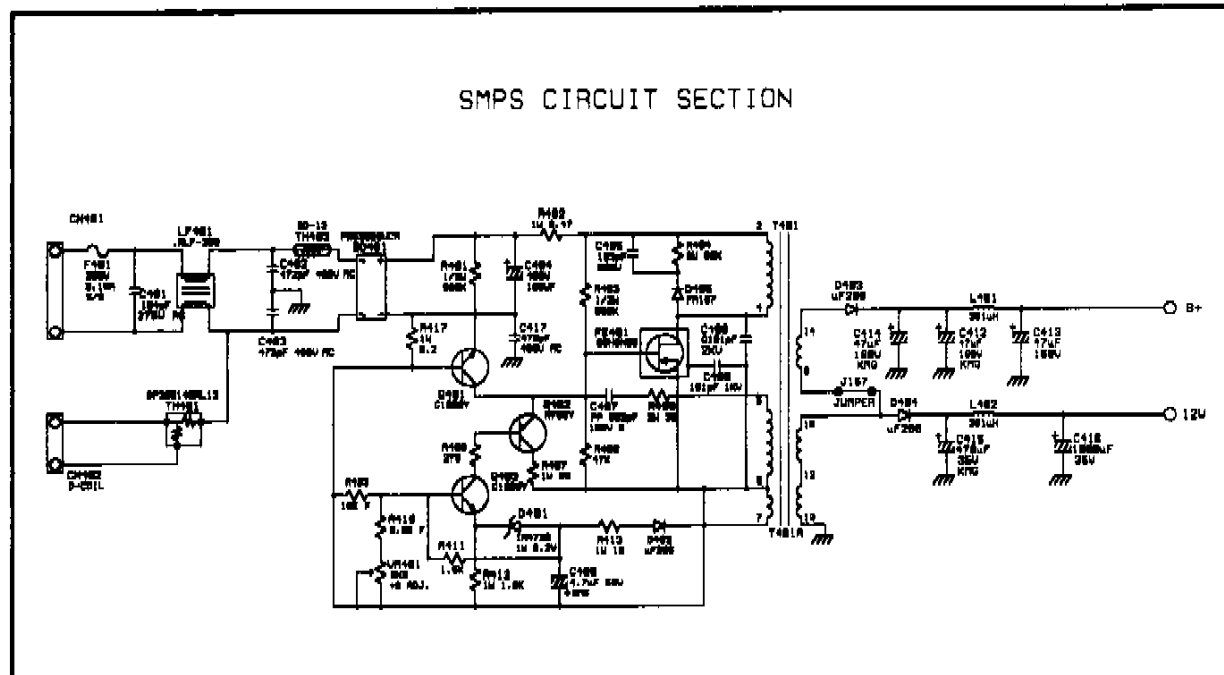
To provide enough BIAS voltage to the cathode, adjust V/R503 and R523 to supply 115~125 V to FBT PIN 10, and transmit the amplified video to the cathode to display.

Understand the characteristics of the parts before you provide after sales service or change the part value.

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6-4 SMPS CIRCUIT SECTION



Power supply is composed of line filter, switching AMP and switching trans circuit. Line filter circuit removes the noise element of power line supplied from outside and prevents noise generated in switching amp from flowing out to external power line. The circuit is made up of C401, L401, C402 and C403.

AC voltage supplied through line filter circuit is supplied to D401 and converted to ripple voltage, and then converted to DC through the operation of C404.

The switching circuit operates as following; As the DC is supplied to FE401 Gate through R402 (overvoltage preventive resistor) and R403 (Start Resistor), FE401 is turned on, provides pulse to T401 PINs 2 and 4, and supplies the voltage to T401 PINs 5, 6 and 7. The voltage supplied to PINs 5, 6 and 7 is supplied to Q403 Base and on both ends of R402.

The voltage to Q402 Base is variable by V/R401, and you can have the required voltage for the second destination. Therefore, if high voltage is supplied to Q403 Base, voltage to Q402 Base gets lower, and collector voltage goes up. On the other hand, if low voltage is supplied to Q403 Base, Q402 Base voltage gets lower and collector voltage goes down.

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If the voltage to Q401 Base goes up, Vc voltage goes down steeply, and FE401 becomes inactive. That makes Q401 Base voltage goes down, and voltage to FE401 Gate goes up, and hence, FE401 becomes active. Switching operation is performed as these processes are repeated. If high voltage feeds back, Q401 turns on, and voltage to FE401 Gate is reduced to stop and protect the circuit. C405, R404 and D405 are the circuits that protect FE401 from surge as it switches. These sequential actions make power to be supplied to the secondary side of T401 and to each part. The voltage provided to the secondary side is transformed to DC through D403, leveled in C414 and C412, removed noise in L401 and C413, and provided to FBT PIN3 to be boosted. The voltage rectified in D404 is provided to IC501, IC301, IC801, IC201 and HDT for normal monitor operation.

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PIN 8 is a protection circuit and operates by detection of feedback current.

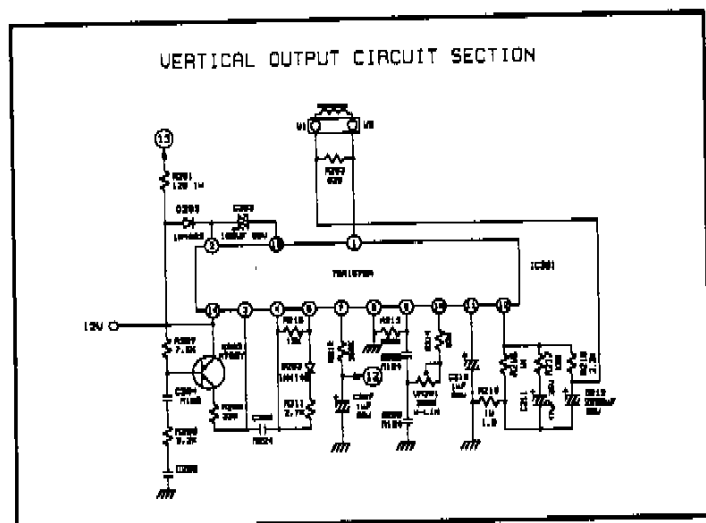
Generally it can be used by set-up in the range of 1-8.5V. If abnormal phenomena happens, then high voltage goes up over about 27KV due to abrupt elevation of voltage, X-ray is discharged within Brown tube. It is the circuit to prevent this and designed to stop a circuit by detection of this voltage at IC 301 (TDA 2595) PIN No 8 according to set-up voltage.

PIN 3 is connected to a voltage of 12V line, adjusts and controls DC voltage, and amount of H-POS varies according to varying amount of V/R.

PIN 4 is a horizontal output terminal and can operate horizontal drive stage with this output. PIN 15 is a terminal to supply Vcc voltage.

PIN 14 H-POS adjusts and controls with DC voltage, and circuit is composed of C308, R309, R308 and VR302.

6-6 VERTICAL OUTPUT CIRCUIT SECTION



As IC 201 is built-in with oscillating part within chip, it has a function of its own oscillation, amplification and output, and it is designed to operate independently. Besides it is an independent circuit having special functions of ESD protection, thermal shutdown protection and etc.

TDA 1675 is a device used to supply to deflection yoke by oscillation and amplification of the oscillating part built-in within chip, and send output by amplification with pin No 1.

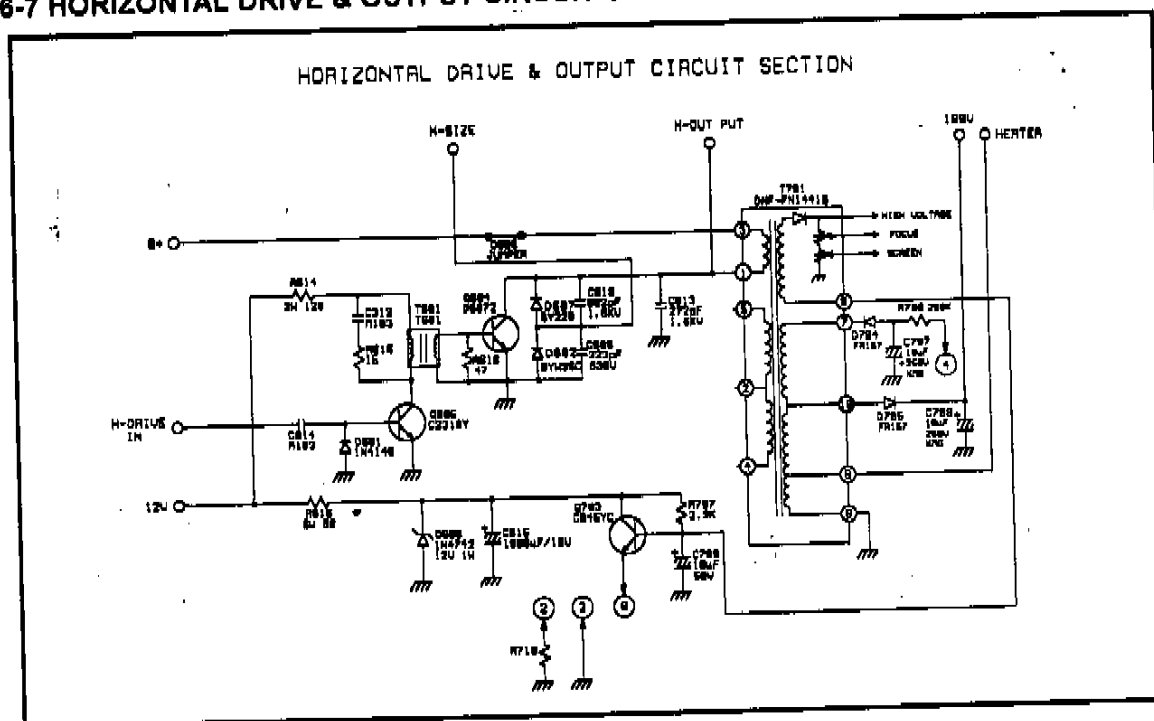
When IC 201 PIN 1 is not supplied with SYNC from outside, it receives input of serrated wave generated by determination of pulse width according to integer of TDA 1675 PIN 3, 4, 6. Then it is amplified through amplifier built-in within chip and is supplied to deflection yoke by its output. It is thus composed so that it performs free running motion in this sequence.

