

Service Guide

Colour Television

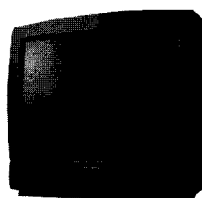
CHASSIS : CP-002

Model :

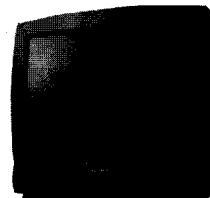
DTC-14 V1/V3/V4/V5/U1 TM

DTC-20 V1/V3/V4/V5/U1 TM

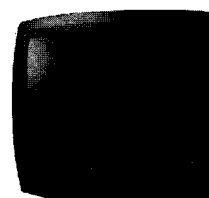
DTC-21 V1/V3/V4/U1/U3 TM



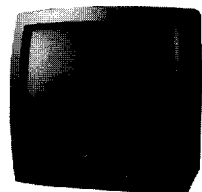
14/20/21 V1



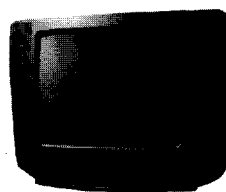
14/20/21 V3



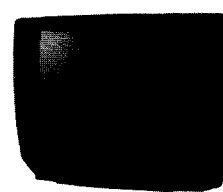
14/20/21 V4



14/20 V5




14/20/21 U1



21 U3

If you need further information (IC, Circuit descriptions or troubleshooting . . .) about this model,
Please visit our web site.(<http://svc.dwe.co.kr>)

Specifications

ITEMS	ITEM	DTC-14V1TM DTC-14V3TM DTC-14V4TM DTC-14V5TM DTC-14U1TM	DTC-20V1TM DTC-20V3TM DTC-20V4TM DTC-20V5TM DTC-20U1TM	DTC-21V1TM DTC-21V3TM DTC-21V4TM DTC-21U1TM DTC-21U3TM	REMARKS
CCIR STANDARD		BG, D/K, I, H, M			
COLOR STANDARD		PAL / SECAM / NTSC3.58 / NTSC4.43			
POWER INPUT		AC 100V~250V, 50/60Hz			
POWER CONSUMPTION		14VX : 57W	20VX : 70W	21VX : 73W	
		14UX : 62W	20UX : 75W	21UX : 78W	
TUNING SYSTEM		Frequency Synthesizer (FS) Tuning System			
RECEPTION CHANNEL	VHF - BAND I	: E1 - E4 (PAL/SECAM-B/G) A01 - A06 (NTSC-M)			
		R1 - R5 (PAL/SECAM-D/K)			
	BAND II	: E5 - E12 (PAL/SECAM-B/G) A07 - A13 (NTSC-M)			
		R6 - R12 (PAL/SECAM-D/K)			
	CABLE BAND	: S1' - S3', S1 - S20			
	HYPER BAND	: S21 - S41			
	UHF - BAND IV, V	: E21 - E69 (PAL/SECAM-B/G) A14 - A79 (NTSC-M)			
SOUND OUTPUT		V series : 3W , U series : 3W + 3W			
SPEAKER		V series : 3W 8 ohm , U series : 3W 8 ohm + 3W 8 ohm			
ANTENNA INPUT IMPEDANCE		75 ohm Unbalanced			
AUXILIARY TETMINAL		INPUT : RCA JACK (Front)  COMMON RCA JACK (Rear) SCART JACK (Option) OUTPUT : ONLY SCART JACK (Option)			
INTERMEDIATE FREQUENCIES	PIF	: 38.9MHz			
	SIF	: 33.4MHz (PAL/SECAM-B/G) 32.9MHz (PAL/SECAM-I) 32.4MHz (PAL/SECAM-D/K) 34.4MHz (NTSC-M)			
	SOUND SUBCARRIER	: 5.5MHz (PAL/SECAM-B/G) 6.0MHz (PAL/SECAM-I) 6.5MHz (PAL/SECAM-D/K) 4.5MHz (NTSC-M)			
	COLOR SUBCARRIER	: 4.43MHz (PAL, NTSC4.43) 4.250MHz, 4.406MHz (SECAM) 3.58MHz (NTSC-M)			
REMOTE CONTROL		R-40A01/R-40A05/R-40A06			
SPECIAL FUNCTIONS		4-Language OSD			
		With TELETEXT			
		Wake-up On Time Sleep Timer			

