S/G No. : CP005P-010G1

Service Guide

Colour Television

CHASSIS : CP-005

Model :

DTP-14V1/V2/V3/V5/C3/C4/C5TF
20V1/V3/C4/C5TF
21V1/V2/V4/V6/C6TF


14/20/21 V1


14/21 V2


14/20 V3


21 V4


14 V5


14 C3


14/20 C4


14/20 C5


21 C6

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

■ Specifications

ITEM / ITEMS	DTP-14V1TF DTP-14V2TF DTP-14V3TF DTP-14V5TF DTP-14C3TF DTP-14C4TF DTP-14C5TF	DTP-20V1TF DTP-20V3TF DTP-20C4TF DTP-20C5TF	DTP-21V1TF DTP-21V2TF DTP-21V4TF DTP-21V6TF DTP-21C6TF	REMARKS
CCIR STANDARD	BG, D/K, I/I, H, L/L'			
COLOR STANDARD	PAL / SECAM / NTSC(AV only)			
POWER INPUT	AC 230V, 50Hz			
POWER CONSUMPTION	57 W	70 W	73 W	
TUNING SYSTEM	Frequency Synthesizer (FS) Tuning System			
RECEPTION CHANNEL	BAND I : CH2 - CH4 BAND II : CH5 - CH12 CABLE BAND : S1' - S3', S1 - S20 HYPER BAND : S21 - S41 BAND IV, V : CH21 - CH69 (CH 70 for Italy)			
SOUND OUTPUT	3 W			
SPEAKER	3 W 8 ohm			
ANTENNA INPUT IMPEDANCE	75 ohm Unbalanced			
AUXILIARY TETMINAL	INPUT : RCA JACK (Front), SCART JACK (Rear) — COMMOM			
REMOTE CONTROL	R-40A01			
SPECIAL FUNCTION	14 - Language OSD With TELETEXT Wake-up On Time Sleep Timer			

DAEWOO ELECTRONICS CO., LTD
http : //svc.dwe.co.kr
April. 2000

Important Service Notes

1. X-ray Radiation Rrecaution

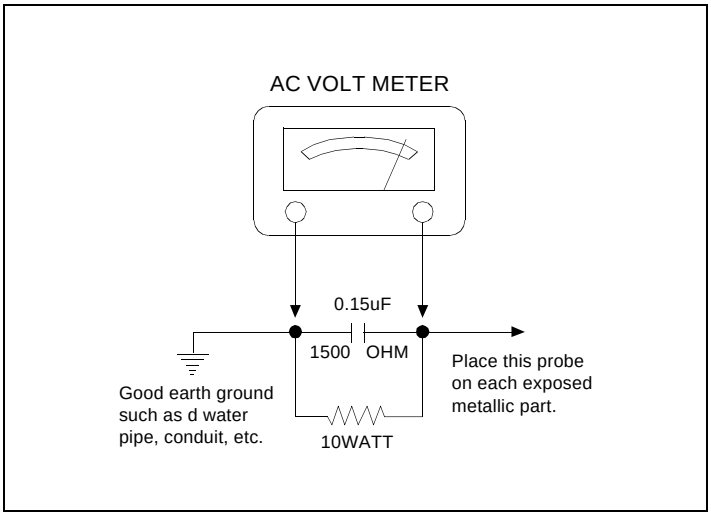
1) Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 25.5kv(20"/21") & 23.5kv(14")at zero beam current (minimum brightness) under a 120V/220V AC power source. The high voltage must not, under any circumstances, exceed 28kv(20"/21") & 26kv(14"). Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure on page 10 of this manual. It is recommended as a parts of the service record. It is important to use an accurate and reliable high voltage meter.
2) This receiver is equipped with X-RADIATION PROTECTION circuit which prevents the receiver from producing an excessively high voltage even if the B+voltage increases abnormally. Each time the receiver is serviced, X-RADIATION PROTECTION circuit must be checked to determine that the circuit is properly functioning, following the X-RADIATION PROTECTION CIRCUIT CHECK procedure on page 6 of this manual.
3) The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
4) Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

2. Safety Precaution

WARNING: Service should not be attempted by anyone unfamiliar with the necessary precaution on this receiver. The following are the necessary precaution to be observed before servicing.

1) Since the chassis of this receiver has hazardous potential to ground whenever the receiver is plugged in (floating chassis), an isolation transformer must be used during servicing to avoid shock hazard.
2) Always discharge the picture tube anode to the CRT conductive coating the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatterproof goggles and keep picture tube away from the body while handling.
3) When placing chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc.
4) Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screw-heads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isolation transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivi-ty in the following manner.

Connect at 1500 ohm 10 watt resistor, paralleled by a 0.15 mfd. AC type capacitor, between a known good earth ground (water pipe, conduit etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 mfd capacitor. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2 milliamp. AC. Any value exceeding the limit constitutes a potential shock hazard and must be corrected immediately.



3. Product Safety Notice

Many electrical and mechanical parts in this chassis have special safety-related characteristics. 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 safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by shading on the schematic diagram and the parts list.
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create X-ray radiation or other hazards.

4. Service Notes

1) When replacing parts or circuit boards, clamp or bend the lead wires to terminals before soldering.
2) When replacing a high wattage resistor (metal oxide film resistor) in the circuit board, keep the resistor min 1/2 inch away form circuit board.
3) Keep wires away from high voltage or high temperature components.