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PIN 2 receives a voltage of 12V line and is connected to a voltage of about 22V while going through D202. This voltage is a terminal to amplify a voltage required in vertical deflection and send output. It receives from fly-back generator in the section of retrace time. PIN 3, PIN 4 and PIN 6 are pulse generators, and charge and discharge occurs according to capacitor value set up between PIN No 3 and No 4, and resistor value set up between PIN No 4 and No 6. OSC built-in within chip oscillates using this time, and this pulse becomes output to PIN 1 and deflected. PIN 5 and PIN 13 is NC terminal. PIN 7 is a terminal to control V-size and is controlled with DC level. Its surrounding circuits are composed of R212, C207 and VR204, and are controlled according to the value of V/R204. PIN 8 is GND terminal. PIN 9 and 10 are terminals to control V-linearity and its circuit is as follows. It is composed of R214, V/R204, C209, C208 and R213, and R203 is a resistor set up for limiter use whose value is set up for correction of linearity for C208 and C209. V-linearity is to be varied according to value of V/R204. PIN 11 and 12 are composed of reversed amplifier and filter, and its circuit is composed of C210, R215, R216, C211, R217, R218 and C212. R215 and R216 are set up for limiter use of vertical output. R218 and C212 are circuits used for damping in order to prevent distortion occurred upon switching of current flowing in DY coil. PIN 14 is Vcc line and is supplied with a voltage of 12V from SMPS, and is an input terminal to make IC 201 operate smoothly.

6-7 HORIZONTAL DRIVE & OUTPUT CIRCUIT SECTION



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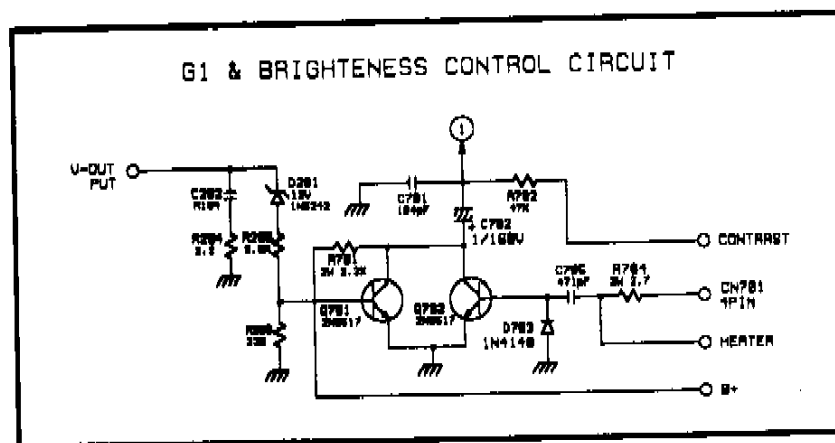
When horizontal drive receives output pulse from TDA2595 PIN 4 and supplies it to Q605 base, Q605 repeats on/off motion by pulse and at this time pulse generated at T601 operates T601.

It is composed that if T601 operates, pulse abandoned from the secondary side of T601 can fully drive horizontal output TR. Then it is supplied to Q604 base and repeats on/off motion by pulse. Thus FBT can be operated. Then pulse to be supplied to horizontal deflection is generated at C616, C609 and C613 (When Q604 is on, C616, C609 and C613 are charged. When it is off, they are discharged.) for supply and Vcp voltage of 900~1000V is connected to T701 PIN1. This voltage varies according to the supplied voltage and here supplied voltage is boosted into higher voltage at T701. Then it becomes output as high voltage, screen voltage, focus voltage and etc.

6-8 G1 & BRIGHTNESS CONTROL CIRCUIT

G1 control connects CDT G1 deeply to blanking section and makes line not to appear on screen by using the horizontal and vertical blanking pulse. And also this voltage receives input voltage of FBT PIN 7 and it is composed to control brightness so that voltage is controlled in the range of -0~-70V.

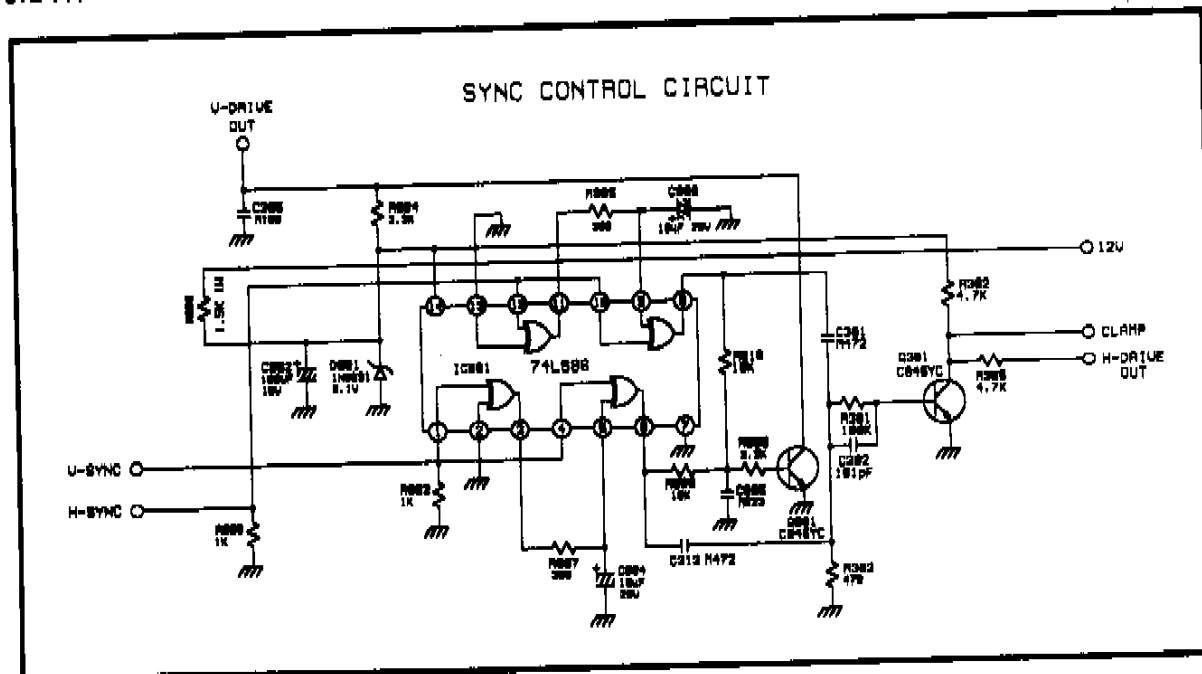
Q702 is a circuit composed so that line does not appear on screen by turning on of blanking section only and making complete cut-off through connecting deeper minus voltage to G1 than back raster level. It is composed of D201, R205, R206, R701, Q701, Q702, D702, D703, C705 and etc.



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6-9.SYNC CONTROL CIRCUIT



This SYNC Control Circuit acts a role to transform so that output of constant level is always made regardless of input or no input of SYNC.

In order to do so the circuit is composed using the chip built-in with 4 sets of EXCLUSIVE-OR Gate circuit.

PIN 14 is Vcc supplying terminal for driving of chip.

PIN 1, 2, 4, 5, 9, 10, 12 and 13 are SYNC input terminal.

PIN 3, 6, 8, 11 are output terminal. (Please refer to the following Function Table for detail contents.)

* FUNCTION TABLE

◆ EACH GATE

IN-PUT		OUT-PUT
A(PIN 1)	B(PIN 2)	Y(PIN 3)
L	L	L
L	H	H
H	L	H
H	H	L

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6-10 KTN-2001 (1401) Adjustment Method

(Only different parts of 14", 20" specification are expressly indicated.)