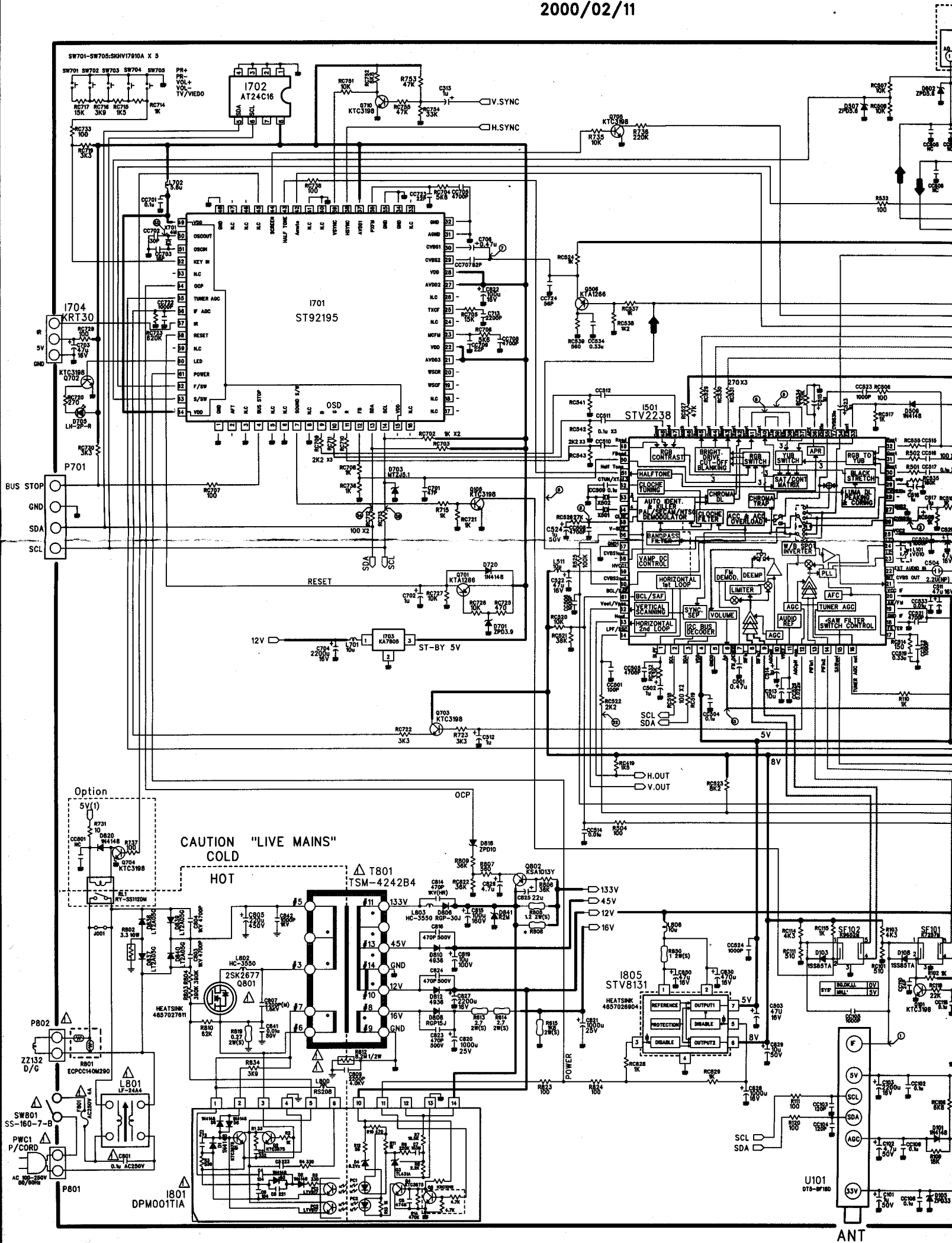
DAEWOO ELECTRONICS CO., LTD

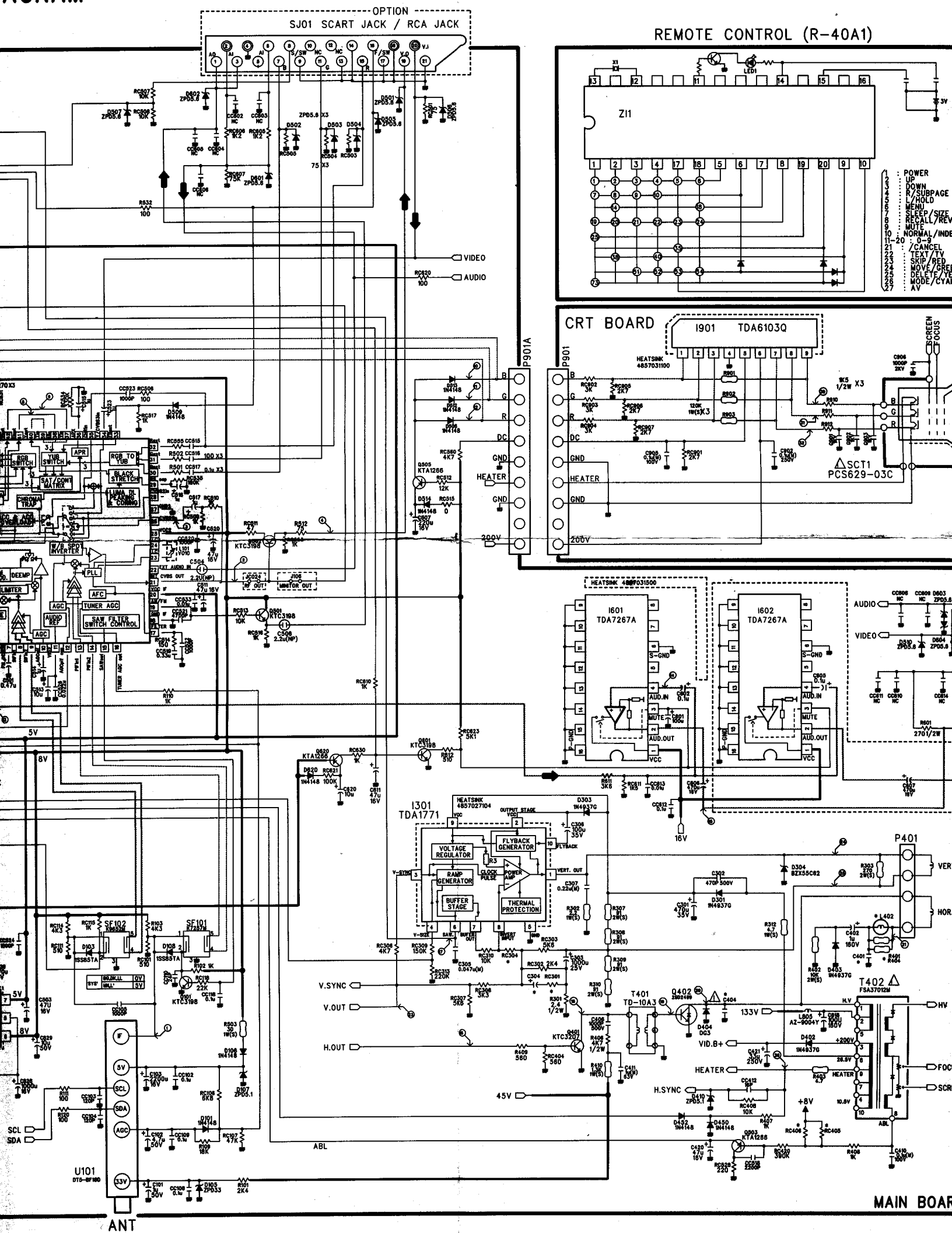
<http://svc.dwe.co.kr>

April. 2000

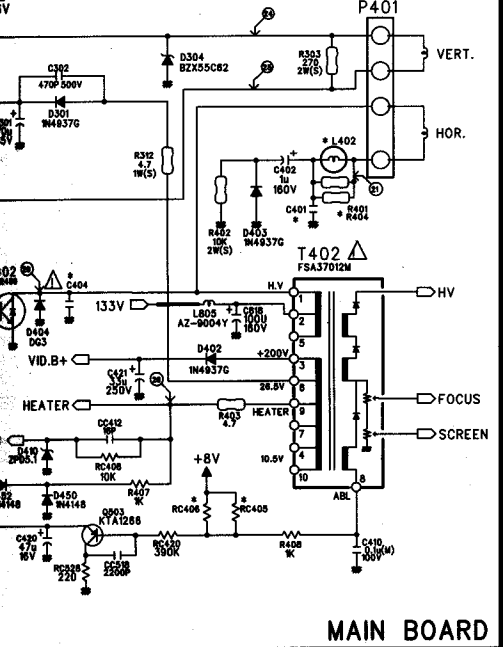
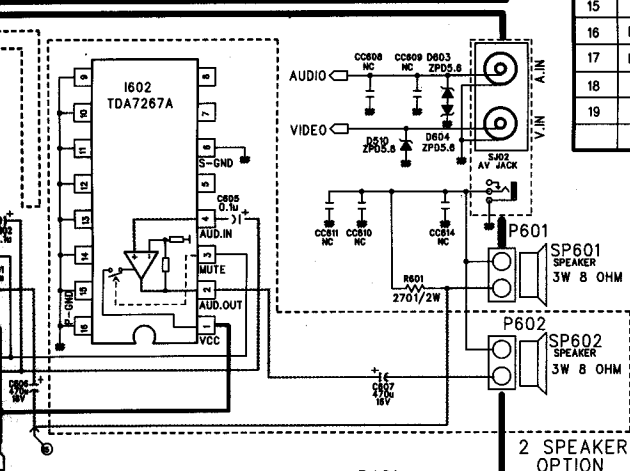
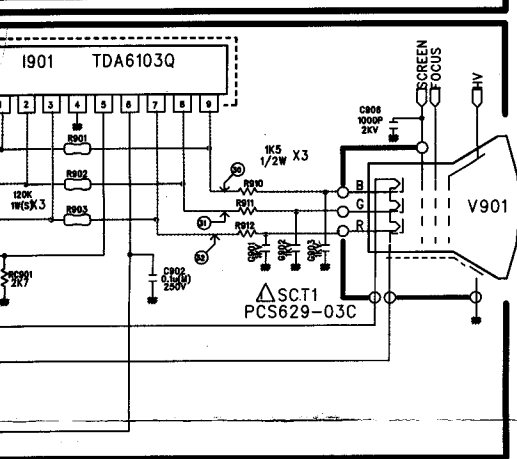
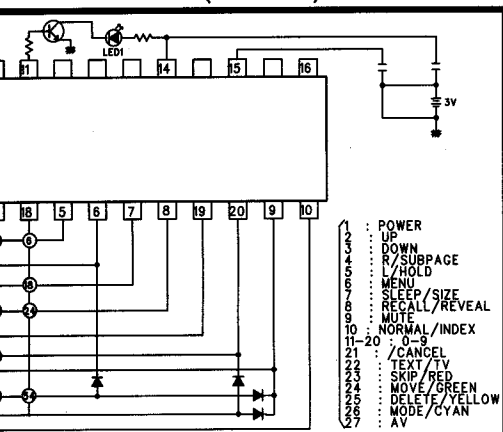
CP-002 CHASSIS SCHEMATIC DIAGRAM

2000/02/11





NOTE CONTROL (R-40A1)



NOTE:

1. RESISTANCE IS SHOWN IN OHM. K=1000, M=1000000
2. UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITOR VALUES ARE EXPRESSED IN μ F
3. VOLTAGES READ WITH "VTVM" FROM POINT INDICATED TO CHASSIS GROUND USING A COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL LINE 230V AC VOLTAGE READINGS SHOWN ARE NORMAL VALUES AND MAY VARY $\pm 20\%$ EXCEPT H.V
4. THIS CIRCUIT DIAGRAM IS A STANDARD ONE CIRCUIT PRINTED MAY BE SUBJECT TO CHANGE FOR PRODUCT IMPROVEMENT WITHOUT PRIOR NOTICE

