

TEAC

SERVICE MANUAL

CTM596SR CTM686ST CTM686STR 59cm/68cmCTV

Effective: August, 1997

CTM596SR/CTM686ST/CTM686STRSERV

SERVICE MANUAL

25" / 28" / 29"
SOLID STATE
Color Television
Receiver

ART-TECH. TV.

(PAL - SECAM VERSION)
PHILIPS IC

This manual is the latest at the time of printing, and does not include the modification which may be made after the printing, by the constant improvement of product.

Document : SM - 14PM

Date : 15 JUL 1991

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SPECIFICATION

SUPPLY VOLTAGE : AC220V 50Hz $\geq + 10\%$ / -20%

SYSTEM :	PAL - I / I	PAL - BG	PAL - I (UK)	PAL - SECAM - BG / DK	PAL - SECAM - BG / DK (HYPER)	PAL - BG (HYPER)	PAL - BG (CATV)	SECAM - L	L'	
CHANNEL L - VHF : H - VHF : UHF :	4 - 13 21 - 69	2 - 4 5 - 12 21 - 69	21 - 69	1 - 5 6 - 12 21 - 69	1 - 5 6 - 12 21 - 69	E2 - S10 E5 - S41 E21 - E69	E2 - S2 E5 - S20 E21 - E69	1 - Q 21 - 69	FB - FC	CH CH CH
VIF FREQUENCY :	38.9	38.9	39.5	38.0	38.9	38.9	38.9	38.9	32.7	MHz
SIF FREQUENCY :	32.9	33.4	33.5	31.5 32.5	32.4 33.4	33.4	33.4	32.4	39.2	MHz
CHROMA IF FREQUENCY :	34.47	34.47	35.07	33.57 33.57	34.47 34.47	34.47	34.47	34.47		MHz
INTER-CARRIER FREQUENCY :	6.0	5.5	6	6.5 5.5	6.5 5.5	5.5	5.5	6.5	6.5	MHz
SCANNING HORIZONTAL : VERTICAL :	15625 LINE 50 Hz									
ANTENNA INPUT IMPEDANCE :	75 OHM									
CRT :	25" - 29"									

ITEMS OF MEASUREMENT	STANDARD	UNIT
VIDEO SENS. AT S/N 30db		
L - VHF	≤ 57	dbuv
H - VHF	≤ 57	dbuv
UHF	≤ 60	dbuv
SOUND SENS. AT S/N 30db		
L - VHF	≤ 42	dbuv
H - VHF	≤ 42	dbuv
UHF	≤ 48	dbuv
AGC CHARACTER	≥ 60	db
SELECTIVITY -1.5 MHz	≥ 35	db
+ 8 MHz	≥ 40	db
COLOR SENS.	≤ 45	dbuv
COLOR LOCK - IN RANGE	$\geq \pm 300$	Hz
VERTICAL LOCK - IN RANGE	≥ 6	Hz
HORIZONTAL LOCK - IN RANGE	≥ 400	Hz
MAX BRIGHTNESS	≥ 100	cd/m ²
MAX OUTPUT POWER	≥ 4.5	W
OUTPUT POWER AT 10% THD	≥ 3.5	W
BUZZ	≤ -40	db
AFC RANGE	$\geq +1$	MHz
	≥ -0.5	MHz
MIN. VOL HUM	≤ 20	mV
RESOLUTION HORIZONTAL	≥ 300	LINES
VERTICAL	≥ 400	LINES
LINEARITY DISTORTION VERTICAL	≤ 10	%
HORIZONTAL	≤ 10	%
RASTER DISTORTION	≤ 5	%
REMOTE CONTROL DISTANCE	≥ 5	METER
ANGLE	$\geq \pm 15$	DEGREE
POWER CONSUMPTION (AT NORMAL CONDITION)	≤ 120	WATTS
W / WOOFER POWER CONSUMPTION	≤ 150	WATTS
(AT NORMAL CONDITION)		
CONVERGENCE DISLOCATION AT AREA "A"	≤ 0.4	%
AREA "B"	≤ 0.8	%
(see fig.1)		

VIDEO INPUT LEVEL : 1.0V p-p ± 3 dB
VIDEO OUTPUT LEVEL : 1.0V p-p ± 3 dB

L / R AUDIO INPUT LEVEL : 0.5V Rms ± 3 dB
L / R AUDIO OUTPUT LEVEL : 0.5V Rms ± 3 dB

WOOFER AUDIO INPUT LEVEL : 125mV Rms ± 25 mV
WOOFER AUDIO FREQUENCY : 100Hz ± 3 Hz
WOOFER SUPPLY VOLTAGE DC : 18V ± 1 V
WOOFER MAX OUTPUT POWER : ≥ 7.5 WATTS

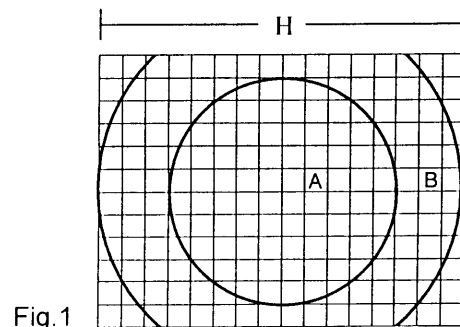


Fig.1

ALIGNMENT INSTRUCTION

PLEASE READ BEFORE ATTEMPTING SERVICE

1. Never disconnect any leads while receiver is in operation.
2. Disconnect all power before attempting any repairs.
3. Do not short any portion of the circuit while power is on.
4. For safety reasons, all parts replaced should be identical, (for parts and part numbers see parts list).
5. Before alignment the set must be pre-heated for 30 minutes or more and erase magnetism thoroughly from CRT front chassis frame by erase coil.
6. An isolation transformer should be used during any dynamic service to avoid possible shock hazard.

TEST EQUIPMENT

- | | |
|-----------------------------------------|-----------------------------------------|
| 1. VIF Sweep Generator | 7. Volt Ohmmeter |
| 2. SIF Sweep Generator | 8. High Voltage Meter |
| 3. Colour Bar Dot Cross Hatch Generator | 9. Ampere Meter (0.5 Class, DC 3mA Max) |
| 4. DC Power Supply | 10. Demagnetizing Coil |
| 5. Oscilloscope | 11. Philips Pattern Generator |
| 6. Vacuum Tube Voltmeter | 12. High Pot Tester |

CONVERGENCE ADJUSTMENT (SEE FIG.2)

1. Receive a dotted pattern input signal $70\text{dB} \pm 10\text{dB}$.
2. Unfix the convergence magnet clamber and align red with blue dots at the center of the screen by rotating (R,B) static convergence magnets.
3. Align Red / Blue with green dots at the center of the screen by rotating (RB-G) static convergence magnet.
4. Fix the convergence magnets by turning the clamber.
5. Remove the DY wedges and slightly tilt the deflection yoke horizontally and vertically to obtain the good overall convergence.
6. Fix the deflection yoke by wedges.
7. If purity error is found, follow "PURITY ADJUSTMENT" INSTRUCTIONS.

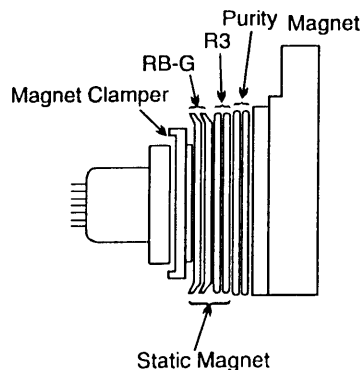


Fig. 2

AFC ALIGNMENT

1. Connect Philips Pattern Generator to tuner IF out and Ground (Frequency is as FROM 1 colour bar input signal level is $80\text{dB} \pm 3\text{dB}$).
2. Connect VOLT Ohmmeter to PIN18 and Ground to IC102.
3. Adjust T101 to obtain a DC $7\text{V} \pm 0\text{V}$.

SOUND TANK COIL ALIGNMENT

1. Connect Philips Pattern Generator to tuner IF point and Ground. (see fig.3)
(Frequency selection is subjected to require system as Form.1)
2. Connect Volt Ohmmeter to PIN12 and Ground at IC101.
3. Adjust T103 to obtain a DC2.8V \pm 0.1V.

* VIF signal is 80dB +3dB

SYSTEM	VIF	UNIT
PAL BG, BG / DK, I / I	38.9M	Hz
PAL I	39.5M	Hz
PAL DK / I (W / NICAM)	38.9M	Hz

FORM.1

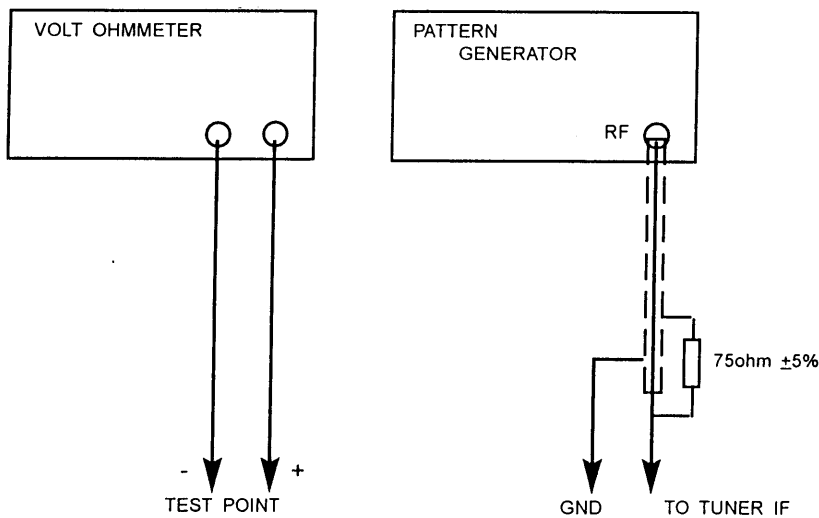


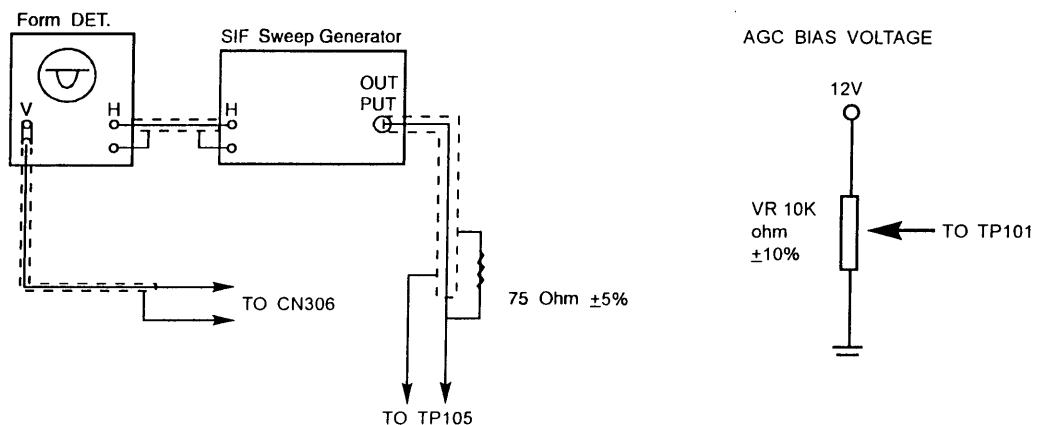
Fig.3

Remark: All frequency of marker point can have \pm 0.2% tolerance.