1. B+ voltage adjustment method

- 1) Measuring terminal: D403 cathode side
- 2) Adjusting V/R: VR401
- 3) Adjusting voltage: $107 \pm 0.3V$ ($110 \pm 0.5V$) - Option
- 4) Measuring condition: AC 120V, 60 Hz, cross hatch pattern
- 5) Other voltage: $6.2 \pm 0.1V$ $149 \pm 0.5V$ ($134 \pm 0.5V$)

2. Screen voltage adjustment method

- 1) Measuring terminal:
- 2) Adjusting V/R: F.B.T. screen VR
- 3) Adjusting voltage: to adjust so that Back Raster is 0.1 F/L
- 4) Measuring condition: cross hatch pattern

3. High voltage adjustment method

- 1) Measuring terminal: CRT anode
- 2) Adjusting V/R: $24KV \pm 300V$
- 3) Measuring condition: cross hatch pattern

Screen size: at full scan (horizontal frequency: 15.75 KHz)

4. Contrast adjustment method

- 1) Measuring terminal: center of screen
- 2) Adjusting V/R: VR702
- 3) Measuring condition:
 - Screen voltage: $500 \pm 5V$
 - Video input voltage: 0.7V
 - Screen brightness: To adjust into max 70F/L.
- 4) Adjusting method:
 - To supply WINDOW pattern by operation of signal source
 - To adjust brightness into 70F/L by changing of V/R702 from Max to Min

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5. Horizontal Raster position adjustment

- 1) Adjusting V/R: no adjustment
- 2) Adjusting position: center of screen

6. Check of coordinates value

- 1) Adjusting position: center of screen (measured as CA-100 in CRT face)
- 2) Measuring condition: After adjusting Back Raster into 0.1F/L, by varying of screen at Cross Hatch, measurement is made at max 70F/L in Window pattern

X: 281 ± 20

y: 311 ± 20

Y: 60F/L

At this time, please confirm 40F/L at Full White

7. Other V/R Adjustment

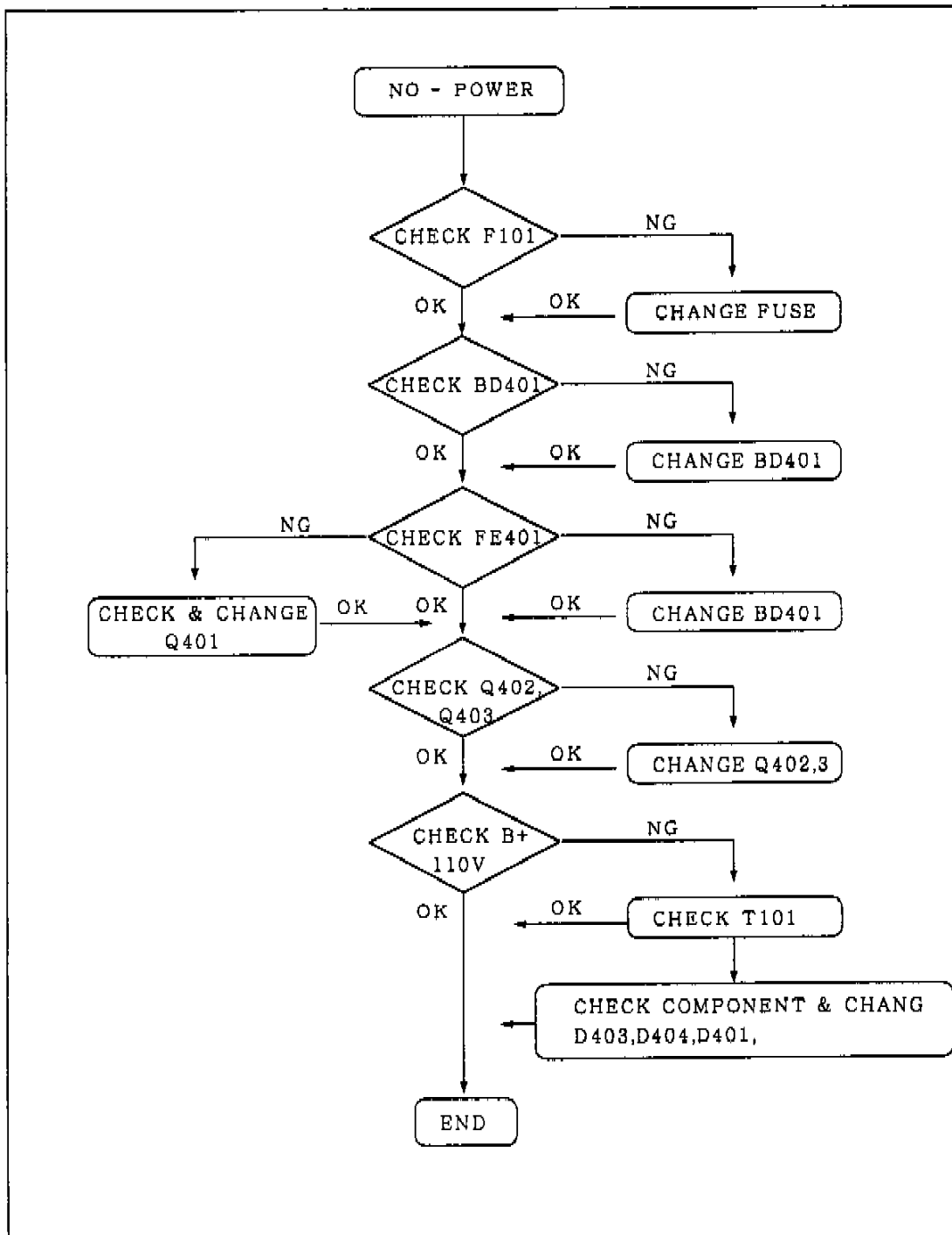
- 1) Measuring condition: BS-120 cross hatch pattern (31.5 KHz 640*480 mode)

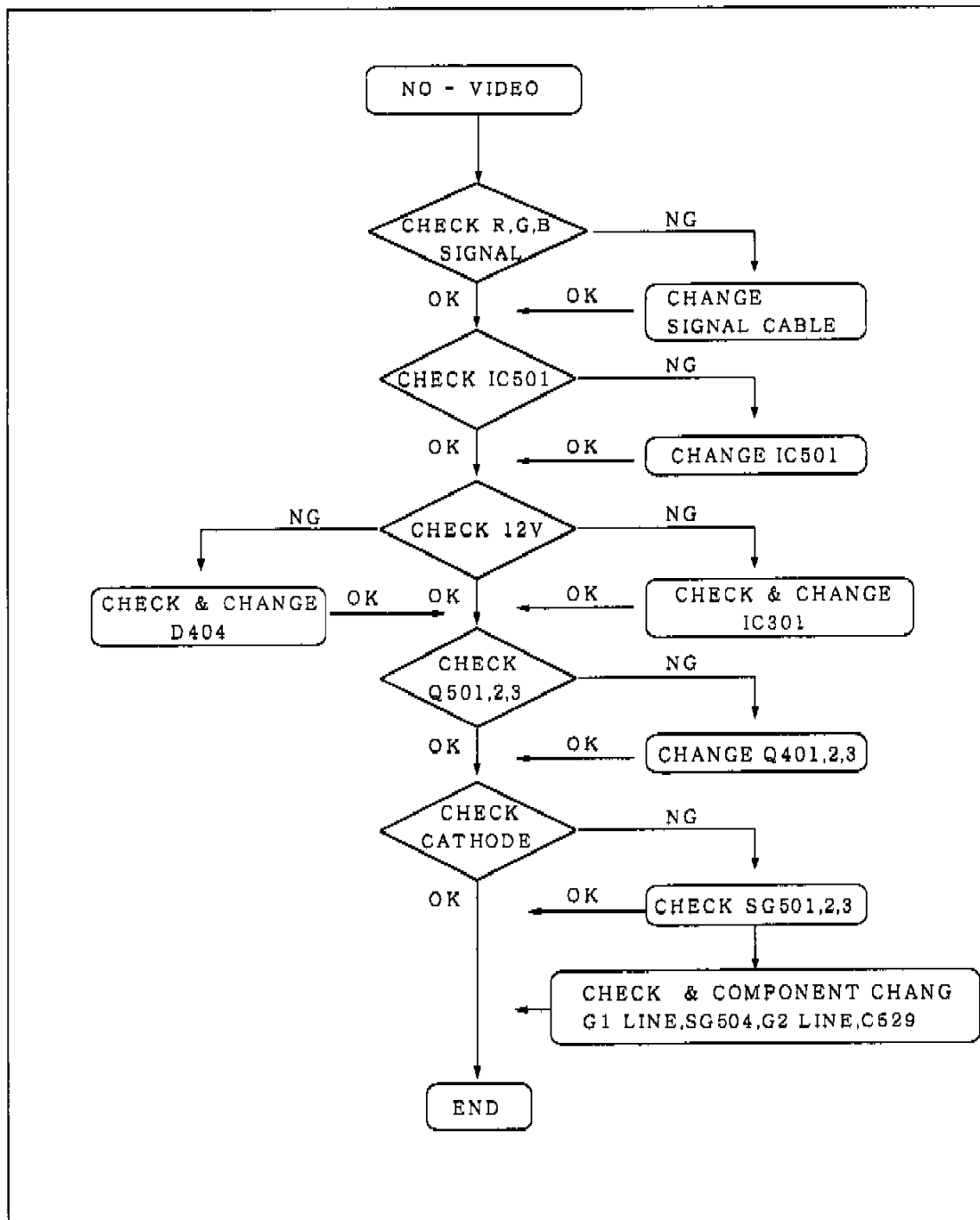
- 2) Measuring method:

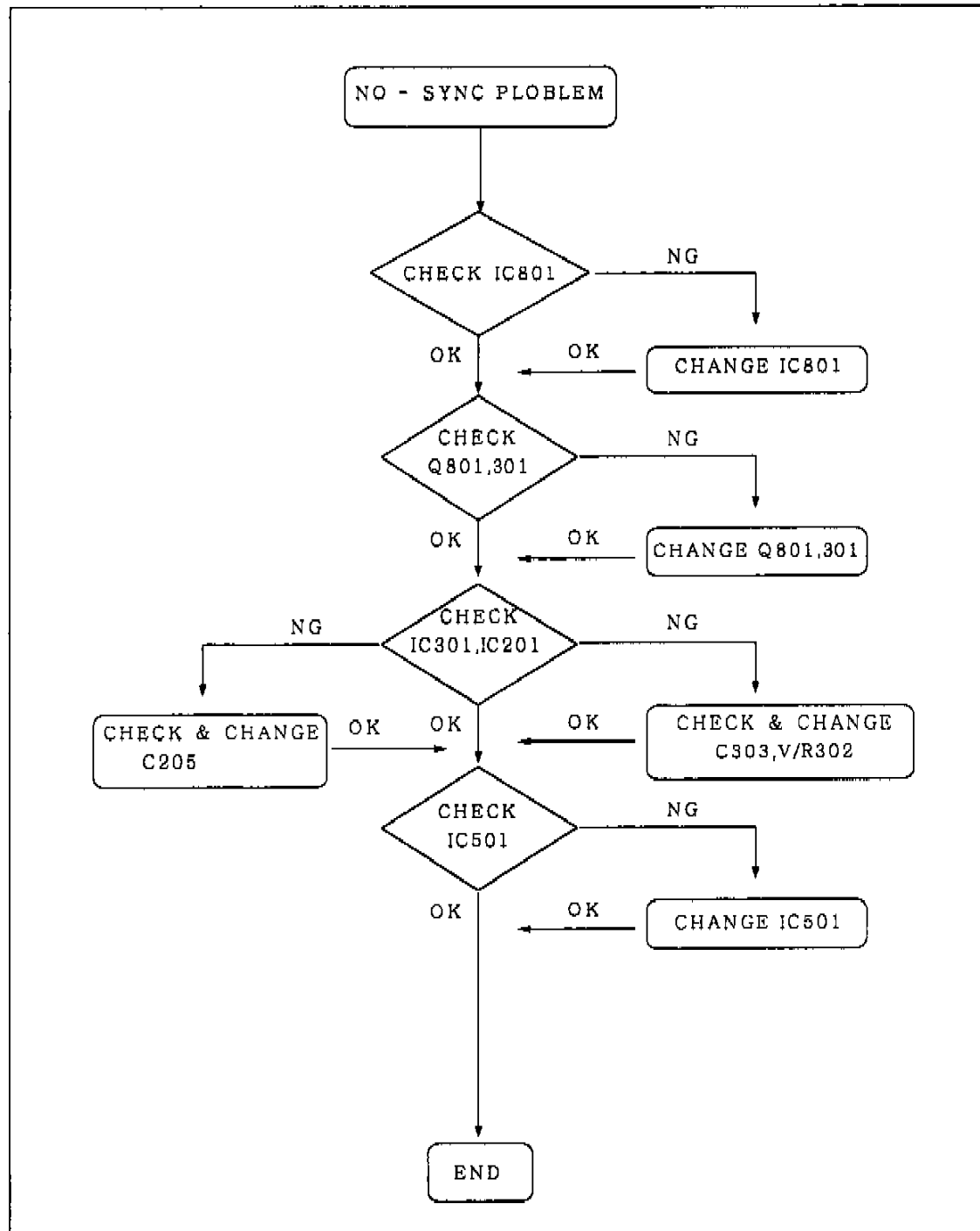
H-size	Min	below 360mm (250mm)
	Max	over scan
V-size	Min	below 190mm (118mm)
	Max	over scan
H-pos	over 20mm from center	
V-pos	over 10mm from center	

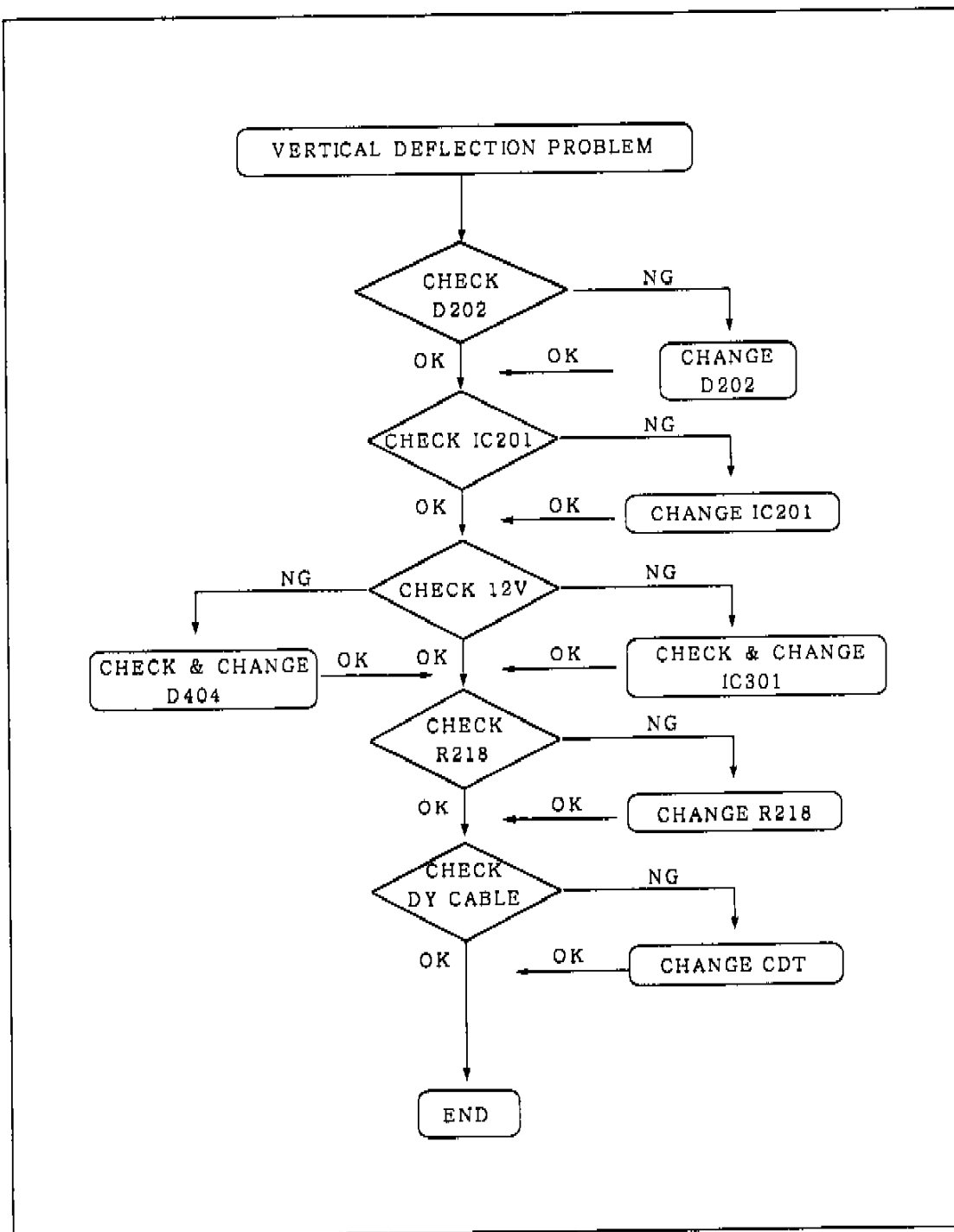
8. High voltage regulation check

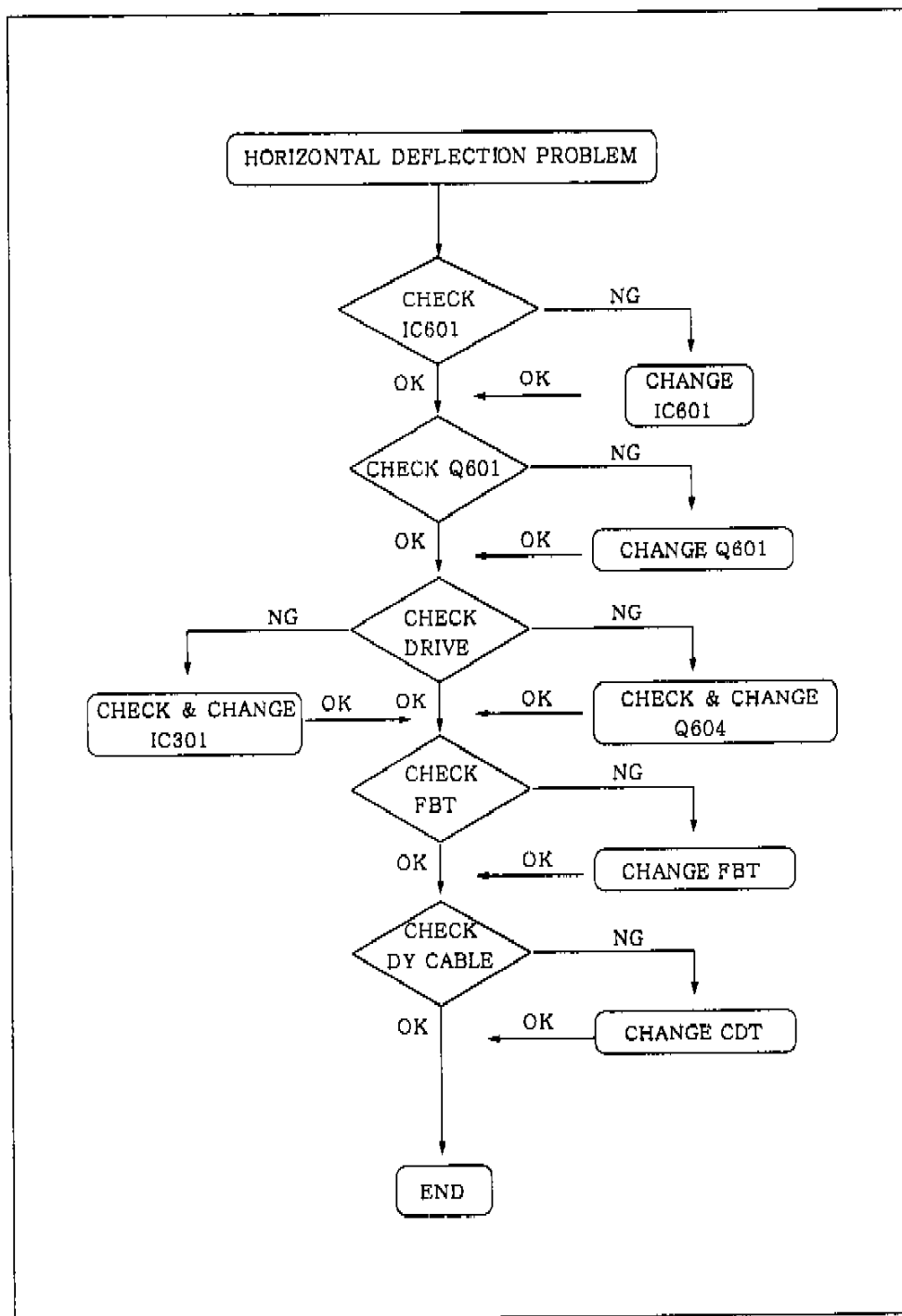
- 1) Measuring terminal: CRT anode
- 2) Measuring voltage: $24KV \pm 300V$
- 3) Measuring condition: To adjust size varying status of screen at time of maximum and minimum in Contrast V/R under Full White Pattern
- 4) Screen change: within 2.0mm