WARNING:

BEFORE SERVICING THE CHASSIS, READ "X-RAY RADIATION", "SAFETY PRECAUTION", AND "PRODUCT SAFETY NOTICE" IN SERVICE MANUAL

PRODUCT SAFETY NOTE

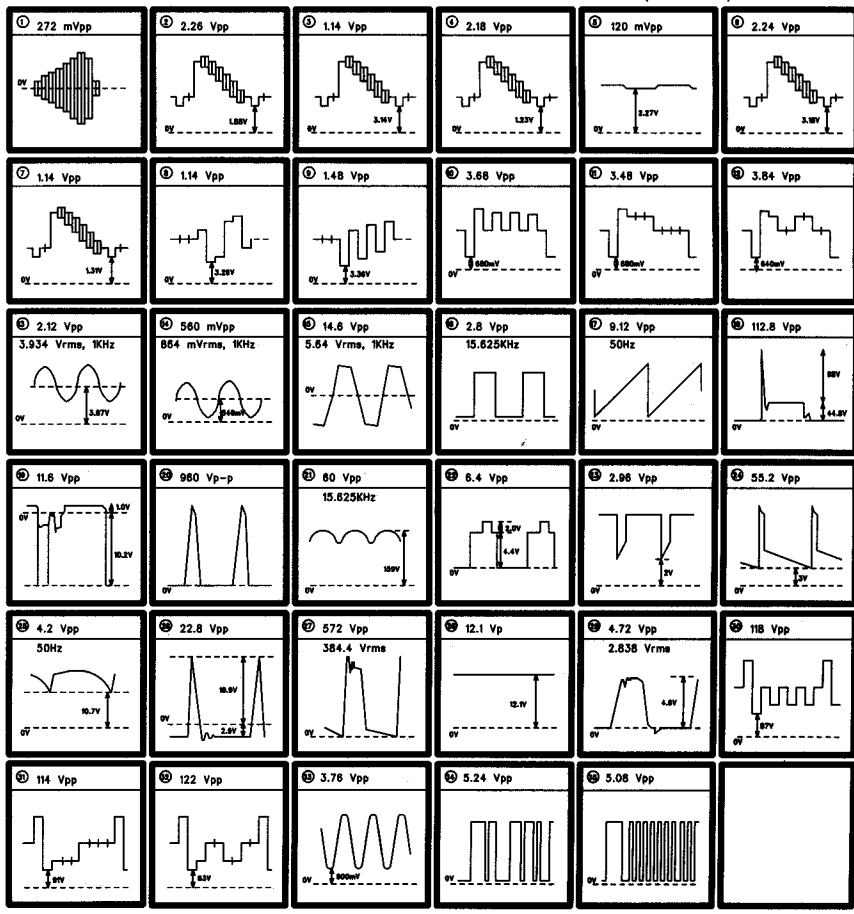
COMPONENTS MARKED WITH Δ ARE IMPORTANT FOR MAINTAINING. THE SAFETY OF THE SET AND SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL OR SPECIFIED ONE IN THE PARTS LIST. DON'T DEGRADE THE SAFETY THROUGH IMPROPER SERVICING.