SOUND DEMODULATION ALIGNMENT

1. Connect 14V \pm 1V B+ bias voltage to D404 (-) and Ground.
2. Connect 14V \pm 1V B+ bias voltage to C923 (+) and Ground.
3. Connect the sweep generator to TP105. (frequency refer to SIF form)
4. Connect waveform detect to PIN1 and PIN3 (for german stereo system) at CN306.
5. Connect AGC Bias voltage to TP101.
6. The output of sweep generator should be -30dB \pm 5dB.

Remark: All frequency of marker point can have +0.2% tolerance.



7. Adjust T104 to obtain the waveform as Fig.4

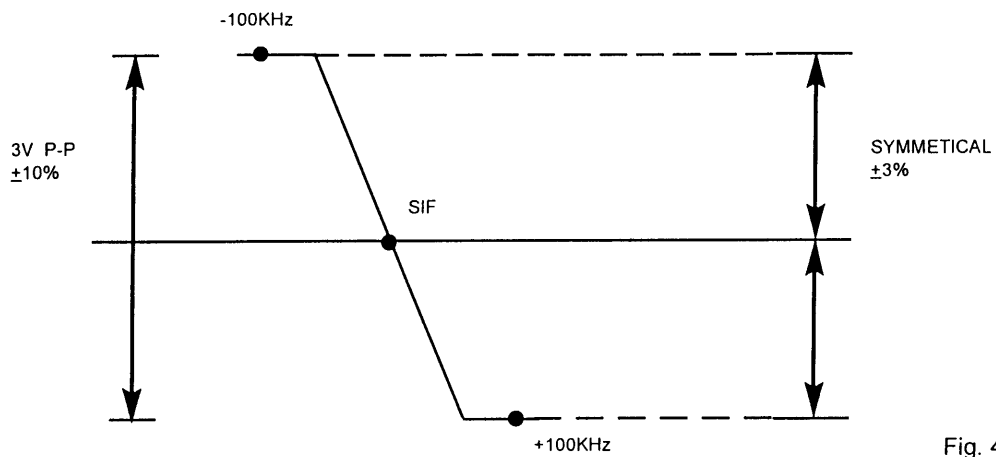


Fig. 4

ADJUSTMENT	T104
SYSTEM SIF	
PAL BG	5.5MHz
PAL BG / DK, DK / I, I / I	6.0MHz

FORM. 2

GERMAN STEREO SIF ADJUSTMENT

Adjust T102 to obtain the waveform as FIG. 5

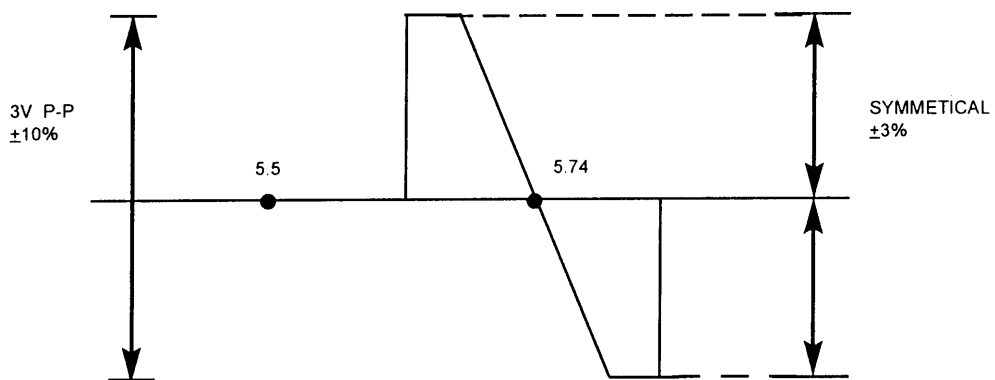


Fig. 5

STEREO AND DUAL SOUND ALIGNMENT

1. Receive colour bar pattern (with stereo and Dual Sound).
2. Connect oscilloscope to TP001, adjust VR001 with stereo signal to get a max waveform as Fig.6.
3. Connect oscilloscope to TP002, adjust VR003 with dual signal to get a max waveform as Fig.7.
4. Adjust T001 to get a max amplitude on both dual and stereo.

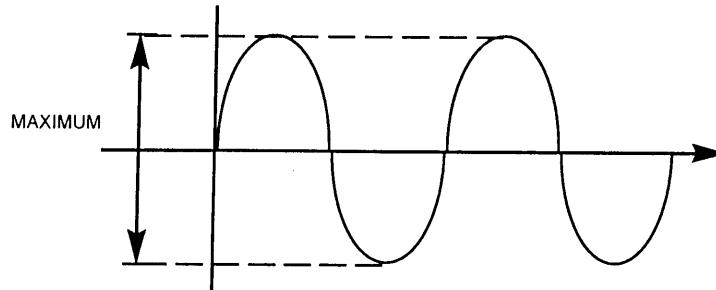


FIG.6

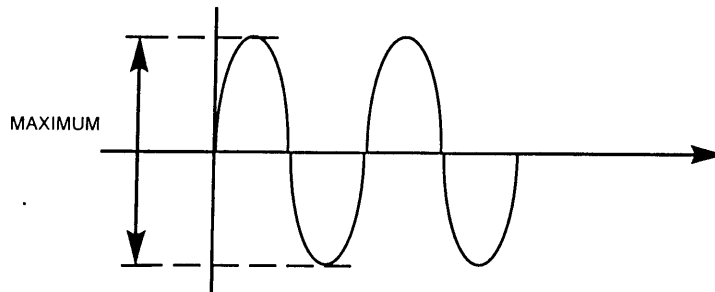
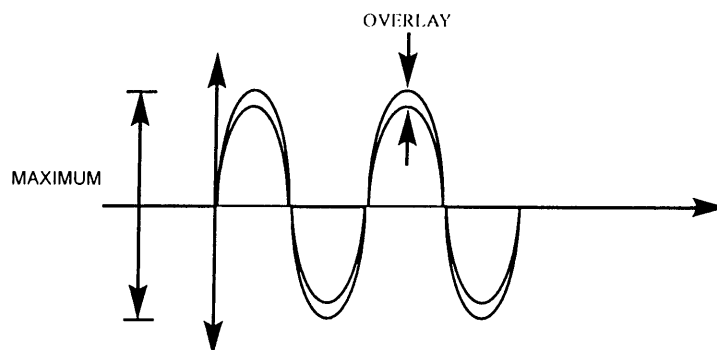


FIG.7

The above procedures are suitable only for IC TDA8416 circuit.

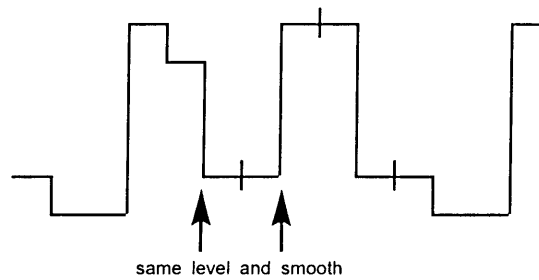
SEPARATION ALIGNMENT

1. Receive color bar pattern (with stereo sound, L=3KHz R=1KHz).
2. Connect oscilloscope to PIN1 at CN201 and ground.
3. Adjust Volume control to maximum obtain a waveform no distortion.
4. Adjust VR002 or VR060 (for IC TDA8416) to obtain waveform as follow.

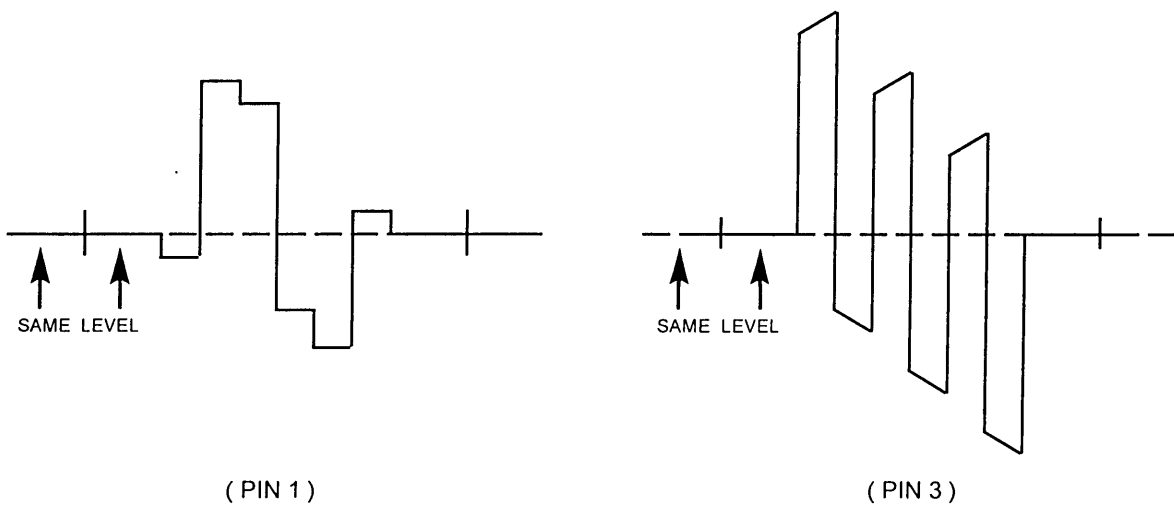


SECAM COLOUR ADJUSTMENT

1. Receive a secam colour bar signal (input signal 70dB \pm 10dB.)
2. Connect oscilloscope to PIN19 on IC307.
3. Adjust colour control to maximum.
4. Adjust T305 to get the waveform as follows.



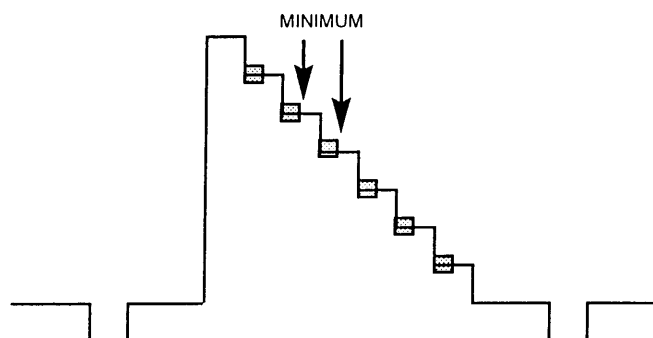
5. Connect scope to PIN1 and PIN3 on IC307.
6. Adjust T301 and VR301 to get the waveform as follows.



SECAM CHROMA TRAP ADJUSTMENT

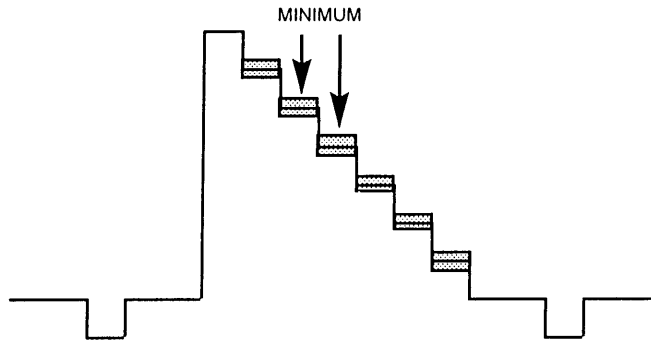
1. Receive secam color bar signal (input signal 70dB +10dB.)
2. Connect scope to PIN20 on IC304.
3. Adjust colour control to minimum.
4. Adjust T302 to get the waveform as follow.

Remark: Frequency of marker point can have \pm 0.2% tolerance.