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Alignment Instructions

SVC v0

R BIAS	159
G BIAS	136
B BIAS	127
R DRIVE	35
G DRIVE	31
B DRIVE	32
V. CENTER	10
V. SIZE	23
H. CENTER	28
VCO	07
VCO FIN	107
VCO-L	05
VCO-L FIN	113
AGC	NO
LED EAST	44
Pr	01

ENTER SERVICE MODE

1. Select the Pr 91.
2. Adjust "Sparpness "to 0.
3. Enter the service mode using the follow keys.
   R → G → MENU.

1. AFT

1) Set a signal Generator with
   - RF FREQUENCY = 38.9MHz, 34.2MHz (L)
   - RF OUTPUT LEVEL = 80+/-5dBuV
   - System = PAL for 38.9MHz.
     SECAM-I for 43.2MHz.
2) Connect the Signal Generator RF Output (PAL 38.9MHz) to P101 (Tuner IF Output). There must be no signal input to the tuner.
3) Locate the cusor to "VCO"in Service Mode Menu, then press the "Vol +"key and wait until the "Please wait"disappear on the TV screen.
4) Connect the Signal Generator RF Output (SECAM-L 34.2MHz) to P101 (Tuner IF Output).
5) Locate the cusor to "VCO-L"in Service Mode Menu, then press the "Vol +"key and wait until the "Please wait"disappear on the TV screen.

2. SCREEN

1) Receive the Retma pattern and heat run over 15minutes.
2) Adjust the "R, G BIAS, R, G DRIVE"to 0, "B BIAS"to 127, "B DRIVE"to 32.
   Adjust the screen volume that the Retma pattern reachs the cut-off point.

3. WHITE BALANCE

1) Receive the Full white pattern and heat run over 15minutes.
2) Adjust the picture control at the point "X"value of white balance instrument in 20cd/m
3) Enter the service mode.
4) Adjust "R BIAS, G BIAS"to x=288, y=301.
5) In order to exit the service mode power off the TV set and power on.
6) Set the TV set to "Normal I"mode(20/21 inch) or set to "Normal II"mode(14 inch)
7) Enter the service mode.
8) Adjust "R DRIVE, G DRIVE"to x=288, y=301.
9) Repeat above process until the white balance value to x=288, y=301, X=20, x=288, y=301, X=200 (approximate) in 2) -8).

4. FOCUS

1) Apply a RETMA PATTERN signal.
2) Adjust the Focus Volume on FBT to obtain optimal resolution.

5. AGC

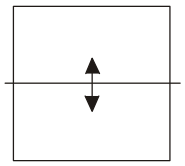
1) Set a pattern Generator with
   - RF LEVEL = 60dBuV
   - 100% FULL COLOR BAR
2) Connect the Pattern Genetator RF Output to tuner RF input.
3) Connect the probe of oscilloscope in AGC pin of tuner.
4) Adjust the AGC point to MAX - 1V.

(Simple Method)

1) Receive the pattern.
2) Locate the cusor in "AGC"and adjust using the "VOL +"or "VOL -"keys.
3) Adjust the point there is no noise in about 60dBuV and no beat in about 90dBuV.

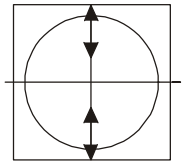
6. GEOMETRY

6.1 VERTICAL CENTER



1) Set the TV to "NORMAL I" mode.
2) Enter the service mode.
3) Locate the cusor at "V.CENTER" then press "VOL +" or "VOL -" keys to adjust the center line with the mechanical center marks of the CRT.

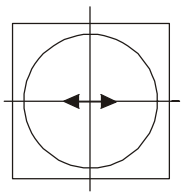
6.2 VERTICAL SIZE



* The VERTICAL CENTER adjustment has to be done in advance.

1) Receive the Retma pattern.
2) Set the TV to "NORMAL I" mode.
3) Enter the service mode.
4) Locate the cursor at "V.SIZE" then press "VOL +" or "VOL -" keys to adjust the upper part of the picture.

6.3 HORIZONTAL CENTER



1) Apply a RETMA PATTERN signal.
2) Set the TV to "NORMAL I" mode.
3) Enter the service mode.
4) Locate the cursor at "H.CENTER" then press "VOL +" or "VOL -" keys to adjust the picture centering.

if EEPROM(I702) has been changed;
- Option data has to be change and
- all alignment function has to be readjusted

* The initial state of adjustment are as follows;
- V-Center, V-Size, H-Center, R, G, B, AFT = Center ( )
- AGC =

* Service Remocon

Electrical Parts List

Ⓡ is a recommendable part for stock.

⚠ is safety component, so it must be used the same component.