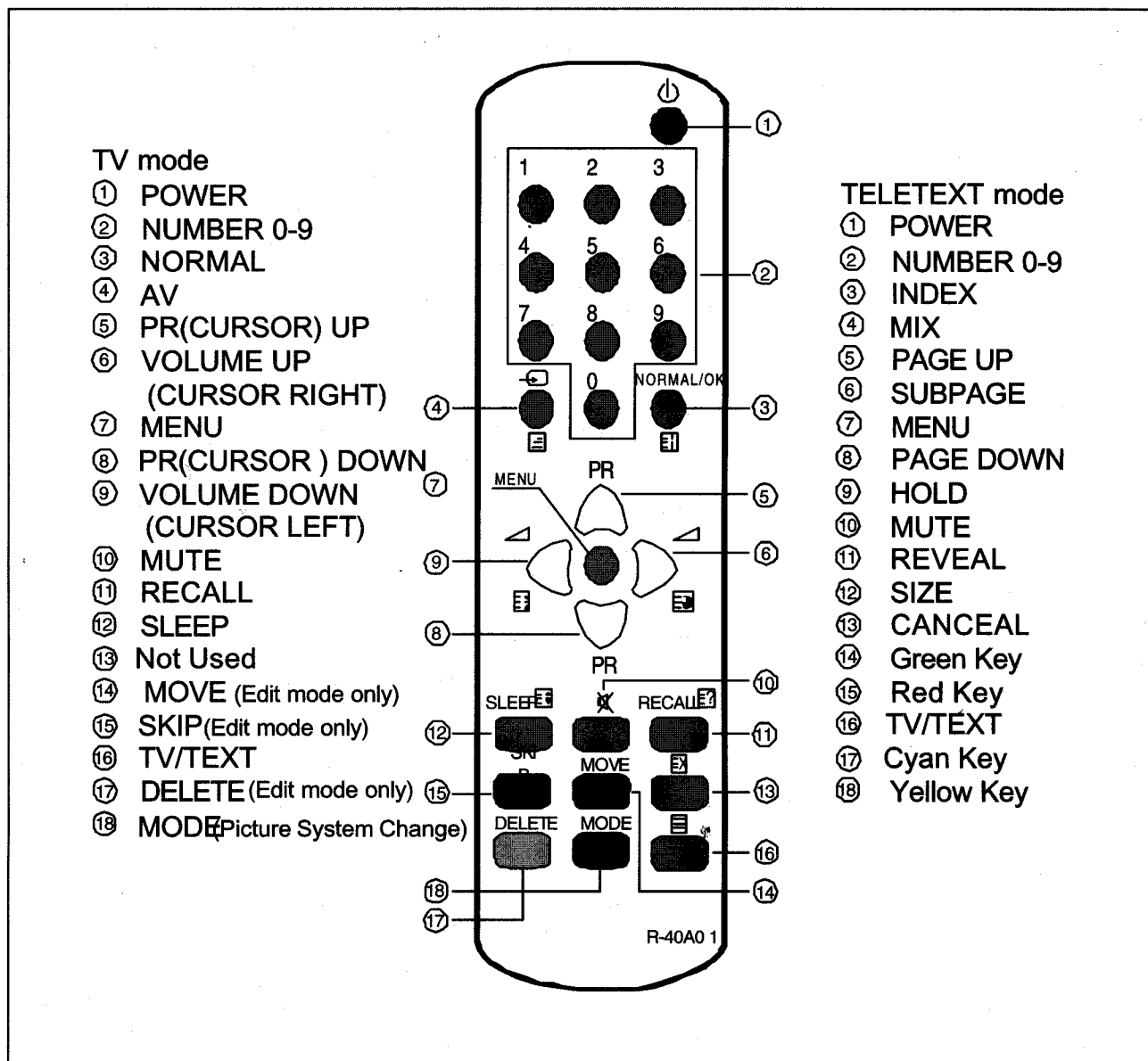
THE DIFFERENT PARTS OF SIZE

NO	LOC	14"	20"	21"
1	CRT V901	ORION A34JLL90X(K)	CPT A48JLL90X	ORION A51EFK155X01
2	D/COIL	DC-1450	DC-2050	DC-2070
3	CRT G/A	1401S-	2001S-	2101S-
4	SCT1	PCS633A	PCS633A	PCS629-03C
5	P401	YFW500-05	YFW500-05	YFW500-06
6	L402	X	X	TRL-361A
7	J008	JUMPER	JUMPER	X
8	R808	2W 1.5	2W 1.5	2W 1.0
9	RC405	3.9K	2.7K	5.1K
10	RC406	X	X	5.1K
11	C401	0.36MF 200V	0.43MF 200V	0.39MF 200V
12	C404	6900P 1.6KV	6900P 1.6KV	7200P 1.6KV
13	C405	X	X	2KV 270P
14	R401	X	X	2W 2K2
15	R404	X	X	2W 2K2
16	RC301	470	430	620
17	RC304	2.2K	2.4K	3K
18	C304	22u	22u	10u
19	R808	1.5 2W	1.5 2W	1 2W

* WAVEFORMS

1. TEST EQUIPMENTS : DIGITAL OSCILLOSCOPE (Tektronix TDX 460)
2. TEST CONDITIONS : PAL-B/G FULL COLOR BAR (NORMAL 1) 1KHZ SINEWAVE(SOUND MAX)





* How to enter 'Service Mode' with user remote.