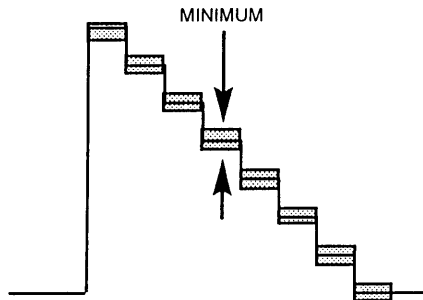
NTSC CHROMA TRAP ADJUSTMENT

1. Receive a NTSC colour bar signal from AV input.
2. IC304 PIN20.
3. Adjust color control to minimum.
4. Adjust T303 to get the waveform as follow.



PAL CHROMA TRAP ADJUSTMENT (FOR DK / I)

1. Receive PAL colour bar signal (input signal 70dB \pm 10dB.)
2. Connect scope to PIN20 on IC304.
3. Adjust colour control to minimum.
4. Adjust T302 to get the waveform as follow.



PAL CHROMA ALIGNMENT (PAL ONLY)

1. Connect OSC to PIN15 of IC307 through a 10K \pm 5% resistor.
2. Receive a PAL colour bar signal (input signal 70dB \pm 10dB.)
3. Adjust T305 to get a maximum amplitude waveform.

Remark: All frequency of marker can have \pm 0.2% tolerance.

B+ ADJUSTMENT

1. Connect a digital volt meter to TPB+ and ground.
2. Set Brightness, contrast and colour to minimum the screen just be seen.
3. Adjust VR301 and screen volume on FBT to brightest bar can just be screen.
4. Adjust VR901 and obtain a reading of 143V \pm 1V.

HORIZONTAL CIRCUIT ADJUSTMENT

1. Receive Monoscope Pattern input signal 70dB \pm 10dB.
2. Connect terminal 25 PIN of IC102 and the ground with the Elect.cap 10uF / 16V +10%.
3. Adjust VR103 to obtain the picture running at centre.
4. Adjust VR102 to obtain the picture at centre.

VERTICAL CIRCUIT ADJUSTMENT

1. Receive the Monoscope Pattern.
2. Adjust V - size (VR401) to obtain a normal picture.

WHITE BALANCE ALIGNMENT STEP

(degauss the picture by degaussing coil if necessary)

1. Set the brightness, contrast, screen and picture control to minimum value.
2. Turn VR501 to middle position. Turn VR502, 503, 504, 505 to minimum position.
3. Receive a monoscope or Philips pattern, input signal 70dB \pm 10dB.
4. Connect a digital meter between Red Gun and Ground on the CRT Board.
5. Adjust VR301 to obtain a CRT cut off voltage at 170V \pm 3V.
6. Adjust screen volume on FBT to brightest bar can just be screen.
7. Receive a black and white pattern, input signal 70dB \pm 10dB or video input 1Vp-p \pm 3dB.
8. Set the brightness and contrast to middle position.
9. Adjust VR501, 502, 503, 504, 505 to obtain a uniformly white picture (9300°K) \pm 3JND.

SUB - BRIGHTNESS ALIGNMENT

1. Receive a Philips pattern, input signal 70dB \pm 10dB.
2. Turn the brightness, contrast and colour to minimum.
3. Adjust VR301 until the brightest bar can just be screen.

FOCUS ALIGNMENT

1. Set the brightness and contrast to middle position.
2. Receive a monoscope pattern, input signal 70dB \pm 10dB.
3. Adjust focus control to obtain sharpest picture.

PAL EAST WEST CORRECTION ADJUSTMENT

1. Receive crosshatch pattern input signal 70dB \pm 10dB.
2. Turn the brightness, contrast to middle position.
3. Adjust VR402 to get a normal regular picture.
4. Adjust VR403 to get a proper horizontal width.

NTSC EAST WEST CORRECT ADJUSTMENT

1. Receive crosshatch pattern and centre cross pattern, input signal.
2. Turn the brightness, contrast to middle position.
3. Adjust VR404 to get a normal regular picture.

AGC ALIGNMENT

1. Receive monoscope pattern at CH69 (UHF) and input field strength (tuner input signal table show as below).
2. Connect a digital meter between the tuner AGC terminal and ground.
3. Adjust the AGC variable resistor (VR201) to the MAXIMUM position (clockwise) and then adjust the VR anti-clockwise until the voltage drop down ≥ 0.4 .

Remark: (1) the voltage drop down must be close to 0.4V.
 (2) No noise on the picture.

TUNER MODEL NO.	RF INPUT SIGNAL(dB)	TUNER MODEL NO.	RF INPUT SIGNAL(dB)
ENV598B7F2	62±2dB	OSCAR 2900KKC	60±2dB
UVC6201-RC	57±2dB	HBC3300KHC	60±2dB
UVC8303-RW	57±2dB	TBD1CAB14	60±2dB
UVL1812-AW	57±2dB	TECC1986VAO618	60±2dB
UVC1401-EW	57±2dB	TBD1-HYPV15V	60±2dB
TDQ-5-32	57±3dB	UVE33-W24/R16-8649	60±2dB
TDQ-8-12	57±3dB	UVE50-AW04D	60±2dB
VISHZUZ51	60±2dB		

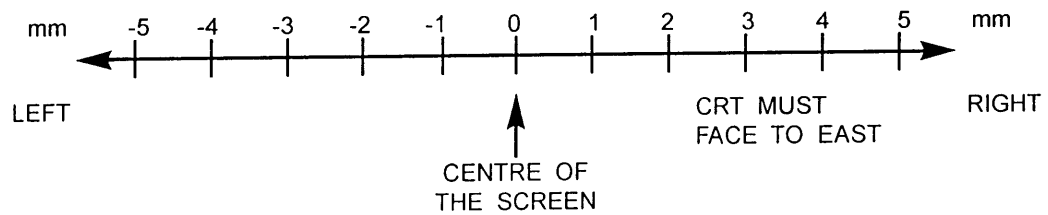
HIGH POT TESTING

1. Short the LINE CORD L - pole and N - pole.
2. Turn on the power switch of the TV set.
3. The High Pot Tester (-) connect to the L and N poly and (+) connect to the metal parts of cabinet.

Remark: The high pot tester can have $\leq \pm 3\%$ tolerance.

STAFETY STD.	CONDITION	TEST SYANDARD	TEST STANDARN FOR PRODUCTION
VDE, SAA		3.0KV 10mA / 1MIN	≥ 3.5 KV ≤ 10 mA / ≥ 10 SEC.
BS		4.0KV 10mA / 1MIN	≥ 4.0 KV ≤ 10 mA / ≥ 10 SEC.
CHINA STANDARD		3.0KV 10mA / 1MIN	≥ 3.3 KV ≤ 5 mA / ≥ 6 SEC.

DISTRICT	CENTRE (mm) POSITION	LIMIT (mm)	SCANNING SIZE (%)	SCANNING SIZE LIMIT (%)
THAILAND	-1	0 ~ -2	90	88 ~ 92
FRANCE	+3	0 ~ +5	90	88 ~ 94
GERMANY	+3	0 ~ +5	90	90 ~ 95
*GROUP A	-2	-5 ~ -1	90	88 ~ 94
*GROUP B	0	-2 ~ +2	90	88 ~ 94
*GROUP C	+3	0 ~ +5	90	88 ~ 94



- REMARK :
1. SUITABLE FOR 14" OR ABOVE TV.
 2. Adjust the centre position must take the upper side of monoscope pattern for standard.
 3. Group A : AUSTRALIA, NEW ZEALAND, TAHITI.
 4. Group B : HONG KONG, CHINA, AMERICA, CANADA, MALAYSIA, MEXICO.
 5. Group C : ENGLAND, ITALY, GERMANY, RUSSIA, SWITZERLAND, JUGOSLAVIA, SPANISH.
If the above countries are not include, please consult to Engineering Dept.

VOLTAGE TABLE FOR TRANSISTOR (ONLY FOR REFERENCE)												
LOCATION \ TR	B (V)	C (V)	E (V)	LOCATION \ TR	B (V)	C (V)	E (V)					
Q101	10.2	10.9	11	Q307	10 mV	11.1	0					
	11.1	0	11.1	Q308	10 mV	11.1	0					
Q102	10.9	3 mV	11	Q401	0.4	8.4	0					
	11	3mV	11.1	Q402	-0.1	113	0					
Q103	0.6	5mV	0	Q403	1.7	10.9	0.1					
	30 mV	11	0	Q404	10.8	0.6	11.4					
Q104	36 mV	11	0	Q405	0.6	9.1	11.4					
	36 mV	11	0	Q406	10 mV	1.7	1.2					
Q105	1	8	0.3	Q501	3.55	123.0	3.0					
Q106	12 mV	2.4	0	Q502	3.5	126.0	3.0					
Q107	30 mV	11	0	Q503	3.5	137.6	3.0					
	0.64	46 mV	0	Q601	0.6	1.1	0					
Q108	11	0.1	11	Q602	0.6	56 mV	3 mV					
	10.2	11	11.1	Q603	8.6	10.9	8.3					
Q109	3.7	11	3.1	Q604	2 mV	0.25	0					
Q201	18.6	18	18	Q605	0.26	1.1	0					
Q302	1.9	1.7	0	Q905	0.6	0.6	0					
Q303	42	80.8	0	Q909	-36.4	202	-35					
Q304	3.8	11.1	3.1	Q910	-31	-30	-31					
Q305	50 mA	11.1	10 mV	Q911	-26	-30	-31					
Q306	-3	10.5	0	Q912	-22	-18.4	-30					

NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHTNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES)						
PIN NO. / SYMBOL	IC801 (V)	IC802 (V)	IC804 (V)	IC102 (V)	IC101 (V)	IC401 (V)
1	5	NC	GEN	5.1	1.7	2.2
2	1.8	4.2	4.2	2.8	2.1	0.00
3	1.9	2.2	4.3	3.7	2.5	1.6
4	0.03	2.2	NC	3.4	0.937	0.00
5	GEN	3.8	NC	3.9	1.82	0.13
6	4.9	1.3	NC	0.0	2.17	25.0
7	2.2	1.2	NC	11.5	2.17	1.9
8	2.4	3.6	NC	5.5	1.8	4.35
9	2.5	3.6	NC	5.5	1.8	24.34
10	5.0	3.7	NC	2.4	4.1	
11	GEN	0	NC	1.88	4.1	
12	2.1	0.3	5.0	2.46	2.79	
13	5	4.2	GEN	3.0	0.04	
14	GEN	GND	GEN	1.5	1.67	
15	0.42	0.6	2.3	2.29	1.77	
16	0.5	0.5	2.0	0.0	2.95	
17	0.4	0.5	0	3.5	0.03	
18	3.8	0.3	GEN	6.28	0.00	
19	4.5	0.5	NC	6.18	5.15	
20	0.8	GND	NC	5.6	1.78	
21	2.5	4.2	NC	5.6		
22	NC	2.5	NC	9.4		
23	4.3	0.8	GEN	2.8		
24	4.3	0.8	NC	2.9		
25	GEN	0.8	NC	4.5		
26	0.5	5.0	GEN	0.787		
27	0.5	5.0	NC	1.18		
28	0.5	5.0	5.0	3.3		
29	0.3					
30	0.5					
31	4.2					
32	0.3					
33	0					
34	3.7					
35	3.6					
36	3.6					
37	1.2					
38	1.3					
39	3.8					
40	2.2					
41	2.2					
42	4.2					
43	4.2					
44	0.8					
45	0.8					
46	0.8					
47	2.5					
48	5.0					
49						
50						

PIN NO.	SYMBOL	IC901 (WIDE VOLT PW P.C.B) (V)	
1		306	
2		0	
3		0	
4		2	
5		0	
6		0	
7		0	
8		-0.5	
9		-1.6	
10			
11			
12			
13			

NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHTNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES)							
PIN NO.	SYMBOL	IC302 (V)	IC303 (V)	IC304 (V)	IC305 (V)	IC306 (V)	IC307 (V)
1		3.649	5.2	3.29	4.1	5.56	6.5
2		0	0	11.8	0.03	0.00	7.2
3		3.65	4.07	8.2	3.39	0.00	6.5
4		3.65	0.00	0.00	3.39	0.00	7.22
5		3.65	3.966	7.8	2.5	0.627	9.65
6		3.68	3.904	0.1	4.8	0.00	9.6
7		3.68	0.00	0.00	4.18	0.87	4.34
8		0.004	0.00	0.00	4.26	0.00	3.45
9		0.115	4.3	4.3	4.97	5.5	0.00
10		0.01	4.06	4.1	11.4	0.00	4.38
11		3.027	0.39	2.9	2.34	3.01	0.00
12		0.0	5.28	0.00	10.0	3.01	2.32
13		2.99	5.3	0.00	0.00	0.00	11.5
14		11.838	0.00	4.06	1.2	1.36	5.7
15		0.016	4.63	4.09	7.4	0.00	3.36
16		2.98	4.6	2.3	3.7	1.37	7.9
17			3.46	2.06	0.00		2.5
18			0.00	0.00	0.00		7.6
19			0.00	3.36			2.8
20			3.8	3.33			7.68
21			0.00				2.7
22			4.578				5.47
23			0.00				7.2
24			5.315				1.26
25							
26							
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NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) (FOR STEREO TDA3803A)						
PIN NO.	SYMBOL	IC001 (V)	IC002 (V)			
1		5.6	NC			
2		5.6	NC			
3		7.4	NC			
4		11.1	NC			
5		7.3	NC			
6		7.3	GND			
7		7.3	GND			
8		7.3	GND			
9		0.06	9.3			
10		NC	9.3			
11		5.6	GND			
12		GND	GND			
13		11.2	0.01			
14		9.2	11.2			
15		9.2	11.2			
16		GND	11.2			
17		5.0				
18		GND				
19		5.0				
20		NC				
21		NC				
22		5.5				
23		5.5				
24		5.5				
25		5.5				
26		5.5				
27		5.5				
28		7.2				
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NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST	:	Maximum Position
BRIGHTNESS	:	Maximum Position
COLOR	:	Maximum Position
SIGNAL INPUT	:	70dB ± 10dB
CHANNEL SETTING	:	The Last Channel of UHF High
SIGNAL PATTERN	:	Colour Bar

VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) (FOR NICAM IC TDA7280)							
PIN NO.	SYMBOL	IC005 (V)	IC006 (V)	IC007 (V)	IC008 (V)	IC009 (V)	IC010 (V)
1		2.1	2.0	5.2	5.2	2.6	5.2
2		0.78	GND	1.4	1.4	2.6	NC
3		0.61	2.3	1.4	1.4	2.6	NC
4		0.61	5.3	GND	GND	GND	5.2
5		0.61	3.9	5.2	5.2	5.2	GND
6		GND	4.0	5.2	5.2	1.4	5.2
7		GND	4.0	5.2	5.2	1.4	GND
8		GND	3.9	11.4	11.4	1.4	2.6
9		3.1	1.2				2.6
10		7.1	2.1				2.6
11		0.61	4.2				GND
12		2.1	5.3				GND
13		0.78	4.2				5.2
14		0.78	GND				GND
15		0.78	2.3				4.8
16		11.3	2.6				2.3
17			NC				2.2
18			NC				5.2
19			GND				2.6
20			3.3				NC
21							2.3
22							NC
23							5.2
24							NC
25							GND
26							NC
27							0.03
28							5.2
29							
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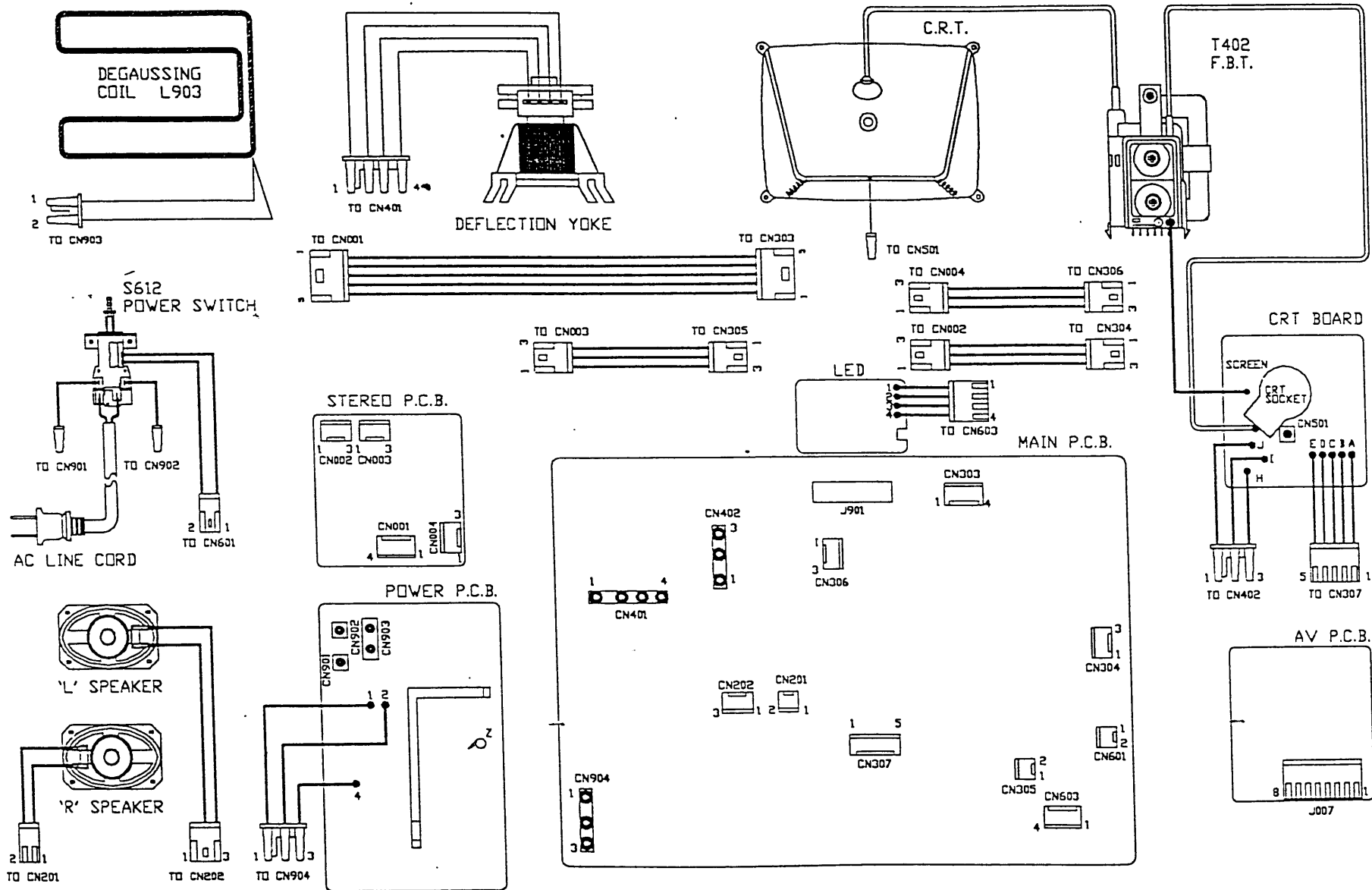
NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

CONTRAST : Maximum Position
 BRIGHNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar

VOLTAGE TABLE FOR IC (ONLY FOR REFERENCES) (FOR NICAM IC TDA7282, IC001, IC002) (FOR G.STEREO IC TDA8416, IC060)						
PIN NO.	SYMBOL	IC601 (V)	IC001 (V)	IC002 (V)	IC060 (V)	
1		4.6	2.49	2.427	5.07	
2		0.08	5.21	GND	4.96	
3		1.759	5.07	2.282	5.97	
4		2.528	5.07	5.33	1.443	
5		2.527	0.011	0.03	GND	
6		0.03	5.18	4.12	3.212	
7		0.03	4.97	4.13	3.210	
8		3.66	4.85	3.95	3.211	
9		2.62	GND	3.957	3.212	
10		5	2.429	2.223	3.213	
11		GND	2.383	4.17	3.26	
12		4	2.37	0.007	3.258	
13		4.9	0.012	4.18	3.9	
14		4.96	0.418	GND	2.89	
15		4.96	2.462	2.502	11.12	
16		4.96	2.427	4.54	GND	
17		4.96	2.43	4.55	3.252	
18		0.1	GND	4.55	11.12	
19		4.97	2.43	GND	5.07	
20		4.98	0.019	3.287	GND	
21		GND	0.019			
22		0.005	0.014			
23		0.007	2.383			
24		0.015	0.005			
25		0.016	5.04			
26		0.443	4.97			
27		-0.073	4.98			
28		5	2.5			
29		5	2			
30		GND	1.97			
31		2.46	2.114			
32		2.119				
33		5				
34		1.32				
35		4.98				
36		0.031				
37		4.99				
38		GND				
39		5.01				
40		5				
41		0.115				
42		5				
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NOTE : VOLTAGE ARE TAKEN UNDER TUNED CONDITION WITH

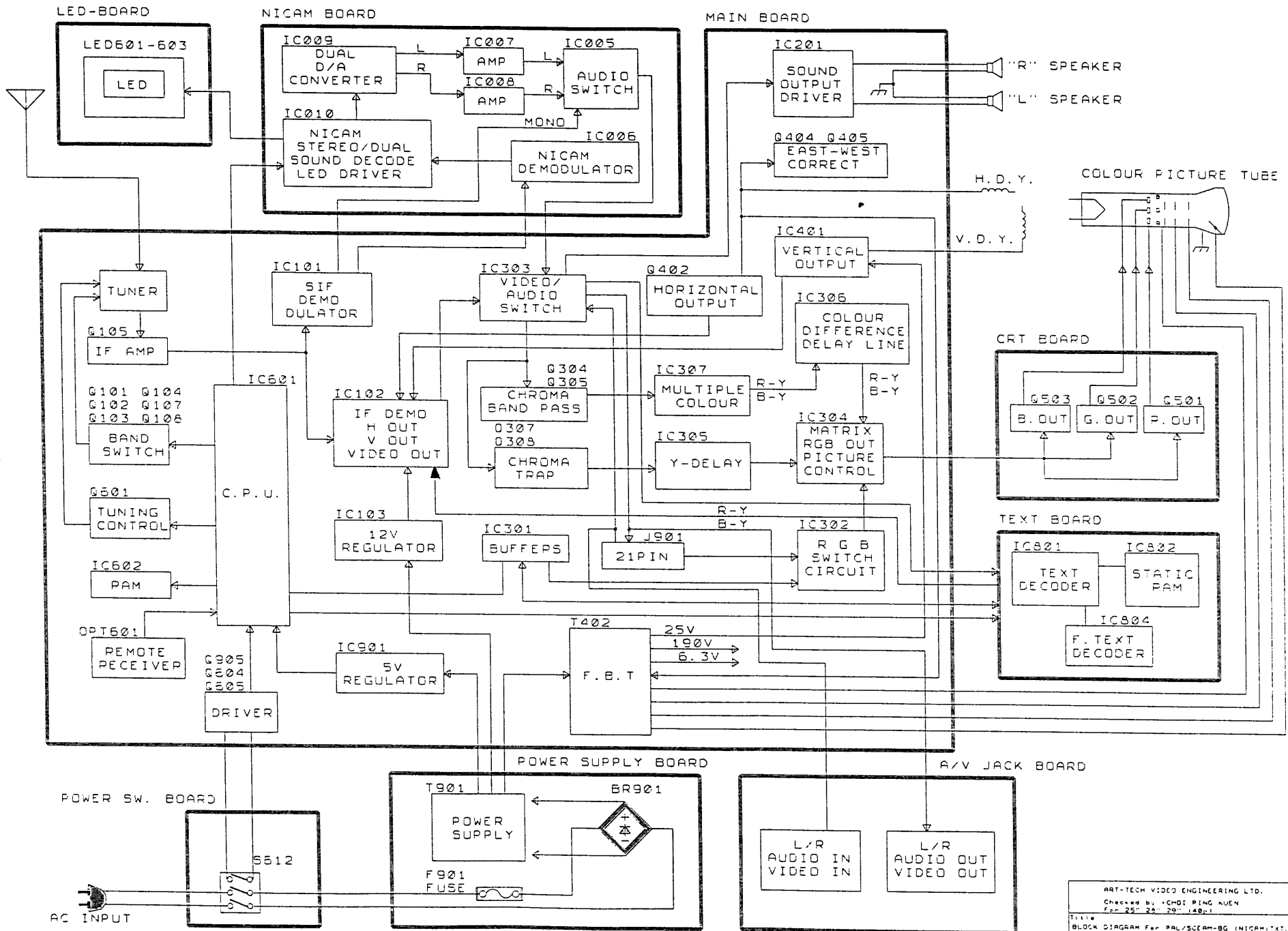
CONTRAST : Maximum Position
 BRIGHNESS : Maximum Position
 COLOR : Maximum Position
 SIGNAL INPUT : 70dB ± 10dB
 CHANNEL SETTING : The Last Channel of UHF High
 SIGNAL PATTERN : Colour Bar