LOC	PART CODE	PART NAME	PART DESCRIPTION
ZZ100 Ⓡ	48B3740A01	TRANSMITTER REMOCON	R-40A01
ZZ110	PTACPWA627	ACCESSORY AS	DTP-14C5TF
100	4850Q00910	BATTERY	R03/NN
M821	4858213800	BAG INSTRUCTION	L.D.P.E T0.05X250X400
ZZ120 Ⓡ	PTBCSHA627	COVER BACK AS	DTP-14C5TF
M211	4852151401	COVER BACK	HIPS BK
M541	4855415800	SPEC PLATE	150ART P/E FILM (C/TV)
ZZ130	PTPKCPA627	PACKING AS	DTP-14C5TF
M801	4858038700	BOX CARTON	SW-2 DTQ-1463FW
M811	4858189600	PAD	EPS 14V5
M821	4858210600	BAG P.E	L.D.P.E T0.03X1000X900
ZZ131	48519A4710	CRT GROUND NET	1401S-1015-1P
ZZ132	58G0000084	COIL DEGAUSSING	DC-1450
ZZ140	PTCACAA627	CABINET AS	DTP-14C5TF
CRT1 Ⓡ	PTRTPWA605	CRT AS	PAL 14" ITC CRT AS
V01	58D0000082	COIL DY	ODY-M1489
V02	48A96R004-	RUBBER WEDGE	HMR 28 SR (I0X54)
V03	4850PM001-	MAGNET CP	NY-225 (MINI NECK)
V04	2TC26019BE	TAPE CLOTH	19X30 BEIGE
V05	2224050026	BOND SILICON	RTV 122 CARTRIDGE
V06	2233030001	PAINT LOCK	3B-1401B
V901	48A96414P4	CRT BARE	A34JLL90X(K)
M193 Ⓡ	4851937902	BUTTON CTRL	4942102+5537501
M321	4853214800	BRKT	FR HIPS BK
M491B Ⓡ	4854942103	BUTTON	ABS BK
M561	4855621401	MARK BRAND	ABS BK
M681	4856812001	TIE CABLE	NYLON66 DA100
SP01A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN
ZZ200 Ⓡ	PTFMSJA627	MASK FRONT AS	DTP-14C5TF
M201	4852069901	MASK FRONT	HIPS BK
ZZ210 ⚠	PTSPPWA627	SPEAKER AS	DTP-14C5TF
P601A	4850703S50	CONNECTOR	YH025-03+35098+ULW=200
SP01 Ⓡ	4858314010	SPEAKER	SP-5070F01 3W 8 OHM
ZZ290 Ⓡ	PTMPMSA627	PCB MAIN MANUAL AS	DTP-14C5TF
C101	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C102	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C103	CEXF1C222V	C ELECTRO	16V RSS 2200MF (13X25) TP
C301	CEXF1V471C	C ELECTRO	35V RUS 470MF (10X20) TP
C302	CCXB3A471K	C CERA	1KV B 470PF K (T)
C303	CEXF1E102C	C ELECTRO	25V RUS 1000MF (13X20) TP
C304	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
C305	CMXE2A473J	C MYLAR	100V PU 0.047MF J
C306	CEXF1V101C	C ELECTRO	35V RUS 100MF (8X11.5) TP
C307	CMXB1H224J	C MYLAR	50V EU 0.22MF J (TP)
C313	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C401	CMYE2D364J	C MYLAR	200V PU 0.36MF J
C402	CEXF2C109V	C ELECTRO	160V RSS 1MF (6.3X11) TP
C404	CMYH3C692J	C MYLAR	1.6KV BUP 6900PF J
C406	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)

LOC	PART CODE	PART NAME	PART DESCRIPTION
C410	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C411	CMYN1J105K	C MYLAR (MKT)	63V 1MF K (7.5MM)
C420	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C421	CEXF2E330V	C ELECTRO	250V RSS 33MF (13X25) TP
C501	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C502	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C503	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C504	CEXD1H229F	C ELECTRO	50V RND 2.2MF (5X11) TP
C506	CEXD1H229F	C ELECTRO	50V RND 2.2MF (5X11) TP
C507	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C511	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C512	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C513~7	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C520	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C522	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C523	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C524	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C601	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C602	CEXF1H108A	C ELECTRO	50V RSM 0.1MF 4X7
C606	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C611	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C620	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C702	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C703	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C704	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP
C706	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C801	CL1JB3474K	C LINE ACROSS	AC250V 0.47MF U/C/ SNDF/SV
C803	CCXF3A472Z	C CERA	1KV F 4700PF Z (T)
C804	CCXF3A472Z	C CERA	1KV F 4700PF Z (T)
C805	CEYN2G181P	C ELECTRO	400V LHS 180MF (25X35)
C807	CMYU3C222J	C MYLAR	1.6KV BCP 2200PF J
C809	CH1HFE102M	C CERA AC	4.0KV 1000PF E DG
C812	CH1HFE102M	C CERA AC	4.0KV 1000PF E DG
C814	CCYR3A471K	C CERA	1KV R 470PF K 125 DE0705
C815	CEXF2C101V	C ELECTRO	160V RSS 100MF (16X25) TP
C816	CCXB3A471K	C CERA	1KV B 470PF K (T)
C818	CEXF2C101C	C ELECTRO	160V RUS 100MF (16X25) TP
C819	CEXF2A100V	C ELECTRO	100V RSS 10MF (6.3X11) TP
C820	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP
C822	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C823	CCXB3A471K	C CERA	1KV B 470PF K (T)
C824	CCXB3A471K	C CERA	1KV B 470PF K (T)
C825	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
C826	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C827	CEXF1C222V	C ELECTRO	16V RSS 2200MF (13X25) TP