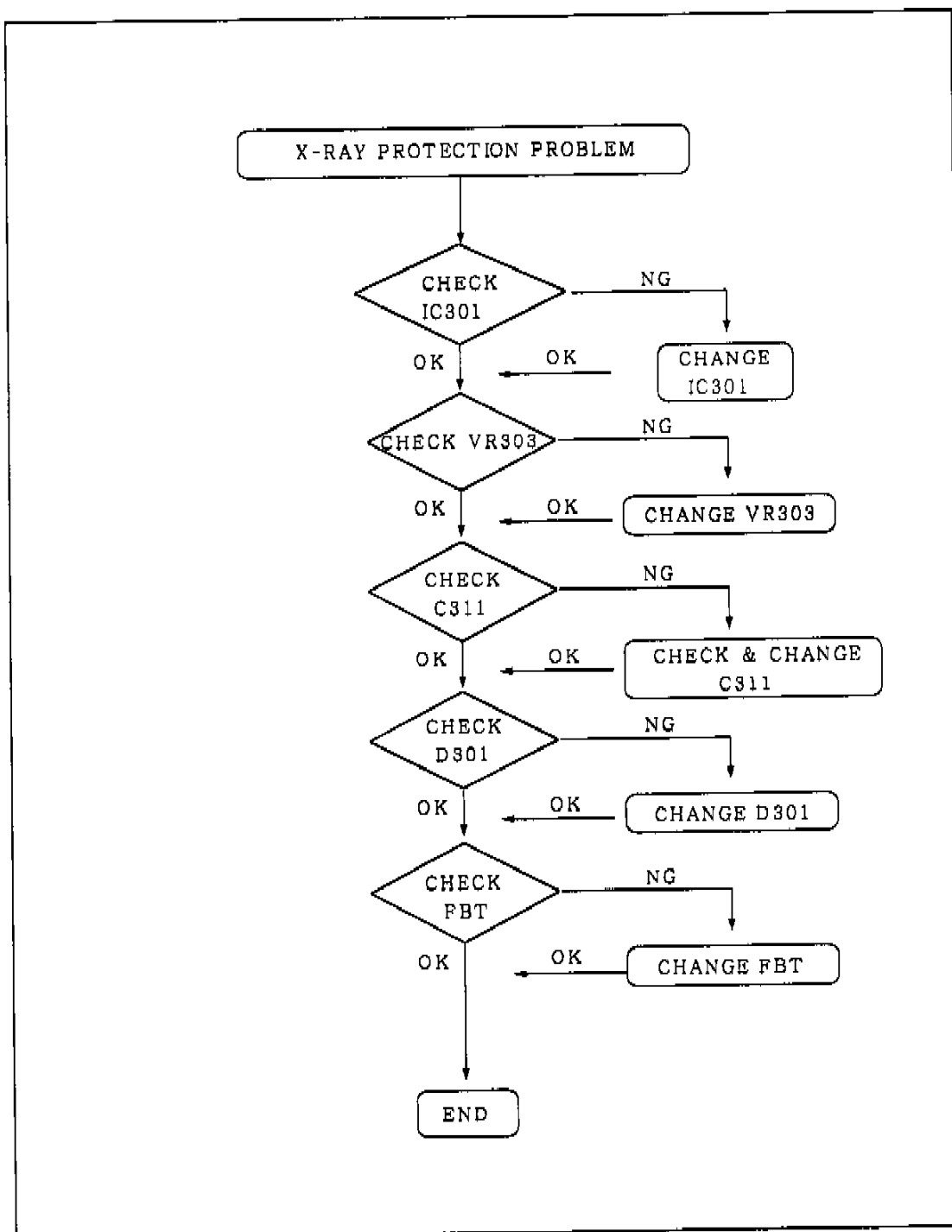
KORTEK Corporation**KTN-2001/1401****7. TROUBLESHOOTING GUIDE****7-1 NO-POWER**

KORTEK Corporation**KTN-2001/1401****7-2 NO-VIDEO**

KORTEK Corporation**KTN-2001/1401****7-3 NO-SYSC PLOBLEM**

KORTEK Corporation**KTN-2001/1401****7-4 VERTICAL DEFLECTION PROBLEM**

KORTEK Corporation**KTN-2001/1401****7-5 HORIZONTAL DEFLECTION PROBLEM**

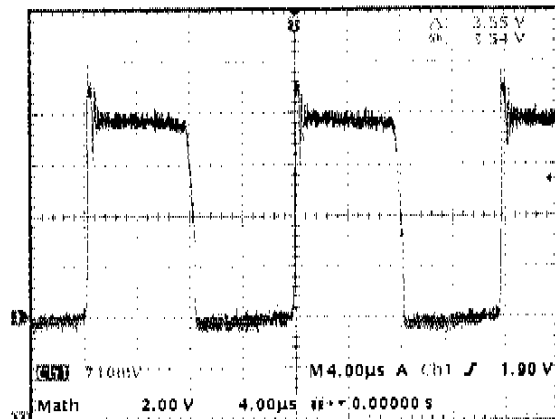
KORTEK Corporation**KTN-2001/1401****7-6 X-RAY PROTECTION PLOBLEM**