WIRING DIAGRAM

GT-8828 PAL-SECAM-BG(INDONISA)
 W/GER.STEREO
 CHECK-BY: LEE WAI HUNG
 PART NOS.:88280401

25" 28 -29" BLOCK DIAGRAM



ART-TECH VIDEO ENGINEERING LTD.
 Checked by: CHOI PING AUN
 For 25" 28" 29" 148x1
 BLOCK DIAGRAM For PAL/SCAM-BG (NICAM) (T.S.)
 Document Number: 14801PSB.SCH
 ORCAD FILE: 14801PSB.SCH
 Date: JULY 1990 Sheet: 1 of 1

MODEL NO.: CT-M686STR Chassis type GT-

Part Number	Description	Qty
10780045546	455K HZ RESONATOR "WEI HAW"	1
11310100517	CARBON FILM RESISTOR 100 OHM 1/16W +-5%	2
11310200517	CARBON FILM RESISTOR 1K OHM 1/16W +-5%	1
11310300517	CARBON FILM RESISTOR 10K OHM 1/16W +-5%	1
11310900517	CARBON FILM RESISTOR 1 OHM 1/16W +-5%	1
11347300517	CARBON FILM RESISTOR 47K OHM 1/16W +-5%	1
11368200517	CARBON FILM RESISTOR 6.8K OHM 1/16W +-5%	1
12747604203	ELECT. CAP. 47 MFD 16V +-20%	1
13060010100	INFRARED EMITTER EL-1L1 KODENSHI	1
13121071929	TRANSISTOR 2SA719R/S MATSUSHITA	1
13123094500	TRANSISTOR 2SC945 NEC	1
13380301033	I.C. SAA3010T PHILIPS	1
17272600099	BARE WIRE 54MM	0.1
190R6330002	REMOTE P.C.B. (140896)	1
51626040810	SELF-TAPPING SCREW 2.6 X 8 P/T (HARDEN)	2
774R6330100	BATTERY SPRING (+VE)	1
774R6330200	BATTERY SPRING (-VE)	1
774R6330300	BATTERY SPRING (+-VE)	1
81004110413	POLYBAG 4" X 11" X 0.04MM W/RE-CYCLING MARK	1
849R6330100	KEY PAD {FULL 40 KEYS}	1
892R6330102	DIAL KEY PLATE - ENG STD W/RED /YELLOW/GREEN/BLUE/SILVER S	1
900R6330103	HANDSET TOP CABINET -MATT BLK. SPRAYED W/SILVER 8001C S.S.	1
902R6330103	HANDSET BOTTOM CABINET - MATT BLACK SPRAYED	1
910R6330116	HANDSET BATTERY DOOR - TEAC DESIGN (RC-643)(CT-M686STR)BLI	1
973R6330100	VOLUME/CHANNEL KNOB - MOULDED BLACK	1
0021295054A	29" CRT RCA A68AGA 20X505 (AUSTRALIA)	1
00313142402	TUNER OSCAR UVE33-W24/R16-3649 MITSUMI (HIGH JACK)	1
00890029104	DEGAUSSING COIL 90T (W/FIVE LAYERS OF TAPE) FOR 29"	1
10773150000	SAW FILTER TSB-5308U (SANYO)	1
10773891600	SAW FILTER TSF-5316 SANYO	1
11315310517	CARBON FILM RESISTOR 15K OHM 1/4W +-5%	2
11322310167	METAL FILM RESISTOR 22K OHM 1/4W +-1%	1
13313524633	I.C. SAA5246AP/E PHILIPS (M6)	1
1662870354H	SPEAKER 3 X 5" 8 OHM 7W `TCL' #YDT812-2B-SP	2
17155008402	84" AC LINE CORD (END-CUT)SAA APPW/7.5A PLUG.	1
18622750314	BATTERY 3A	2
19140100507	4 PIN SOCKET ASS'Y L=450MM	1
52493200100	CRT MTG. SCREWS 7 X 50 VP (HARDEN)	4
61093290707	GIFT BOX - TEAC (D) DESIGN (K3A3A3K)	1
66323050296	SERIAL NO.LABEL - OC:GT-502/96	2
6698828015P	RATING LABEL - TEAC (C) DESIGN 240V	1
6709329000Z	I/MANUAL - TEAC (D) DESIGN W/DECODER FEATURE 40 PROG.	1
67892210903	EASY TUNE CARD (A) - TEAC (A) DESIGN	1
67893131502	TOTAL CARE LABEL - TEAC DESIGN (BLK & WHITE)	1
67893290226	SCREEN STICKER - TEAC (D) DESIGN	1

67894210159	POLYBAG WARNING LABEL - TEAC	DESIGN	1
69092213901	WARRANTY CARD- TEAC (A)	DESIGN	1
69388280004	EAN CODE LABEL - 9313060005054		1
70393290105	SPEAKER GRILLE - MATT BLACK	DOUBLE SIDE W/SPARY	2
83423080200	RUBBER WASHER OD=23, ID=8, T=2		4
88493290501	PRESET PLATE - BLACK W/L.GREY	S.S. ENG STD (14 KEY HOLES)	1
88493293402	JACK COVER PLATE - TEAC DESIGN		1
90093292302	FRONT CABINET (TWO-C) - 426U	GREY (SAMSUNG CRT)	1
902932911U3	BACK CABINET - MATT BLACK		1
91793290213	REMOTE LENS - T.RED ENG STD	FOR TEAC	1
9199329020A	PRESET DOOR (PAL) - TEAC (C)	DESIGN W/CABLE READY WORD	1
95493291200	CRT MTG. INSERT (HIGH = 35MM)		4
980932922U0	JACK PLATE W/BRASS INSERT	(521-882001-00 2PCS/SET)	1
9868828010U	NAME PLATE - TEAC (A) DESIGN	(BIG SIZE)	1
00122990105	FLYBACK TRANSFORMER F27901-02	GOLDSTAR	1
01210234006	SEMI-FIXED RESISTOR EVND8AA	03B13 1KB	2
01210434006	SEMI-FIXED RESISTOR EVND8AA	03B15 100KB	1
01220233006	SEMI-FIXED RESISTOR EVND2AA	03B23 2KB	5
01220334006	SEMI-FIXED RESISTOR EVND8AA	03B24 20KB	2
01250234006	SEMI-FIXED RESISTOR EVND8AA	03B53 5KB	3
01250334006	SEMI-FIXED RESISTOR EVND8AA	03B54 50KB	2
10119100996	HORIZONTAL DRIVE TRANSFORMER	(R1009)	1
10128827095	LINE FILTER LB28T270		1
10149026094	SWITCH POWER TRANSFORMER 28"	KB49C260 "HIGHLIGHT"	1
10237060002	TANK COIL / AFC COIL COILS	707851	1
10267130002	SOUND IF COIL. COILS 710256		2
10267160002	SOUND IF COIL KHC-823087	"COILS"	1
10277031002	CHROMA FILTER KH-814657	"COILS"	1
10287050002	DOSC COIL. COILS 707534		1
10510010308	FIXED INDUCTOR COIL 10 UH	+/-10% AXIAL	2
10515010102	FIXED INDUCTIVE COIL 15UH 10%		1
10515010206	LINEARITY COIL 15UH FOR 29"	RCA CRT	1
10520110602	CHOKE COIL 200UH 10% CH9012-	201K (ELEC PRODUCT)	2
10539910308	FIXED INDUCTIVE COIL 3.9 UH	+/-10% (WITTIS)	1
10556010102	FIXED INDUCTOR COIL 56uH +/-10%	CW-560K-455-705111	3
10568910308	FIXED INDUCTOR COIL 6.8 UH	+/-10% AXIAL	1
10582115606	CHOKE COIL 820UH 0.37 OHM	HIGHLIGHT	1
10582810302	FIXED INDUCTIVE COIL 0.82UH	10% AXIAL TYPE	1
10582910308	FIXED CONDUCTOR COIL 8.2 UH	+/-10% AXIAL	3
10621001201	RELAY 12V OMIT-SS-112LM	ORIGINAL	1
10710443066	CHROMA TRAP CERAMIC FILTER	4.43 MHZ WEI HAW	1
10710550066	SOUND TRAP CERAMIC FILTER	5.5MHZ WEI HAW	1
10730550016	SOUND BYPASS CERAMIC FILTER	5.5MHZ WEI HAW	1
10730574016	SOUND BYPASS CERAMIC FILTER	5.74MHZ SFE-5.74MC MURATA	1
11110320123	VERIABLE RESISTOR 10K (EVU-E2A)	20B14 MATSUSHITA)	1
1111042812A	VERIABLE RES. W/CENTRE CHICK	100K (VA09CVI U 20TMB100K HDR	1
11310010517	CARBON FILM RESISTOR 10 OHM	1/4W +/-5%	5
11310020512	CARBON FILM RESISTOR 10 OHM	1/2W +/-5%	1
11310050575	METAL OXIDE FILM RESISTOR 10	OHM 3W +/-5%	1
11310110517	CARBON FILM RESISTOR 100 OHM	1/4W +/-5%	12