LOC	PART CODE	PART NAME	PART DESCRIPTION
C828	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C829	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C830	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C841	CCXF1H103Z	C CERA	50V F 0.01MF Z (TAPPING)
C842	CCXB3A102K	C CERA	1KV B 1000PF K (TAPPING)
C850	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP
C902	CMXL2E104K	C MYLAR	250V MEU 0.1MF K
C905	CMXL2E104K	C MYLAR	250V MEU 0.1MF K
C906	CBXB3D102K	C CERA SEMI	2KV BL(N) 1000PF K (T)
CC102	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC103	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC104	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC105	HCQK102JCA	C CHIP CERA	50V CH 1000PF J 2012
CC108	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC109	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC118	HCBK104KCA	C CHIP CERA	50V X7R 0.1MF K 2012
CC412	HCQK160JCA	C CHIP CERA	50V CH 16PF J 2012
CC501	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC502	HCFK103ZCA	C CHIP CERA	50V Y5V 0.01MF Z 2012
CC504	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC505	HCBK222KCA	C CHIP CERA	50V X7R 2200PF K 2012
CC506	HCQK102JCA	C CHIP CERA	50V CH 1000PF J 2012
CC508	HCBK472KCA	C CHIP CERA	50V X7R 4700PF K 2012
CC509~12	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC515~7	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC518	HCBK222KCA	C CHIP CERA	50V X7R 2200PF K 2012
CC519	HCFK334ZCA	C CHIP CERA	50V Y5V 0.33MF Z 2012
CC520	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC521	HCBK472KCA	C CHIP CERA	50V X7R 4700PF K 2012
CC522~4	HCQK102JCA	C CHIP CERA	50V CH 1000PF J 2012
CC526	HCBK223KCA	C CHIP CERA	50V X7R 0.022MF K 2012
CC533	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC534	HCQK300JCA	C CHIP CERA	50V CH 30PF J 2012
CC535	HCQK300JCA	C CHIP CERA	50V CH 30PF J 2012
CC536	HCQK300JCA	C CHIP CERA	50V CH 30PF J 2012
CC602~4	HCQK102JCA	C CHIP CERA	50V CH 1000PF J 2012
CC605	HCQK471JCA	C CHIP CERA	50V CH 470PF J 2012
CC606	HCQK471JCA	C CHIP CERA	50V CH 470PF J 2012
CC610	HCQK181JCA	C CHIP CERA	50V CH 180PF J 2012
CC612	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC613	HCFK103ZCA	C CHIP CERA	50V Y5V 0.01MF Z 2012
CC701	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC702	HCQK820JCA	C CHIP CERA	50V CH 82PF J 2012
CC705	HCBK472KCA	C CHIP CERA	50V X7R 4700PF K 2012
CC707	HCQK820JCA	C CHIP CERA	50V CH 82PF J 2012
CC708	HCBK472KCA	C CHIP CERA	50V X7R 4700PF K 2012
CC709	HCQK220JCA	C CHIP CERA	50V CH 22PF J 2012
CC713	HCBK222KCA	C CHIP CERA	50V X7R 2200PF K 2012
CC722	HCQK102JCA	C CHIP CERA	50V CH 1000PF J 2012
CC723	HCQK220JCA	C CHIP CERA	50V CH 22PF J 2012
CC801	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
CC830	HCFK104ZCA	C CHIP CERA	50V Y5V 0.1MF Z 2012
D101	D1N4148---	DIODE	1N4148 (TAPPING)
D103	D1SS85TA--	DIODE	1SS85TA
D105	DUZ33B----	DIODE ZENER	UZ-33B
D106	D1N4148---	DIODE	1N4148 (TAPPING)