KORTEK Corporation

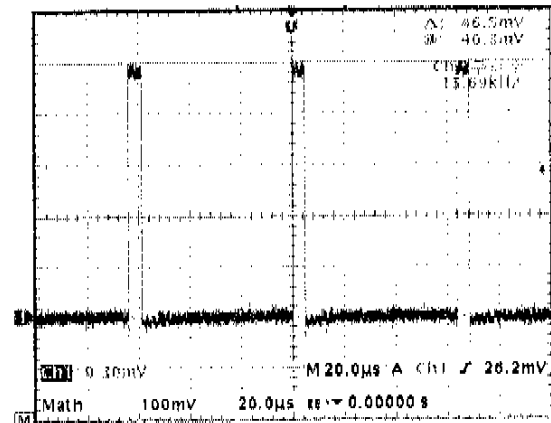
KTN-2001/1401

8. Waveform for major parts

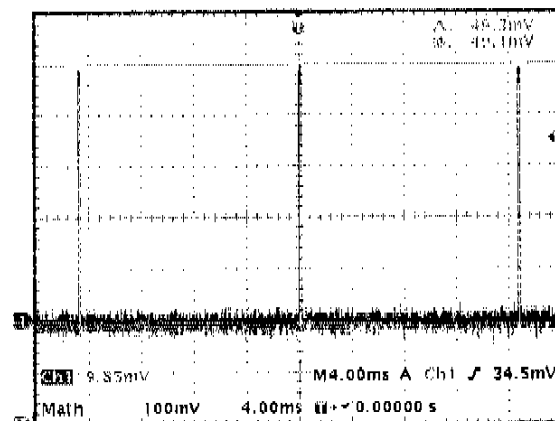
1) FE401 DRAIN OUTPUT WAVEFORM



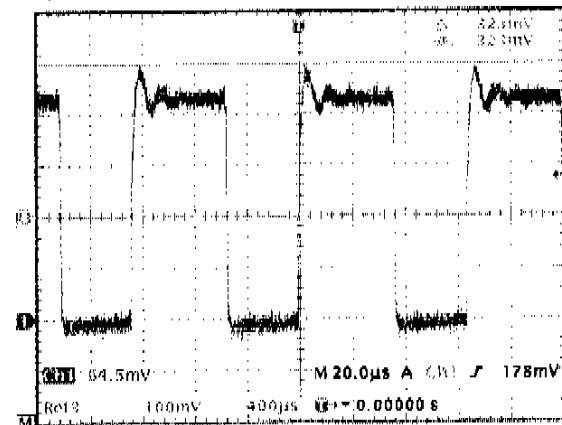
2) HORIZONTAL INPUT WAVEFORM



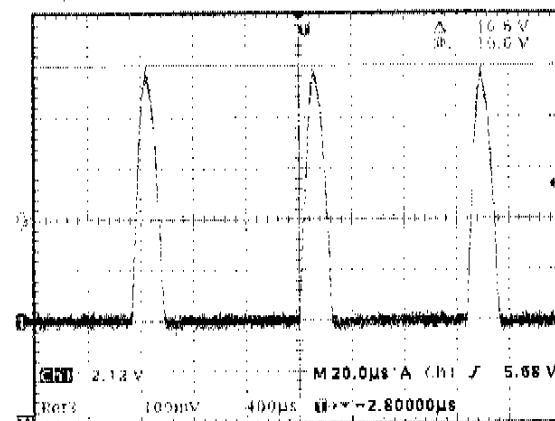
3) VERTICAL INPUT WAVEFORM



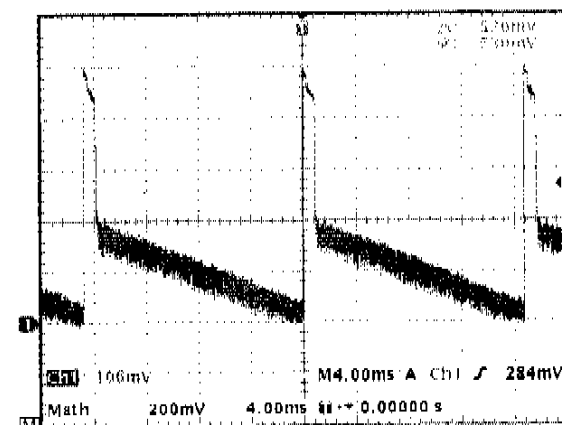
4) Q605 HORIZONTAL DRIVE WAVEFORM



5) Q604 HORIZON OUTPUT WAVEFORM



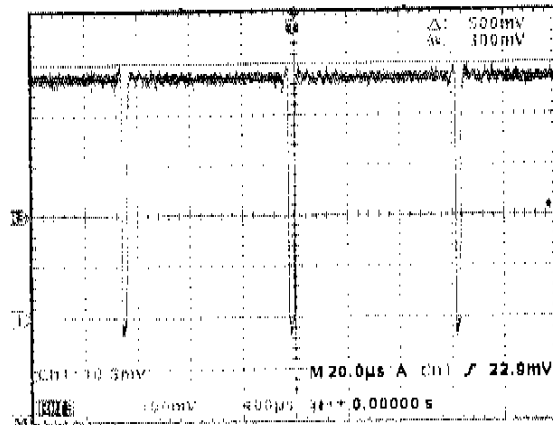
6) IC201 PIN 1 VERTICAL OUTPUT WAVEFORM



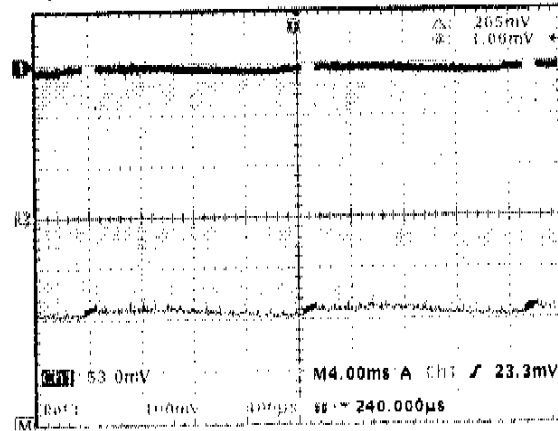
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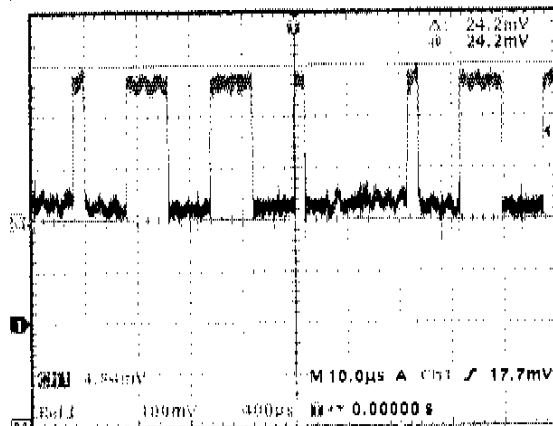
7) CLAMP(IC501 PIN 14) WAVEFORM



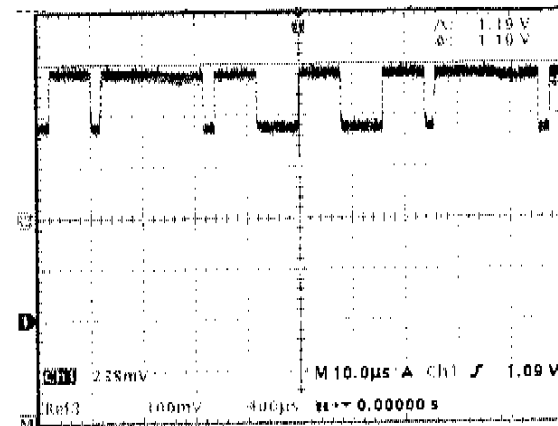
8) Q702 COLLECTOR PULSE WAVEFORM



9) IC501(1203) PIN 25 INPUT WAVEFORM



10) Q501 COLLECTOR WAVEFORM



KORTEK Corporation**KTN-2001/1401****9. BILL OF MATERIAL**

NO	DESCRIPTION	SPECIFICATION	LOCATION NO.
1	JUMP WIRE	5 mm	J157,J158,J162
2	JUMP, WIRE	7.5 mm	J122,J123,J134,J139, J140,J159,J155,J161
3	JUMP, WIRE	10 mm	R601,J102,J106,J107,J109,J111, J112,J114,J115,J118,J119,J120, J124,J125,J126,J129,J130,J131, J132,J133,J137,J147,J149
4	JUMP, WIRE	12.5mm	J103,J104,J113,J116,J117,J127,J128 J135,J136,J138,J148,J160,J105
5	JUMP, WIRE	15 mm	J101,R610
6	RESISTOR - CARBON	1/4W 2.2 ohm	R204
7	RESISTOR - CARBON	1/4W 15 ohm	R615
8	RESISTOR - CARBON	1/4W 47 ohm	R618
9	RESISTOR - CARBON	1/4W 100 ohm	R608
10	RESISTOR - CARBON	1/4W 120 ohm	R217
11	RESISTOR - CARBON	1/4W 220 ohm	R209
12	RESISTOR - CARBON	1/4W 270 ohm	R406
13	RESISTOR - CARBON	1/4W 330 ohm	R206
14	RESISTOR - CARBON	1/4W 390 ohm	R805,R807,R705
15	RESISTOR - CARBON	1/4W 470 ohm	R801,R312,R303,R606
16	RESISTOR - CARBON	1/4W 820 ohm	R203
17	RESISTOR - CARBON	1/4W 1 Kohm	R216,R802,R806
18	RESISTOR - CARBON	1/4W 1.5 Kohm	R411
19	RESISTOR - CARBON	1/4W 1.8 Kohm	R710
20	RESISTOR - CARBON	1/4W 2.2 Kohm	R218,R809
21	RESISTOR - CARBON	1/4W 2.7 Kohm	R211
22	RESISTOR - CARBON	1/4W 3.3 Kohm	R804
23	RESISTOR - CARBON	1/4W 3.9 Kohm	R707
24	RESISTOR - CARBON	1/4W 4.7 Kohm	R302,R305
25	RESISTOR - CARBON	1/4W 5.6 Kohm	R205,R306
26	RESISTOR - CARBON	1/4W 6.8 Kohm 1%	R410
27	RESISTOR - CARBON	1/4W 7.5 Kohm	R207,R607

KORTEK Corporation**KTN-2001/1401**

NO	DESCRIPTION	SPECIFICATION	LOCATION NO.
28	RESISTOR - CARBON	1/4W 8.2 Kohm	R208
29	RESISTOR - CARBON	1/4W 10 Kohm	R304,R808,R810,D703
30	RESISTOR - CARBON	1/4W 12 Kohm	R210
31	RESISTOR - CARBON	1/4W 12 Kohm 1%	R308
32	RESISTOR - CARBON	1/4W 18 Kohm 1%	R423
33	RESISTOR - CARBON	1/4W 30 Kohm	R310
34	RESISTOR - CARBON	1/4W 33 Kohm	R605
35	RESISTOR - CARBON	1/4W 47 Kohm	R408,R702,R311
36	RESISTOR - CARBON	1/4W 56 Kohm	R602,R307
37	RESISTOR - CARBON	1/4W 82 Kohm	R214,R603
38	RESISTOR - CARBON	1/4W 100 Kohm	R301,R309
39	RESISTOR - CARBON	1/4W 150 Kohm	R212
40	RESISTOR - CARBON	1/4W 200 Kohm	R706
41	RESISTOR - CARBON	1/4W 560 Kohm	R213
42	RESISTOR - CARBON	1/2W 560 Kohm	R401,R403
43	DIODE - BRIDGE	PBS208GUCA	BD401
44	DIODE	1N4002	D202
45	DIODE	BY228	D607
46	DIODE	BYW95C	D602
47	DIODE	FR107	D302,D405,D702
48	DIODE	FR157	D704,D705
49	DIODE	1N4148	D203,D301,D601
50	DIODE	UF206	D402,D403,D404,D605
51	DIODE - ZENER	1N4735 (1 W 6.2V)	D401
52	DIODE - ZENER	1N4742 (1 W 12 V)	D606
53	DIODE - ZENER	1N5231 (1/2W 5.1V)	D801
54	DIODE - ZENER	1N5242 (1/2W 12 V)	D201
55	RESISTOR - CARBON	1/4W 68 Kohm	IC301 Rear attachment with
56	RESISTOR - METAL OXIDE	1 W 0.47 ohm	R402
57	RESISTOR - METAL OXIDE	1 W 10 ohm	R413
58	RESISTOR - METAL OXIDE	1 W 0.2 ohm	R417
59	RESISTOR - METAL OXIDE	1 W 1.5 ohm	R215
60	RESISTOR - METAL OXIDE	1 W 56 ohm	R407