11310110517	CARBON FILM RESISTOR 100 OHM	1/4W +-5%	11
11310110517	CARBON FILM RESISTOR 100 OHM	1/4W +-5%	3
11310130575	METAL OXIDE FILM RESISTOR 100	OHM 1W +-5%	1
11310210517	CARBON FILM RESISTOR 1K OHM	1/4W +-5%	11
11310210517	CARBON FILM RESISTOR 1K OHM	1/4W +-5%	12
11310210517	CARBON FILM RESISTOR 1K OHM	1/4W +-5%	10
11310210517	CARBON FILM RESISTOR 1K OHM	1/4W +-5%	3
11310230575	METAL OXIDE FILM RESISTOR 1K	OHM 1W +-5%	1
11310310167	METAL FILM RESISTOR 10K OHM	1/4W +-1%	1
11310310517	CARBON FILM RESISTOR 10K OHM	1/4W +-5%	10
11310310517	CARBON FILM RESISTOR 10K OHM	1/4W +-5%	9
11310310517	CARBON FILM RESISTOR 10K OHM	1/4W +-5%	9
11310310517	CARBON FILM RESISTOR 10K OHM	1/4W +-5%	1
11310410517	CARBON FILM RESISTOR 100K OHM	1/4W +-5%	3
11310430575	METAL OXIDE FILM RESISTOR 100K	OHM 1W +-5%	1
11310510167	METAL FILM RESISTOR 1M OHM	1/4W +-1%	1
11310930575	METAL OXIDE FILM RESISTOR 1	OHM 1W +-5%	1
11312030575	METAL OXIDE FILM RESISTOR 12	OHM 1W +-5%	1
11312040575	METAL OXIDE FILM RESISTOR 12	OHM 2W +-5%	1
11312110517	CARBON FILM RESISTOR 120 OHM	1/4W +-5%	3
11312210517	CARBON FILM RESISTOR 1.2K OHM	1/4W +-5%	9
11312220512	CARBON FILM RESISTOR 1K2 OHM	1/2W +-5%	1
11312310517	CARBON FILM RESISTOR 12K OHM	1/4W +-5%	2
11315010517	CARBON FILM RESISTOR 15 OHM	1/4W +-5%	4
11315120512	CARBON FILM RESISTOR 150 OHM	1/2W +-5%	2
11315210517	CARBON FILM RESISTOR 1.5K OHM	1/4W +-5%	4
11315310517	CARBON FILM RESISTOR 15K OHM	1/4W +-5%	4
11315340575	METAL OXIDE FILM RESISTOR 15K	OHM 2W +-5%	1
11315410517	CARBON FILM RESISTOR 150K OHM	1/4W +-5%	4
11315420512	CARBON FILM RESISTOR 150K OHM	1/2W +-5%	1
11315840575	METAL OXIDE FILM RESISTOR 0.15	OHM 2W +-5%	1
11315990551	WIRE WOUND CEMENT RESISTOR 1.5	OHM 10W +-5%	1
11318110517	CARBON FILM RESISTOR 180 OHM	1/4W +-5%	1
11318210517	CARBON FILM RESISTOR 1.8K OHM	1/4W +-5%	11
11318210517	CARBON FILM RESISTOR 1.8K OHM	1/4W +-5%	6
11318310517	CARBON FILM RESISTOR 18K OHM	1/4W +-5%	5
11318410517	CARBON FILM RESISTOR 180K OHM	1/4W +-5%	3
11320260575	METAL OXIDE FILM RESISTOR 2K	OHM 5W +-5%	1
11322110517	CARBON FILM RESISTOR 220 OHM	1/4W +-5%	5
11322130575	METAL OXIDE FILM RESISTOR 220	OHM 1W +-5%	1
11322210167	METAL FILM RESISTOR 2.2K OHM	1/4W +-1%	1
11322210517	CARBON FILM RESISTOR 2.2K OHM	1/4W +-5%	5
11322310517	CARBON FILM RESISTOR 22K OHM	1/4W +-5%	8
11322410517	CARBON FILM RESISTOR 220K OHM	1/4W +-5%	2
11322910517	CARBON FILM RESISTOR 2.2 OHM	1/4W +-5%	3
11322920512	CARBON FILM RESISTOR 2.2 OHM	1/2W +-5%	1
11322940542	FUSING RESISTOR 2.2 OHM 2W +-5	%	1
11322950575	METAL OXIDE FILM RESISTOR 2.2	OHM 3W +-5%	1
11322960551	WIRE WOUND CEMENT RESISTOR	2.2 OHM 5W +-5%	1
11327010517	CARBON FILM RESISTOR 27 OHM	1/4W +-5%	1

11327040575	METAL OXIDE FILM RESISTOR 27	OHM 2W +-5%	1
11327110517	CARBON FILM RESISTOR 270 OHM	1/4W +-5%	1
11327210517	CARBON FILM RESISTOR 2.7K OHM	1/4W +-5%	1
11327220512	CARBON FILM RESISTOR 2.7K OHM	1/2W +-5%	5
11327310517	CARBON FILM RESISTOR 27K OHM	1/4W +-5%	4
11327410517	CARBON FILM RESISTOR 270K OHM	1/4W +-5%	1
11333110517	CARBON FILM RESISTOR 330 OHM	1/4W +-5%	5
11333210217	CARBON FILM RESISTOR 3.3K OHM	1/4W +-2%	4
11333210517	CARBON FILM RESISTOR 3.3K OHM	1/4W +-5%	11
11333310517	CARBON FILM RESISTOR 33K OHM	1/4W +-5%	8
11333410167	METAL FILM RESISTOR 330K OHM	1/4W +-1%	1
11333410517	CARBON FILM RESISTOR 330K OHM	1/4W +-5%	1
11333430575	METAL OXIDE FILM RESISTOR 330K	OHM 1W +-5%	1
11339050575	METAL OXIDE FILM RESISTOR 39	OHM 3W +-5%	1
11339060575	METAL OXIDE FILM RESISTOR 39	OHM 5W +-5%	1
11339110517	CARBON FILM RESISTOR 390 OHM	1/4W +-5%	4
11339210517	CARBON FILM RESISTOR 3.9K OHM	1/4W +-5%	1
11339310517	CARBON FILM RESISTOR 39K OHM	1/4W +-5%	2
11347010517	CARBON FILM RESISTOR 47 OHM	1/4W +-5%	2
11347110517	CARBON FILM RESISTOR 470 OHM	1/4W +-5%	4
11347210517	CARBON FILM RESISTOR 4.7K OHM	1/4W +-5%	12
11347310517	CARBON FILM RESISTOR 47K OHM	1/4W +-5%	4
11347910517	CARBON FILM RESISTOR 4.7 OHM	1/4W +-5%	2
11351110517	CARBON FILM RESISTOR 510 OHM	1/4W +-5%	1
11356110517	CARBON FILM RESISTOR 560 OHM	1/4W +-5%	6
11356210517	CARBON FILM RESISTOR 5.6K OHM	1/4W +-5%	6
11356310517	CARBON FILM RESISTOR 56K OHM	1/4W +-5%	2
11356521092	CARBON COMPOSITION RESISTOR	5.6M OHM 1/2W +-10%	2
11368110517	CARBON FILM RESISTOR 680 OHM	1/4W +-5%	3
11368210217	CARBON FILM RESISTOR 6.8K OHM	1/4W +-2%	1
11368210517	CARBON FILM RESISTOR 6.8K OHM	1/4W +-5%	2
11368310517	CARBON FILM RESISTOR 68K OHM	1/4W +-5%	1
11368830542	FUSING RESISTOR 0.68 OHM 1W	+5%	3
11368840542	FUSEBLE RESISTOR 0.68 2W +-5%		1
11375010517	CARBON FILM RESISTOR 75 OHM	1/4W +-5%	5
11382010517	CARBON FILM RESISTOR 82 OHM	1/4W +-5%	2
11382110517	CARBON FILM RESISTOR 820 OHM	1/4W +-5%	1
11382210517	CARBON FILM RESISTOR 8.2K OHM	1/4W +-5%	4
11382250577	METAL OXIDE FILM RESISTOR 8.2K	OHM 3W +-5%	3
11382310517	CARBON FILM RESISTOR 82K OHM	1/4W +-5%	2
11382960575	METAL OXIDE FILM RESISTOR 8.2	OHM 5W +-5%	1
11421026200	THERMISTOR PTH451C262B		1
12310034060	CERAMIC CAP. 10PF +-5% 50V	(SL TYPE)	1
12310135060	CERAMIC CAP. 100 PF 50V +-10%	(SL TYPE) "SMART GOOD"	3
12310235090	CERAMIC CAP. 0.001 MFD 50V	+10% (B TYPE)	11
12310337090	CERAMIC CAP. 0.01 MFD 50V +80	-20%	12
12310337090	CERAMIC CAP. 0.01 MFD 50V +80	-20%	3
12310427090	CERAMIC CAP. 0.1 MFD 25V +80	-20%	11
12310427090	CERAMIC CAP. 0.1 MFD 25V +80	-20%	1
12310435090	CERAMIC CAP. 0.1 MFD 50V	+10% (B TYPE)	2

12312135060	CERAMIC CAP. 120 PF 50V +-10%	(SL TYPE)	3
12312255190	CERAMIC CAP. 0.0012 MFD 500V	+-10% (B TYPE) MATSUSHITA	1
12313034093	CERAMIC CAP. 13PF 50V +-5%	(NPO)	1
12315034093	CERAMIC CAP. 15 PF 50V +-5%	(NPO)	1
12315135060	CERAMIC CAP 150 PF 50V +-10%	(SL TYPE)	1
12315285010	CERAMIC CAP. 0.0015 MFD 2KV	+-10% MATSUSHITA	1
12320934093	CERAMIC CAP. 2PF 50V +-5%	(NPO)	1
12322034060	CERAMIC CAP. 22 PF 50V +-5%	(SL TYPE)	4
12322135060	CERAMIC CAP. 220 PF 50V +-10%	(SL TYPE)	4
12322155190	CERAMIC CAP. 220 PF 500V	+-10% MATSUSHITA	1
12322246650	CERAMIC CAP. 0.0022 MFD 400VAC	+-20% ECKDNA222ME "MATSUSH	1
12322285010	CERAMIC CAP. 0.0022 MFD 2KV	+-10% MATSUSHITA	1
12322337090	CERAMIC CAP. 0.022 MFD 50V +80	-20%	12
12324034093	CERAMIC CAP 24PF 50V +-5%(NPO)		1
12327034060	CERAMIC CAP. 27 PF 50V +-5%	(SL-TYPE)	1
12327034093	CERAMIC CAP. 27PF 50V +-5%	(NPO)	2
12327135060	CERAMIC CAP. 270 PF 50V +-10%	(SL TYPE)	2
12333034060	CERAMIC CAP. 33 PF 50V +-5%	(SL TYPE)	1
12333135060	CERAMIC CAP. 330 PF 50V +-10%	(SL TYPE)	1
12339034093	CERAMIC CAP. 39PF 50V +-5%	(NPO)	1
12339135060	CERAMIC CAP. 390PF 50V +-10%	(SL TYPE)	1
12347135060	CERAMIC CAP. 470 PF 50V +-10%	(SL TYPE)	1
12347235090	CERAMIC CAP. 0.0047 MFD 50V	+-10% (B TYPE)	2
12347255090	CERAMIC CAP. 0.0047 MFD 500V	+-10% (B TYPE)	2
12347255290	CERAMIC CAP. 0.0047 MFD 500V	+-10% (B TYPE) SMALL SIZE	3
12347265090	CERAMIC CAP. 4700 PF 1 KV		1
12347285010	CERAMIC CAP. 0.0047MFD 2KV	+-10% MATSUSHITA	1
12356135060	CERAMIC CAP. 560 PF 50V +-10%	(SL TYPE)	2
12368034060	CERAMIC CAP. 68 PF 50V +-5%	(SL TYPE)	1
12368135090	CERAMIC CAP. 680 PF 50V +-10%	(B TYPE)	1
12382185010	CERAMIC CAP. 820 PF 2KV +-10%	(SL TYPE) MATSUSHITA	1
12422406103	TANTALIUM CAP. 0.22 MFD 35V	+-10%	2
12536112011	POLYSTYRENE CAP. 360PF 125V	+-5%	1
12539112011	POLYSTYRENE CAP. 390 PF 125V	+-5%	1
12610207101	MYLAR CAP. 0.001 MFD 50V +-10%		3
12610307101	MYLAR CAP. 0.01 MFD 50V +-10%		3
12610407101	MYLAR CAP. 0.1 MFD 50V +-10%		12
12610407101	MYLAR CAP. 0.1 MFD 50V +-10%		11
12610410131	POLYPROPYLENE CAP. 0.1 MFD	100V +-10%	1
12622207101	MYLAR CAP. 0.0022 MFD 50V	+-10%	2
12622307101	MYLAR CAP. 0.022 MFD 50V +-10%		6
12622340131	POLYPROPYLENE CAP. 0.022MFD	400V +-10%	2
12622407101	MYLAR CAP 0.22 MFD 50V +-10%		5
12627207031	POLYPROPYLENE CAP. 0.0027 MFD	50V +-5%	1
12633307101	MYLAR CAP. 0.033 MFD 50V +-10%		1
12633407101	MYLAR CAP. 0.33 MFD 50V +-10%		4
12647207101	MYLAR CAP. 0.0047 MFD 50V	+-10%	2
12647216041	METALLIZED POLYPROPYLENE CAP.	0.0047 MFD 1600V +-5%	2
12647307101	MYLAR CAP. 0.047 MFD 50V +-10%		2
12647322241	METALIZED POLYPROPYLENE CAP.	0.047 MFD 275V +-20% "OKAYA"	2