LOC	PART CODE	PART NAME	PART DESCRIPTION
D107	DUZ5R1B---	DIODE ZENER	UZ-5.1B UNIZON
D301,3	D1N4937G--	DIODE	1N4937G (TAPPING)
D402~3	D1N4937G--	DIODE	1N4937G (TAPPING)
D404	DDG3------	DIODE	DG3
D410	DUZ5R1B---	DIODE ZENER	UZ-5.1B UNIZON
D450	D1N4148---	DIODE	1N4148 (TAPPING)
D452	D1N4148---	DIODE	1N4148 (TAPPING)
D501~7	DUZ5R6BM--	DIODE ZENER	UZ-5.6BM(TAPPING)
D508	D1N4148---	DIODE	1N4148 (TAPPING)
D509	D1N4148---	DIODE	1N4148 (TAPPING)
D510	DUZ5R1B---	DIODE ZENER	UZ-5.1B UNIZON
D512~4	D1N4148---	DIODE	1N4148 (TAPPING)
D602	DUZ5R6BM--	DIODE ZENER	UZ-5.6BM(TAPPING)
D610	D1N4148---	DIODE	1N4148 (TAPPING)
D620	D1N4148---	DIODE	1N4148 (TAPPING)
D701	DUZ3R9B---	DIODE ZENER	UZ-3.9B
D704	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
D706	DLH2PR----	LED BLOCK	LH-2P-R
D720	D1N4148---	DIODE	1N4148 (TAPPING)
D806	DRGP30J---	DIODE	RGP30J
D808,10, 12	D1N4936GP-	DIODE	1N4936GP (TAPPING)
D816	DUZ3R9B---	DIODE ZENER	UZ-3.9B
D820	D1N4148---	DIODE	1N4148 (TAPPING)
D835	DR2M------	DIODE ZENER	R2M
D837~40	DLT2A05G--	DIODE	LT2A05G (TP)
F801	5FSCB4022R	FUSE CERA	SEMKO F4AH 4A 250V MF51
F801A	4857415001	CLIP FUSE	PFC5000-0702
F801B	4857415001	CLIP FUSE	PFC5000-0702
I301	PTA2SW7104	HEAT SINK ASS`Y	1TDA1771-- + 7174301011
I301 Ⓡ	1TDA1771--	IC VERTICAL	TDA1771
I301A	4857027104	HEAT SINK	SPCC T1.0+SN
I301B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN
I501 Ⓡ	1STV2238DQ	IC CHIP VIDEO	STV2238D
I601 Ⓡ	1TDA7267A-	IC AMP	TDA7267A
I701 Ⓡ	1DW195DE1Q	IC MICOM	DW92195B7T-DE1(ERP)
I702 Ⓡ	1AT24C16PC	IC	AT24C16-10PC
I703 Ⓡ	1KA7805---	IC REGULATOR	KA7805
I704 Ⓡ	1KRT30----	IC PREAMP	KRT30
I802 Ⓡ	4850M04710	MODULE POWER	DPM001T1A
I805	PTA2SW6904	HEAT SINK ASS`Y	1STV8131-- + 7174301011
I805 Ⓡ	1STV8131--	IC REGULATOR	STV8131
I805A	4857026904	HEAT SINK	AL EX
I805B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN
I901	PTB3SW1100	HEAT SINK ASS`Y	1TDA6103Q- + 7174301011
I901 Ⓡ	1TDA6103Q-	IC VIDEO	TDA6103Q
I901A	4857031100	HEAT SINK	A1050P-H24 T2.0
I901B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN
J046	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
JC001~6	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC008~9	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC011~20	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC022	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC024~5	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JS02	4859109950	JACK PIN BOARD	PH-JB-9710A
L101	58N0000044	COIL VCO	TRF-V010
L301	5CPZ100K04	COIL PEAKING	10UH 10.5MM K (LAL04TB)
L511	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L601	5CPZ109M02	COIL PEAKING	1UH M (AXIAL 3.5MM)
L602	5CPZ109M02	COIL PEAKING	1UH M (AXIAL 3.5MM)

LOC	PART CODE	PART NAME	PART DESCRIPTION
L603	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
L604	5CPZ109M02	COIL PEAKING	1UH M (AXIAL 3.5MM)
L606	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
L701	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)
L702	5CPZ569K02	COIL PEAKING	5.6UH K (AXIAL 3.5MM)
L800	58Q0000093	COIL DELAY LINE	RS208
L801	5PLF24A3--	FILTER LINE	LF-24A3
L802	5MC0000100	COIL BEAD	HC-3550
L803	5MC0000100	COIL BEAD	HC-3550
L805	58C4500079	COIL CHOKE	L-45
L806	5CPZ390K04	COIL PEAKING	39UH 10.5MM K (LAL04TB)
M681	4856812001	TIE CABLE	NYLON66 DA100
M721	4857235402	SHIELD CASE	SPTH-C T0.25
P401	4859240020	CONN WAFER	YFW500-05
P601	485923162S	CONN WAFER	YW025-03 (STICK)
P801	4859287320	CONN WAFER	MKS2822-6-10-202
P802	4859242220	CONN WAFER	YFW800-02
P901	4850709N02	CONNECTOR	YBNH250-09YBNT025+ULW=300
PA801 Ⓡ	4859906210	CORD POWER AS	6-L0+H03VVH2=2200
Q105	TKTC3198Y-	TR	KTC3198Y
Q401	TKTC3207--	TR	KTC3207 (TP)
Q402 Ⓡ	T2SD2499--	TR	2SD2499
Q501	TKTC3198Y-	TR	KTC3198Y
Q502	TKTC3198Y-	TR	KTC3198Y
Q503	TKTA1266Y-	TR	KTA1266Y (TP)
Q505	TKTA1266Y-	TR	KTA1266Y (TP)
Q506	TKTC3198Y-	TR	KTC3198Y
Q601	TKTC3198Y-	TR	KTC3198Y
Q620	TKTA1266Y-	TR	KTA1266Y (TP)
Q701	TKTA1266Y-	TR	KTA1266Y (TP)
Q702	TKTC3198Y-	TR	KTC3198Y
Q703	TKTC3198Y-	TR	KTC3198Y
Q704	TKTC3198Y-	TR	KTC3198Y
Q705	TKTC3198Y-	TR	KTC3198Y
Q710	TKTC3198Y-	TR	KTC3198Y
Q801	PTR2SW4500	HEAT SINK ASS`Y	T2SK2671-- + 7174300811
Q801 Ⓡ	T2SK2671--	FET	2SK2671
Q801A	4857024500	HEAT SINK	AL EX B/K
Q801B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN
Q802 Ⓡ	TKSA1013Y-	TR	KSA1013Y (TP)
R101	RD-4Z242J-	R CARBON FILM	1/4 2.4K OHM J
R109	RD-4Z183J-	R CARBON FILM	1/4 18K OHM J
R110	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R111	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R120	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R301	RD-2Z249J-	R CARBON FILM	1/2 2.4 OHM J
R302	RN02B229JS	R METAL FILM	2W 2.2 OHM J SMALL
R303	RN02B271JS	R METAL FILM	2W 270 OHM J SMALL
R307	RN02B181JS	R METAL FILM	2W 180 OHM J SMALL
R308	RN02B181JS	R METAL FILM	2W 180 OHM J SMALL
R309	RN02B181JS	R METAL FILM	2W 180 OHM J SMALL
R310	RN02B181JS	R METAL FILM	2W 180 OHM J SMALL
R402	RS02Z103JS	R M-OXIDE FILM	2W 10K OHM J SMALL
R403	RS01Z439J-	R M-OXIDE FILM	1W 4.3 OHM J
R406	RD-2Z472J-	R CARBON FILM	1/2 4.7K OHM J
R407	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R408	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R409	RD-4Z561J-	R CARBON FILM	1/4 560 OHM J
R410	RN01B132JS	R METAL FILM	1W 1.3K OHM J SMALL