KORTEK Corporation**KTN-2001/1401**

NO	DESCRIPTION	SPECIFICATION	LOCATION NO.
61	RESISTOR - METAL OXIDE	1 W 120 ohm	R201
62	RESISTOR - METAL OXIDE	1 W 1.5 Kohm	R803
63	RESISTOR - METAL OXIDE	1 W 1.8 Kohm	R412
64	RESISTOR - METAL OXIDE	2 W 39 ohm	R409
65	RESISTOR - METAL OXIDE	2 W 120 ohm	R614
66	RESISTOR - METAL OXIDE	2 W 2.2 Kohm	R701
67	RESISTOR - METAL OXIDE	2 W 1 ohm	R704
68	RESISTOR - METAL OXIDE	2 W 68 Kohm	R404
69	RESISTOR - CEMENT	5 W 27 ohm	R405
70	RESISTOR - CEMENT	5 W 68 ohm	R616
71	RESISTOR - VARIABLE	CET 065C 100B	VR801,VR802,VR803
72	RESISTOR - VARIABLE	CET 065C 5KB	VR401
73	RESISTOR - VARIABLE	CET 065C 10KB	VR302,VR303
74	RESISTOR - VARIABLE	CET 065C 200KB	VR201
75	CAPACITOR - CERAMIC	50 V 101pF	C302
76	CAPACITOR - CERAMIC	50 V 104pF	C317,C701,C703,706
77	CAPACITOR - CERAMIC	50 V 471pF	C705
78	CAPACITOR - CERAMIC	250V 472pF AC	C402,C403,C417
79	CAPACITOR - CERAMIC,EPOXY	1 KV 101pF	C408
80	CAPACITOR - CERAMIC,EPOXY	2 KV 101pF	C406
81	CAPACITOR - ELECTROLYTIC	16 V 100uF	C802
82	CAPACITOR - ELECTROLYTIC	16 V 1000uF	C615
83	CAPACITOR - ELECTROLYTIC	25 V 10 uF	C804,C806
84	CAPACITOR - ELECTROLYTIC	25 V 47 uF	C211
85	CAPACITOR - ELECTROLYTIC	25 V 220 uF	C310
86	CAPACITOR - ELECTROLYTIC	25 V 2200uF	C212
87	CAPACITOR - ELECTROLYTIC	35 V 1000uF	C416
88	CAPACITOR - ELECTROLYTIC	50 V 1 uF	C210,C308,C311,C207
89	CAPACITOR - ELECTROLYTIC	50 V 10 uF	C316,C709
90	CAPACITOR, X-CAP(PILKOR)	250V 224pF K (BOX-TYPE)	C101, C102
91	CAPACITOR - ELECTROLYTIC	50 V 100 uF	C203,C611
92	CAPACITOR - ELECTROLYTIC	160V 1 uF	C702
93	CAPACITOR - ELECTROLYTIC	160V 47 uF	C413

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NO	DESCRIPTION	SPECIFICATION	LOCATION NO.
94	CAPACITOR - ELECTROLYTIC	400V 220 uF	C404
95	CAPACITOR - ELECTROLYTIC	35 V 470 uF KMG	C415
96	CAPACITOR - ELECTROLYTIC	50 V 4.7 uF KMG	C409,C606
97	CAPACITOR - ELECTROLYTIC	160V 47 uF KMG	C412,C414
98	CAPACITOR - ELECTROLYTIC	250V 10 uF KMG	C707,C708
99	CAPACITOR - MYLAR	100V 102pF J	C603
100	CAPACITOR - MYLAR	100V 103pF J	C204,C205,C303,C306,C309,C312,C614
101	CAPACITOR - MYLAR	100V 104pF J	C202,C208,C209,C305
102	CAPACITOR - MYLAR	100V 223pF J	C805
103	CAPACITOR - MYLAR	100V 224pF J	C206,C307
104	CAPACITOR - MYLAR	100V 472pF J	C301,C313
105	CAPACITOR - MYLAR	100V 683PF	Attachment to upper part of R312 in parallel
106	CAPACITOR - P.P	100V 472pF G	C304
107	CAPACITOR - P.P	100V 682pF G	C407
108	CAPACITOR - M P.P	250V 434pF J	C607
109	CAPACITOR - P.P	630V 103pF J	C405,C609
110	CAPACITOR - P.P	1.6KV 152pF J	C613
111	CAPACITOR - P.P	1.6KV 472pF J	C616
112	CAPACITOR - BOX	275V 104pF AC	C401
113	IC	74LS86	IC801
114	IC	TDA1675A	IC201
115	IC	TDA2595	IC301
116	IC	KA358A	IC601
117	TRANSISTOR	2N6517	Q701,Q702
118	FET	SSH6N80	FE401
119	TRANSISTOR	A708Y	Q203,Q402
120	TRANSISTOR	B834Y	Q601
121	TRANSISTOR	C1008Y	Q401,Q403
122	TRANSISTOR	C2316Y	Q605
123			
124			
125			
126			

KORTEK Corporation**KTN-2001/1401**

NO	DESCRIPTION	SPECIFICATION	LOCATION NO.
127	TRANSISTOR	C945YC	Q301,Q703,Q801
128	TRANSISTOR	D5072	Q604
129	LINE FILTER	ALF-200	LF401
130	MAIN-TRANS	T401A	T401
131	DRIVE-TRANS	T601	T601
132	FLY BACK TRANSFORMER	FN-1441B (New spec.)	T701
133	COIL - CHOKE	301uH	L401,L402
134	COIL - CHOKE	102 (1mH)	L601
135	COIL - LINEARITY	540	L701
136	POSISTOR	DP3BG140ML12	TH401
137	THERMISTOR	8D-13	TH403
138	FUSE HOLDER	FUSE CLIP FC-51A	F401
139	FUSE	250V 3.15A S/B(50T)	F401
140	G.T PIN	2.36 x 15mm	GND
141	G.T PIN (D-COIL)	YFW800-02 8mm	CN402
142	G.T PIN	YFW-800-02 10mm	CN401
143	CONNECTOR (KTN)	8PX 6P 330mm CRT SOCKET	CN801
144	CONNECTOR (KTN)	8PX 8P 330mm CRT SOCKET	CN701
145	WAFER	YFW-800-04	CN201
146	WAFER	5267-06	CN801
147	WAFER	5267-08	CN701
148	WAFER	0640-08	CN202
149	WAFER	0640-09	CN202
150	WAFER - MOLEX	LW-1143-06	CN802
151	HEAT SINK	JS-92 40mm	IC201,Q601
152	HEAT SINK	JS-92 55mm	FE401,Q604
153	PCB - MAIN	KTN	PCB
154	SILICON PAD RUBBER	Insulation paper (20x25mm)	FE401
155	SCREW PAN	TP 3 x 6mm 2종 CUT	IC201,Q601
156	SCREW PAN	TP 3 x 8mm 2종 CUT	
157	SCREW PAN	TP 3 x 12mm 2종 CUT	FE401
158	CHASSIS BRACKET	KTN CHASSIS	
159	PCB CHASSIS	KTN MAIN	
160	JUMP - WIRE	6 mm	J501,J506

KORTEK Corporation**KTN-2001/1401**

NO	DESCRIPTION	SPECIFICATION	LOCATION NO.
161	JUMP - WIRE	7.5 mm	J505,J509
162	JUMP - WIRE	10 mm	J504,J502,J503
163	JUMP - WIRE	12.5mm	J507,J508
164	RESISTOR - CARBON	1/6W 47 ohm	R512,R513,R515,R519
165	RESISTOR - CARBON	1/6W 100 ohm	R505
166	RESISTOR - CARBON	1/6W 150 ohm	R518,R524,R532
167	RESISTOR - CARBON	1/6W 220 ohm F	R501,R502,R503
168	RESISTOR - CARBON	1/6W 470 ohm	R509,R514,R516,R517,R520,R528
169	RESISTOR - CARBON	1/6W 620 ohm	R511
170	RESISTOR - CARBON	1/6W 1 Kohm	R504
171	RESISTOR - CARBON	1/6W 5.6 Kohm	R510
172	RESISTOR - CARBON	1/6W 10 Kohm	R506,R507,R508
173	RESISTOR - CARBON	1/6W 180 Kohm	R523,R525,R526,R527,R529,R530
174	DIODE	FR105	D501,D502,D503,D504,D505
175	CRT-PCB	KTN	PCB
176	CAPACITOR - CERAMIC	50 V 10 pF	C513
177	CAPACITOR - CERAMIC	50 V 104 pF	C504,C506,C511,C512,C514
178	CAPACITOR - CERMAIC	50 V 560PF J	C517,C519,C526
179	CAPACITOR - CERAMIC	500V 101 pF K	C505
180	CAPACITOR - CERAMIC	2 KV 472 pF	C529
181	CAPACITOR - ELECTRONIC	16 V 220 uF	C507
182	CAPACITOR - ELECTROLYTIC	25 V 10 uF	C501,C502,503
183	CAPACITOR - ELECTROLYTIC	50 V 4.7 uF	C515,C516
184	CAPACITOR - ELECTROLYTIC	250V 1 uF	C520,C522,523
185	CAPACITOR - ELECTROLYTIC	250 V 10 uF KMG	C525
186	CAPACITOR - ELECTROLYTIC	250 V 47 uF KMG	C527
187	CAPACITOR - ELECTROLYTIC	BP 100V 1uF	C518,521,C524
188	RESISTOR - CARBON	1/2W 150 Kohm	R533
189	RESISTOR - METAL OXIDE	2 W 3.9 Kohm	R521,R522,R531
190	RESISTOR - VARIABLE	CET 068C 100B	VR501,VR502
191	RESISTOR - VARIABLE	CET 068C 50KB	VR503,VR504,VR505
192	SURGE - ABSORBER	BSD-201(200V)	SG501,SG502,SG503,SG504
193	TRANSISTOR	C1507	Q501,Q502,Q503