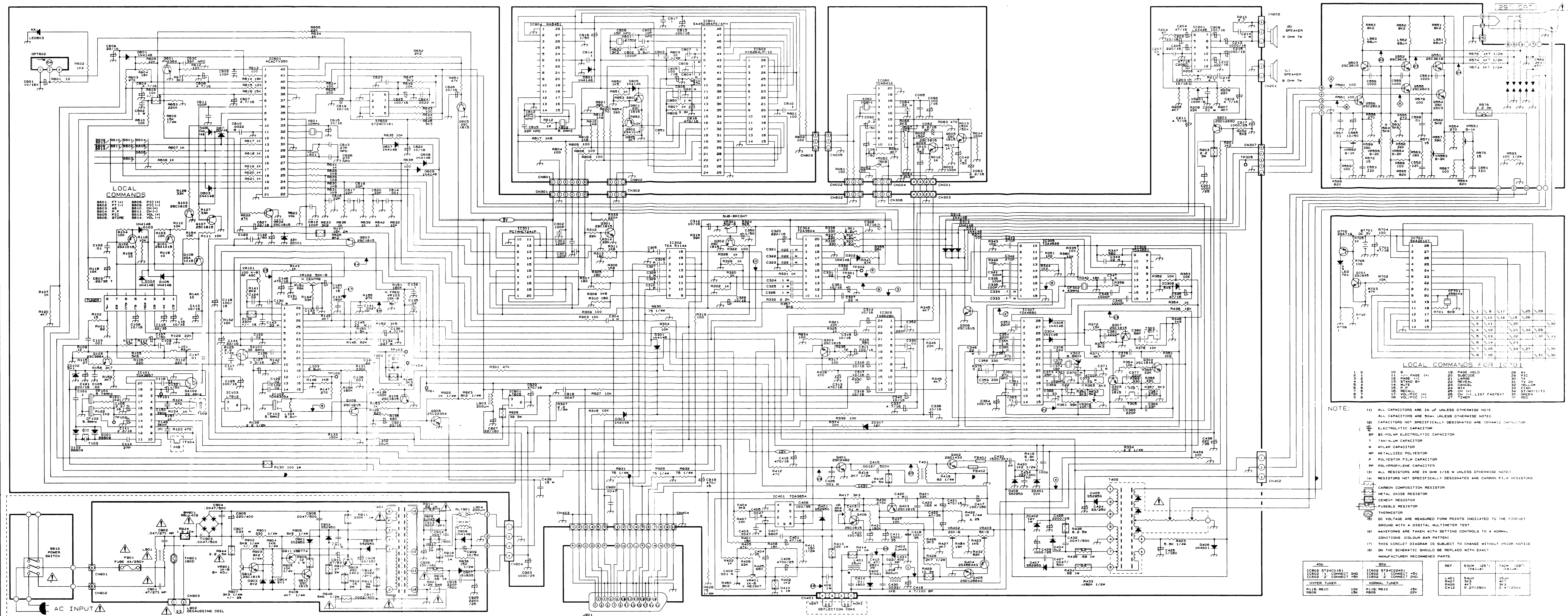
12647420131	POLYPROPYLENE CAP 0.47 MFD	200V +-10%	1
12647422241	METALIZED POLYPROPYLENE CAP.	0.47 MFD 275VAC +-20% "OKAYA	1
12668307101	MYLAR CAP. 0.068 MFD 50V +-10%		1
12710507203	ELECT. CAP. 1 MFD 50V +-20%		5
12710604203	ELECT. CAP. 10 MFD 16V +-20%		8
12710604203	ELECT. CAP. 10 MFD 16V +-20%		10
12710607203	ELECT. CAP. 10 MFD 50V +-20%		2
12710610403	ELECT CAP. 10 MFD 100V +-20%	105øC	1
12710704203	ELECT. CAP. 100 MFD 16V +-20%		10
12710706203	ELECT. CAP. 100 MFD 35V +-20%		2
12710713203	ELECT. CAP. 100 MFD 160V +-20%	"NICHICON"	3
12710804203	ELECT. CAP. 1000 MFD 16V +-20%		2
12710805203	ELECT. CAP. 1000 MFD 25V +-20%		5
12722507203	ELECT. CAP 2.2 MFD 50V +-20%		9
12722507223	ELECT CAP. 2.2 MFD 50V +-20%	(NON-POLAR)	2
12722604203	ELECT. CAP. 22 MFD 16V +-20%		1
12722704203	ELECT. CAP. 220 MFD 16V +-20%		3
12722706203	ELECT. CAP. 220 MFD 35V +-20%		1
12722740203	ELECT CAP. 220 MFD 400V +-20%	(í22MM-26MM)	1
12722805203	ELECT. CAP. 2200 MFD 25V +-20%		2
12733507105	ELECT CAP. 3.3UF 50V +-10%	(TIME CONSTANT)	1
12733507203	ELECT CAP. 3.3 MFD 50V +-20%		1
12733604203	ELECT. CAP. 33 MFD 16V +-20%		2
12733604223	ELECT. CAP. BIPOLAR 33 MFD 16V	+20%	1
12733625203	ELECT CAP. 33 MFD 250V +-20%		1
12733806203	ELECT CAP. 3300 MFD 35V +-20%		1
12747507203	ELECT CAP 4.7 MED 50V		7
12747510223	ELECT CAP.BIPOLAR 4.7MFD 100V	+20%	1
12747604203	ELECT. CAP. 47 MFD 16V +-20%		5
12747607207	ELECT.CAP. 47 MFD 50V +-20%	NICHICON	1
12747609407	ELECT CAP. 47 MFD 63V +-20%	105øC "NICHICON"	1
12747704203	ELECT. CAP. 470 MFD 16V +-20%		8
12747805203	ELECT. CAP. 4700MFD 25V +-20%		1
13013414801	SILICON DIODE IN4148		12
13013414801	SILICON DIODE IN4148		11
13024080950	VERIABLE CAPACITANCE DIODE	BB809	2
13031034100	RECTIFIER DIODE 3TH41 TOSHIBA		1
13031034500	RECTIFIER DIODE 3JH45 TOSHIBA		2
13031040600	BRIDGE RECTIFIER RBV-406	SANKEN	1
13031154560	RECTIFIER DIODE 1R5JH45		2
13031400101	RECTIFIER DIODE 1N4001		1
13031529500	RECTIFIER DIODE S5295G TOSHIBA		7
13041005101	ZENER DIODE 5.1V 1/2W +-5%		1
13041005601	ZENER DIODE 5.6V		1
13041008201	ZENER DIODE 8.2V		1
13041010001	ZENER DIODE 10V 1/2W		1
13041012002	ZENER DIODE 12V HZ12A2		1
13041057400	ZENER DIODE UPC 574J NEC		1
13041109101	ZENER DIODE 9.1V		1
13042212000	ZENER DIODE 1W 12V		1

13051204400	LED 3MM RED 204HDC		1
13121056418	TRANSISTOR 2SA564AQ		1
13121101500	TRANSISTOR 2SA1015 TOSHIBA		4
13122077420	TRANSISTOR 2SB774/Q/R/S	MATSUSHITA	1
13123180900	TRANSISTOR 2SC1809 ROHM		1
13123181525	TRANSISTOR 2SC1815 TOSHIBA		10
13123181525	TRANSISTOR 2SC1815 TOSHIBA		11
13123181525	TRANSISTOR 2SC1815 TOSHIBA		3
13123223000	NPN-TR 2SC2230A-Y (TOSHI) TO92	VCE=180V IC=.1A HFE=120-240	1
13123248200	TRANSISTOR 2SC2482 TOSHIBA		1
13123361900	TRANSISTOR 2SC3619		3
13123470600	TRANSISTOR 2SC4706 SHIN HO		1
13124140625	TRANSISTOR 2SD1406-Y TOSHIBA		1
13124140627	TRANSISTOR 2SD1406-GR TOSHIBA		1
13124154700	TRANSISTOR 2SD1547 TOSHIBA		1
13146236900	TRANSISTOR PH2369 PHILIPS		1
13310035233	I.C. CTV350S.GW2 PHILIPS		1
13310242131	I.C. ST24C02AB1 SGS		1
13310350433	I.C. TDA3504 PHILIPS		1
13310385733	IC TDA3857 PHILIPS		1
13310456533	I.C. TDA4565 PHILIPS		1
13310465033	I.C. TDA 4650 PHILIPS		1
13310466533	I.C. TDA4665 (PHILIPS IC)		1
13310830533	IC TDA8305A PHILIPS		1
13310841633	I.C. TDA8416 PHILIPS		1
13310862814	IC TA8628N TOSHIBA		1
13320365433	I.C. TDA3654 (PHILIPS)		1
13320444516	I.C. LA4445 SANYO		1
13320780531	I.C. L7805CV SGS		1
13320781231	IC L7812CV SGS-THOMSON		1
13330097233	PHILIPS IC CTV972 FOR EAST	EUROPE	1
13330424133	I.C. PC74HCT241P PHILIPS		1
13330511431	I.C. TEA5114A SGS		1
13330768867	I.C. GM76C88L-15 GOLDSTAR		1
13650000200	REMOTE RECEIVER (HC-SZ02)		1
13710000031	CRYSTAL 10 MHZ HOORAY		2
13727000033	CRYSTAL 27 MHZ 16PF "GIC"		1
13771590920	CRYSTAL 7.15909 MHz		1
13788672320	CRYSTAL 8.86 MHz KDS		1
13798304020	CRYSTAL 9.83 MHz		1
14610000213	TACT SWITCH KSM0634A HDK		12
14610000614	POWER SWITCH PS5E-B	"CHINA LANDMARK"	1
16010100108	PIN CONNECTOR 1 PIN PLUG	STRAIGHT	3
16010225527	PIN CONNECTOR 2 PINS PLUG	STRAIGHT (UL) (S.H.S)	1
16010280508	PIN CONNECTOR 2 PIN PLUG	STRAIGHT	1
16010325527	PIN CONNECTOR 3 PINS PLUG		10
16010380508	PIN CONNECTOR 3 PIN PLUG	STRAIGHT	1
16010425527	PIN CONNECTOR 4 PINS PLUG	(SHS)	3
16010480508	PIN CONNECTOR 4 PIN PLUG	STRAIGHT	2
16010525527	PIN CONNECTOR 5 PINS WAFER	2.5 PITCH	1