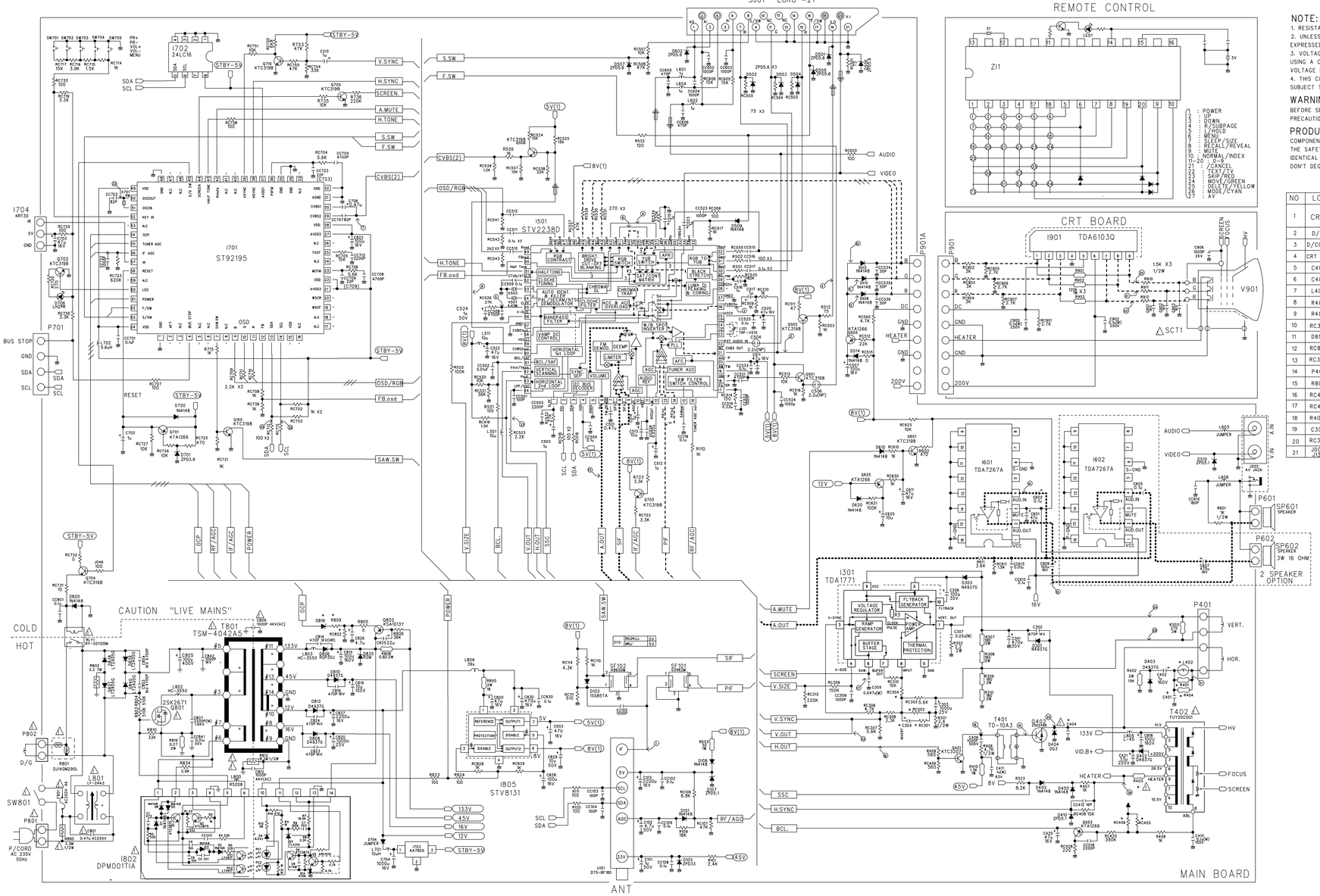
LOC	PART CODE	PART NAME	PART DESCRIPTION
R501	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R502	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R503	RN01B300JS	R METAL FILM	1W 30 OHM J SMALL
R512	RD-4Z750J-	R CARBON FILM	1/4 75 OHM J
R521	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R525	RD-4Z104J-	R CARBON FILM	1/4 100K OHM J
R526	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R532	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R601	RD-2Z102J-	R CARBON FILM	1/2 1K OHM J
R602	RD-4Z511J-	R CARBON FILM	1/4 510 OHM J
R611	RD-4Z362J-	R CARBON FILM	1/4 3.6K OHM J
R715	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R723	RD-4Z332J-	R CARBON FILM	1/4 3.3K OHM J
R735	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J
R736	RD-4Z224J-	R CARBON FILM	1/4 220K OHM J
R753	RD-4Z473J-	R CARBON FILM	1/4 47K OHM J
R801	DEC140M290	POSISTOR	ECPCC140M290
R802	RX07C339JF	R CEMENT	7W 3.3 OHM J 15MM 4P
R803	RD-4Z514J-	R CARBON FILM	1/4 510K OHM J
R804	RD-4Z514J-	R CARBON FILM	1/4 510K OHM J
R805	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
R806	RD-4Z363J-	R CARBON FILM	1/4 36K OHM J
R808	RS02Z828JS	R M-OXIDE FILM	2W 0.82 OHM J SMALL
R809	RD-4Z103J-	R CARBON FILM	1/4 10K OHM J
R810	RD-4Z333J-	R CARBON FILM	1/4 33K OHM J
R812	RC-2Z825KP	R CARBON COMP	1/2 8.2M OHM K
R819	RS02Z278JS	R M-OXIDE FILM	2W 0.27 OHM J SMALL
R823	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R824	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R834	RD-4Z392J-	R CARBON FILM	1/4 3.9K OHM J
R850	RN02B180JS	R METAL FILM	2W 18 OHM J SMALL
R890	RC-2Z335KP	R CARBON COMP	1/2 3.3M OHM K
R901~3	RN01B124JS	R METAL FILM	1W 120K OHM J SMALL
R910~2	RD-2Z152J-	R CARBON FILM	1/2 1.5K OHM J
RC106	HRFT682JCA	R CHIP	1/10 6.8K OHM J 2012
RC107	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RC111	HRFT511JCA	R CHIP	1/10 510 OHM J 2012
RC114	HRFT432JCA	R CHIP	1/10 4.3K OHM J 2012
RC115	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC301	HRFT361JCA	R CHIP	1/10 360 OHM J 2012
RC302	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RC303	HRFT562JCA	R CHIP	1/10 5.6K OHM J 2012
RC304	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RC306	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC307	HRFT562JCA	R CHIP	1/10 5.6K OHM J 2012
RC308	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RC309	HRFT154JCA	R CHIP	1/10 150K OHM J 2012
RC310	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC313	HRFT224JCA	R CHIP	1/10 220K OHM J 2012
RC404	HRFT561JCA	R CHIP	1/10 560 OHM J 2012
RC405	HRFT362JCA	R CHIP	1/10 3.6K OHM J 2012
RC408	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC419	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
RC420	HRFT394JCA	R CHIP	1/10 390K OHM J 2012
RC501	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RC503~5	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RC506	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC507	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC508	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC509	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC510	HRFT102JCA	R CHIP	1/10 1K OHM J 2012