1. Select CH number 91.
2. Adjust sharpness to minimum.
3. Exit from Menu mode
4. Quickly press the key sequence : Red → Green → Menu
5. You can see the 'Service Mode OSD'

* To exit 'Service Mode', then press 'Power off'

■ Alignment Instructions

1. AFT

- 1) Set a signal Generator with
 - RF FREQUENCY = 38.9MHz, 34.2MHz (L)
 - RF OUTPUT LEVEL = 80 ± 5 dBuV
 - System = PAL / SECAM - B/G, D/K, I, H
NTSC - 3.58/4.43
- 2) Connect the Signal Generator RF Output to P101 (Tuner IF Output).
There must be no signal input to the tuner.
- 3) Press the 'AFT' KEY in Service Mode and wait until the 'Please wait' disappear on the TV screen.

2. AGC

- 1) Set a pattern Generator with
 - RF LEVEL = 60dBuV
 - 100% FULL COLOR BAR
- 2) Connect the Pattern Generator RF Output to Tuner RF Input.
- 3) Press the 'AGC' KEY in Service Mode and wait until the 'Please wait' disappear on the TV screen.

3. SCREEN

- 1) Receive the Retma pattern and heat run over 15minutes.
- 2) On the normal mode1 adjust the screen volume that the horizontal line appears on the screen after pushing the 'SCREEN' KEY on the SVC Mode.
- 3) Adjust the screen volume that the horizontal lines reach the cut-off point.

4. WHITE BALANCE

- 1) Set the TV to NOR 1 mode.
- 2) Adjust the R,G,B UP/DOWN KEY of the color which appears abnormally on the screen to obtain WHITE BALANCE.

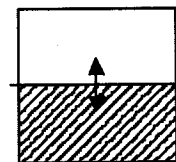
5. FOCUS

- 1) Apply a RETMA PATTERN signal.
- 2) Adjust the FOCUS VOLUME on FBT to obtain optimal resolution.

6. GEOMETRY

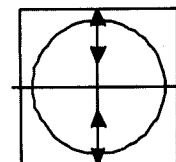
6.1 VERTICAL CENTER

- 1) Set the TV to NOR 1 mode.
- 2) Pressing the V-SIZE UP/DOWN KEY, the lower half of the screen is blanked.
- 3) Adjust the border line of blanked picture coincident with the mechanical center marks of the CRT using the V-CENTER UP/DOWN KEY.



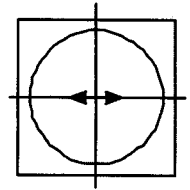
6.2 VERTICAL SIZE

- * The VERTICAL CENTER adjustment has to be done in advance.
- 1) Apply a RETMA PATTERN signal.
 - 2) Set the TV to NOR 1 mode.
 - 3) Adjust the upper part of the picture with the V-SIZE UP/DOWN keys.



6.3 HORIZONTAL CENTER

- 1) Apply a RETMA PATTERN signal.
- 2) Adjust picture centering with H-CENTER LEFT/RIGHT keys.



7. DATA PRESET(D.P) ADJUSTMENTS

- 1) Receive a 91 channel.
- 2) Adjust the SHARPNESS to 0.
- 3) Enter the service mode using the user remote control by pressing buttons in sequence as follows
R —> G —> B —> MENU
- 4) Then, D.P OSD in service mode will appear on screen.
- 5) Press the channel up or down button to enter you wish to adjust.
- 6) You can control the data by pressing the volume up or down button.

8. FACTORY OUTGOING MODE

- 1) Press the EX-FACTORY in service mode, then set becomes factory outgoing status.
- 2) You can see the OSD 'outgoing OK!'.