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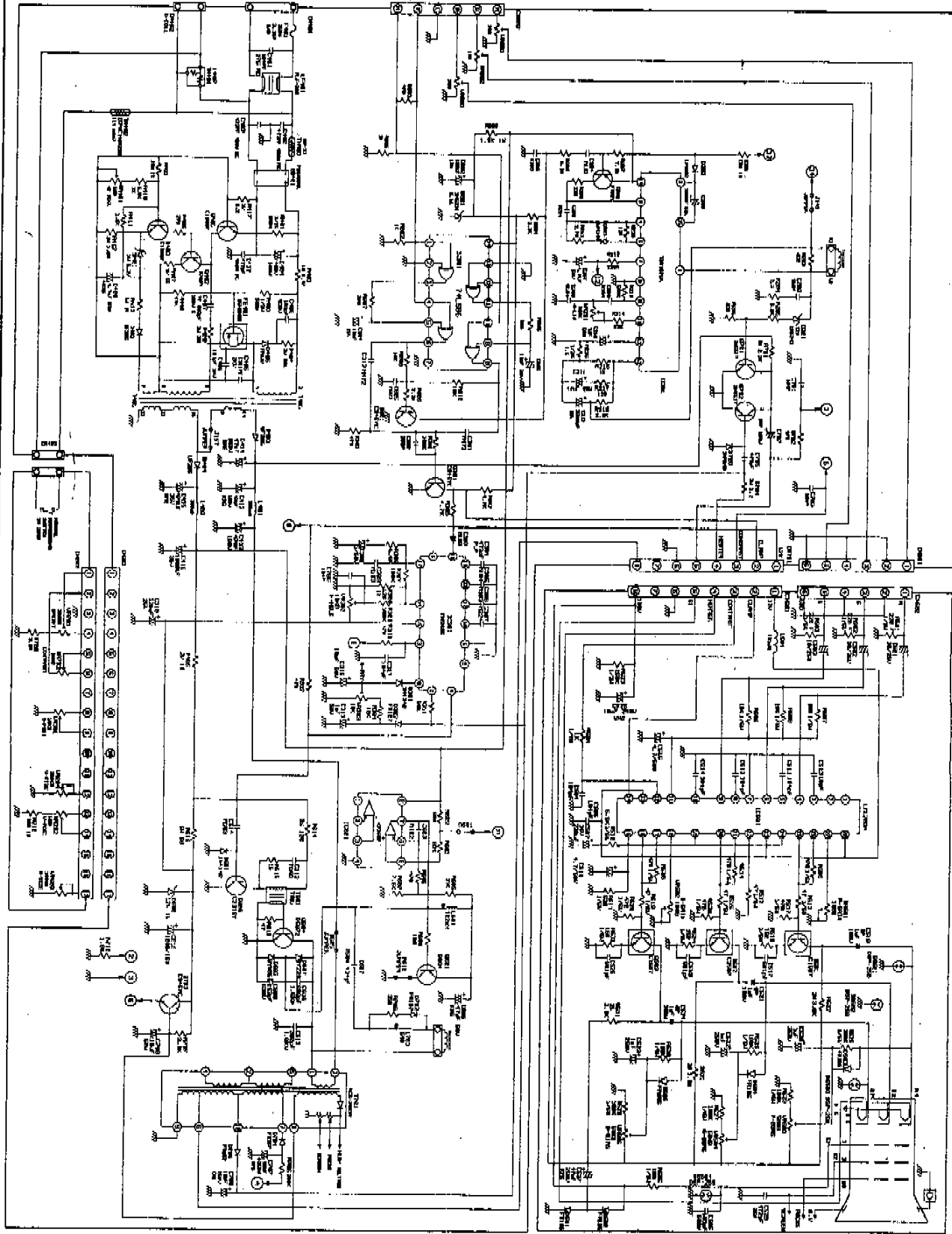
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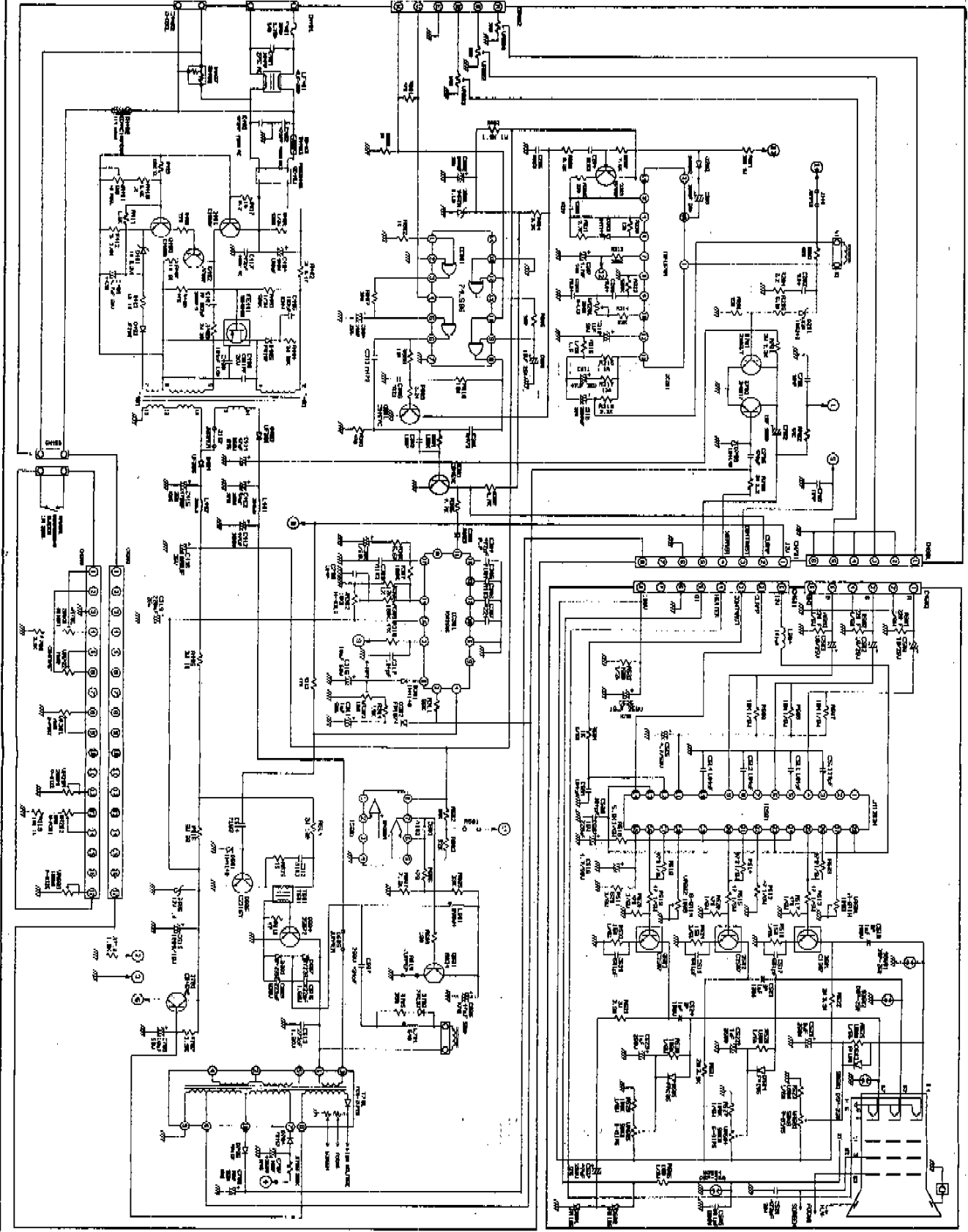
KTN-2001/1401

* Maternal List of KTN-2001 different from KTN-1401

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REV.	CONTENTS	ECO. NO.	DATE
KORTEK CORPORATION			
MODEL NAME	KTN-1461		
REVISIONS	PCB NAME	KTN	
DESIGNED	1. MAIN		
CHECKED	2. SOCKET		
REPRODUCED	SUB		
DATE NO.	KTN-1461-01	REV. NO.	8



REV.	CONTENTS	ECO NO.	DATE
1			
KORTEK CONFIGURATION			
MODEL NAME		KTN-2881	
APPROVALS	PCB NAME	KTN	
DRAWN	1. AMIN	O	
DESIGNED	2. SOHET	O	
CHECKED	SUB	O	
APPROVED	DATE	01-01-17	
QMS. NO.	KTN-2881-00	REV. NO.	0