LOC	PART CODE	PART NAME	PART DESCRIPTION
RC511	HRFT470JCA	R CHIP	1/10 47 OHM J 2012
RC512	HRFT223JCA	R CHIP	1/10 22K OHM J 2012
RC513	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC514	HRFT151JCA	R CHIP	1/10 150 OHM J 2012
RC515	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC516	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC517	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC518	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC519	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC520	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC521	HRFT363JCA	R CHIP	1/10 36K OHM J 2012
RC522	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC523	HRFT822JCA	R CHIP	1/10 8.2K OHM J 2012
RC524	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC525	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC526	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
RC527	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RC528	HRFT221JCA	R CHIP	1/10 220 OHM J 2012
RC529~31	HRFT271JCA	R CHIP	1/10 270 OHM J 2012
RC532	HRFT273JCA	R CHIP	1/10 27K OHM J 2012
RC534	HRFT334JCA	R CHIP	1/10 330K OHM J 2012
RC535	HRFT184JCA	R CHIP	1/10 180K OHM J 2012
RC537	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC538	HRFT223JCA	R CHIP	1/10 22K OHM J 2012
RC539	HRFT122JCA	R CHIP	1/10 1.2K OHM J 2012
RC541~3	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC553	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC555	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC560	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC605	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC606	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC610	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC611	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
RC620	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC621	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
RC623	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
RC630	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC702	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC703	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC704	HRFT562JCA	R CHIP	1/10 5.6K OHM J 2012
RC705	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC706	HRFT562JCA	R CHIP	1/10 5.6K OHM J 2012
RC707	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC708	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC709	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC710	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC711	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC712	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC713	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC714	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC715	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
RC716	HRFT392JCA	R CHIP	1/10 3.9K OHM J 2012
RC717	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC719	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RC720	HRFT271JCA	R CHIP	1/10 270 OHM J 2012
RC721	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC722	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RC723	HRFT624JCA	R CHIP	1/10 620K OHM J 2012
RC725	HRFT471JCA	R CHIP	1/10 470 OHM J 2012

LOC	PART CODE	PART NAME	PART DESCRIPTION
RC726	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC727	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC729	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC730	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RC731	HRFT100JCA	R CHIP	1/10 10 OHM J 2012
RC732	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC733	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC736	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC738	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC751	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC752	HRFT682JCA	R CHIP	1/10 6.8K OHM J 2012
RC754	HRFT333JCA	R CHIP	1/10 33K OHM J 2012
RC755	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RC822	HRFT134JCA	R CHIP	1/10 130K OHM J 2012
RC828	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC829	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC901	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RC902	HRFT302JCA	R CHIP	1/10 3K OHM J 2012
RC903	HRFT302JCA	R CHIP	1/10 3K OHM J 2012
RC904	HRFT302JCA	R CHIP	1/10 3K OHM J 2012
RC905~7	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RLY1	5SC0101338	SW RELAY	DQ5D1-O(M)/GJ-SS-105LM
SCT1	4859303430	SOCKET CRT	PCS633A
SF101	5PG3962M--	FILTER SAW	G 3962-M
SF102	5PK9650M--	FILTER SAW	K9650M
SJ01	4859200401	SOCKET RGB	YRS21-R1
SW701	5S50101090	SW TACT	SKHV17910A
SW702	5S50101090	SW TACT	SKHV17910A
SW703	5S50101090	SW TACT	SKHV17910A
SW704	5S50101090	SW TACT	SKHV17910A
SW705	5S50101090	SW TACT	SKHV17910A
SW801 Ⓡ	5S40101146	SW POWER PUSH	SS-160-7-B
T401	50D10A3---	TRANS DRIVE	TD-10A3
T402 Ⓡ	50H0000202	FBT	FUY20C001
T801	50M4042A5-	TRANS SMPS	TSM-4042A5
U101 Ⓡ	4859719930	TUNER VARACTOR	DT5-BF18D
W101	4851900130	GROUND TUNER AS	DS-W1015-S
X501	5XEX4R433B	CRYSTAL QUARTZ	HC-49U 4.43361M 15PPM TP
X502	5XEX3R579B	CRYSTAL QUARTZ	HC-49U 3.57954M 15PPM TP
X701	5XEX4R000C	CRYSTAL QUARTZ	HC-49U 4.0000MHZ (TP)

CP-005 CHASSIS SCHEMATIC DIAGRAM

CP-005 by J.D.Park, 2000/06/05



NOTE:

1. RESISTANCE IS SHOWN IN OHM. K=1000, M=1000000
2. UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITOR VALUES ARE EXPRESSED IN uF
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 +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 "PROCUCT SAFETY NOTICE" IN SERVICE MANUAL

PRODUCT SAFETY NOTE

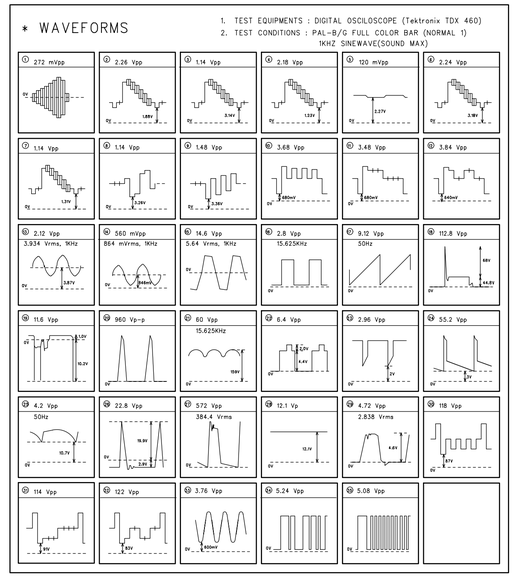
COMPONENTS MARKED WITH △ ARE IMPORTANT FOR MAINTAINING. THE SAFETY OF THE SET AND SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL OR SPECIFIED ONE IN THE PARTS LIST. DON'T DEGRADE THE SAFETY THROUGH IMPROPER SERVICING.

THE DIFFERENT PARTS OF SIZE

NO	LOC	14"			20"			21"			
		ORION	PHILIPS		ORION		POLKOLOR	ORION		PHILIPS	POLKOLOR
1	CRT	A34JLL90X			A48JLL90X			A51JSW90X			
2	D/Y	ODY-M1489	←		ODY-M2050		←	ODY-L2144		←	←
3	D/COIL	DC-1450	←		DC-2050		←	DC-2070		←	←
4	CRT G/A	1401S-	←		2001S-		←	2101S-		←	←
5	C401	0.36MF 200V	←		0.43MF 200V		←	0.18MF 200V		←	←
6	C404	6900P 1.6KV	←		6900P 1.6KV		←	6200P 1.8KV		←	←
7	L402	X	←		X		X	TRL-5418		←	←
8	R401	X	←		X		X	2W 4.7K		←	←
9	R404	X	←		X		←	X		←	←
10	RC301	360	←		360		←	510		←	←
11	DB16	ZPD3.9	←		ZPD10		←	ZPD10		←	←
12	RC822	130K	←		36K		←	27K		←	←
13	RC304	2.7K	←		3K		←	3.3K		←	←
14	P401	YFW500-05	←		YFW500-05		←	YFW500-06		←	←
15	R809	10K	←		36K		←	36K		←	←
16	RC405	3.6K	←		3K		←	5.6K		←	←
17	RC406	X	←		X		←	5.6K		←	←
18	R403	4.3	←		5.1		←	4.7		←	←
19	C304	22u	←		22u		←	10u		←	←
20	RC302	2.0K	←		2.4K		←	2.0K		←	←
21	J008 J137	JUMPER	←		JUMPER		←	X		←	←

* WAVEFORMS

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



---- Video

---- Audio