16010625527	PIN CONNECTOR 6 PINS WAFER	(SHS) S11-W	3
16011025527	PIN CONNECTOR 10 PINS PLUG		1
16148010532	RF CONNECTOR #KP-JJ (PAL)	MIKI	1
16154010501	CRT SOCKET HPS0199-01-020	(HOSIDEN) 29MM THICK	1
16168370222	21 PIN SOCKET		1
17262001040	UL 1007 TOP COAT WIRE AWG 20	100MM BLACK 10 X 10 MM	1
17262001440	UL 1007 TOP COAT WIRE AWG 20	140MM BLACK 10 X 10 MM	2
17262001443	UL 1007 TOP COAT WIRE AWG 20	140MM ORANGE 10 X 10MM	1
17262200740	UL 1007 TOP COAT WIRE #22 70MM	BLACK 5 X 5 MM	2
17262200740	UL 1007 TOP COAT WIRE #22 70MM	BLACK 5 X 5 MM	0
17262600840	UL 1007 TOP COAT WIRE AWG 26	80MM BLACK 10 X 10 MM	2
17262600840	UL 1007 TOP COAT WIRE AWG 26	80MM BLACK 10 X 10 MM	2
17262601442	UL 1007 TOP COAT WIRE AWG 26	140MM RED 10 X 10 MM	1
17262601442	UL 1007 TOP COAT WIRE AWG 26	140MM RED 10 X 10 MM	1
17262601443	UL 1007 TOP COAT WIRE AWG 26	140MM ORANGE 10 X 10 MM	3
17262601643	UL 1007 TOP COAT WIRE AWG 26	160MM ORANGE 10 X 10 MM	2
17262601643	UL 1007 TOP COAT WIRE AWG 26	160MM ORANGE 10 X 10 MM	1
17262601843	UL 1007 TOP COAT WIRE AWG 26	180MM ORANGE 10 X 10 MM	2
17262602043	TOP COAT WIRE 200MM AWG 26	ORANGE 10 X 10MM	1
17262602441	UL 1007 TOP COAT WIRE AWG 26	240MM BROWN 10 X 10 MM	3
17272600099	BARE WIRE 54MM		10
17272600099	BARE WIRE 54MM		0
17272600099	BARE WIRE 54MM		0
17272600099	BARE WIRE 54MM		0
17272600099	BARE WIRE 54MM		0
17272600099	BARE WIRE 54MM		0
17272600099	BARE WIRE 54MM		0
17283012099	FLAT BRIDED WIRE		2.6
17483302650	DOUBLE SHIELD WIRE UL 2547 AWG	28 260MM BLACK	1
17765505302	2 PIN FLAT CABLE WIRE AWG 26	50MM	1
17900101000	OIL SLEEVING 1 mm DIA.		0.1
17900101000	OIL SLEEVING 1 mm DIA.		0
17900101000	OIL SLEEVING 1 mm DIA.		0
17900101000	OIL SLEEVING 1 mm DIA.		0.1
17900101000	OIL SLEEVING 1 mm DIA.		0
17910500000	UL PVC TUBE 5mm DIA		0.4
17910500000	UL PVC TUBE 5mm DIA		1.2
17911050000	UL PVC TUBE 11MM DIA.		0.1
17940303000	3MM DIA. SHRINKABLE TUBE		0.3
18222400003	FUSE T4A 250V		1
18435080508	AXIAL LEAD BEAD INDUCTORS	"COILS"	3
19088200AXE	POWER SWITCH P.C.B. (131196)		1
19088280300	CRT P.C.B. (280593)		1
19093250207	POWER P.C.B. (280595)		1
19093290408	21 PIN SOCKET P.C.B. (140295)		1
19093290AXB	MAIN P.C.B. (120796)		1
19093290AXF	TELETEXT P.C.B. (060596)		1
19094200309	NICAM/STEREO P.C.B. (061196)		1
19101100107	10 PINS SOCKET ASS'Y L=210MM	(1-6 FLT CABLE,7-10 S.S.CABLE)	1
19101100107	10 PINS SOCKET ASS'Y L=210MM	(1-6 FLT CABLE,7-10 S.S.CABLE)	0
19110003509	1 PIN SOCKET ASSM'Y L=400MM	(DOUBLE INSULATION) BROWN	1

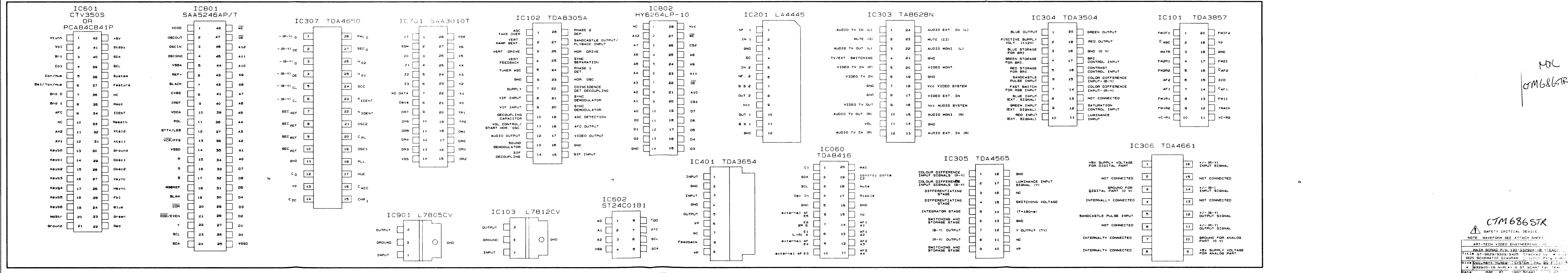
19110003609	1 PIN SOCKET ASSM'Y L=400MM	(DOUBLE INSULATION) BLUE	1
19110100707	1 PIN SOCKET ASS'Y L=350MM		1
19110101207	1 PIN DOUBLE INSOLATION WIRE	AWG 18 L=400MM BLUE	1
19110101307	1 PIN DOUBLE INSOLATION WIRE	AWG 18 L=400MM BROWN	1
19120100407	2 PINS SOCKET ASS'Y L=500MM		1
19120100607	2 PINS SOCKET ASS'Y L=700MM		1
19130100307	3 PINS SOCKET ASS'Y L=450MM		1
19130100307	3 PINS SOCKET ASS'Y L=450MM		0
19130100307	3 PINS SOCKET ASS'Y L=450MM		0
19130120207	3 PIN SOCKET ASSM'Y		1
19130120407	3 PIN SOCKET ASSM'Y		1
19130120507	3 PINS SOCKET ASS'Y L=100MM		1
19130121407	3 PIN SOCKET ASS'Y L=240MM		1
19140101407	4 PINS SOCKET ASS'Y L=350MM		1
19140101407	4 PINS SOCKET ASS'Y L=350MM		0
19140120107	4 PINS SOCKET ASS'Y L=60MM		1
19150004809	5 PIN SOCKET ASSM'Y L=480MM		1
19150004809	5 PIN SOCKET ASSM'Y L=480MM		0
19160100707	6 PINS SOCKET ASS'Y L=210MM	(1-6 PIN W/FLAT CABLE)	1
19160100707	6 PINS SOCKET ASS'Y L=210MM	(1-6 PIN W/FLAT CABLE)	0
19160120100	6 PIN SOCKET ASS'Y		1
40252200101	COAXIAL CABLE W/DIN, RCA 250MM		1
50430500610	MACHINE SCREW 3 X 6 B/M	(WHITE)	6
50930501000	MACHINE SCREW 3 X 10 KM	(BLACK)	2
51430340810	SELF-TAPPING SCREW 3 X 8 B/T	(HARDEN)	2
51440041210	SELF-TAPPING SCREW 4 X 12 B/T	(HARDEN)	1
51440041810	SELF-TAPPING SCREW 4 X 18 B/T	(HARDEN)	10
51440043510	SELF-TAPPING SCREW 4 X 35 B/T	(HARDEN)	3
51530341010	SELF-TAPPING SCREW 3 X 10	W/B/T (HARDEN)	1
51530341010	SELF-TAPPING SCREW 3 X 10	W/B/T (HARDEN)	32
51530341010	SELF-TAPPING SCREW 3 X 10	W/B/T (HARDEN)	0
51730331210	SELF-TAPPING SCREW 3 X 12 W/A	W/H=7MM (HARDEN)	6
51730331210	SELF-TAPPING SCREW 3 X 12 W/A	W/H=7MM (HARDEN)	0
54002003001	EYELET 2 X 3 MM		8
58010100401	"EZ" TWIST LOCK SUPPORTS	#23EZ0625N0028	1
58010126101	CABLE TIE L=100MM		22
58010126101	CABLE TIE L=100MM		2
58010126101	CABLE TIE L=100MM		3
58010126101	CABLE TIE L=100MM		6
61888280100	PACKING PAD (FOR POLYFOAM)		2
62288280200	FELT L240 X W17 X T0.5MM	W/TAPE	9
63011452000	FIBRE WASHER		1
63011551200	FIBRE WASHER 11 X 5.5 X 1.2 mm		4
66193250101	FUSE LABEL - ATAKI DESIGN	(T4A/250V)	1
74488130100	SPRING FOR C.R.T. MOUNTING 5.2	X 42 X 0.6MM	2
74606310100	TEST PIN:TOTAL LENGTH 18.6mm	THK:0.8mm	2
74606310101	AC LINE CORD PIN		4
75006310100	SOLDERING LUG LEG:8X4MM		3
75006310201	35MM SOLDERING LUG	OD:7 ID:3.2 LEG:4X35MM	6
7668680100	FUSE HOLDER		2

77789200100	SPRING IN 17.0 X L22		1
77993250100	IRON HEAT SINK		1
77993290202	IRON HEAT SINK		1
78193250102	ALUMINIUM HEAT SINK (POWER)		1
78193290301	ALUMINIUM HEAT SINK (A)		1
78193290901	ALUMINIUM HEAT SINK (L)		1
78193291001	ALUMINIUM HEAT SINK (M)		1
78388130601	SHIELD CAN COVER		1
78388131301	SHIELD CAN		1
80093290100	POLYFOAM TOP - LEFT		1
80093290200	POLYFOAM TOP - RIGHT		1
80093290300	POLYFOAM BOTTOM - LEFT		1
80093290400	POLYFOAM BOTTOM - RIGHT		1
81005220414	POLYBAG 5" X 22" X 0.04MM	PO MAT W/RE-CYCLING MARK	1
81009150413	POLYBAG 9" X 15" X 0.04MM W/	RE-CYCLING MARK	1
81045530414	POLYBAG 45"X53"X0.04MM W/PUNCH	HOLE/RE-CYCLING MARK (P/O M/	1
82643200500	FOAM SHEET - 43" X 20" X 0.5MM	THK	1
82647350500	FOAM SHEET - 47" X 35" X 0.5MM	THK	1
84001102421	PAD CORD L240 X W10 X T1 MM	W/TAPE	9
84005103011	RUBBER PAD (ONE SIDE W/TAPE)		4
89688210100	POWER BOARD COVER (UL)		1
920932901U0	P.C.B. MTG. BRACKET		1
92988210300	LED HOLDER BKT		1
93888200100	SECAM BOARD HOLDER		4
93989200100	POWER KNOB ADAPTER		1
94888200300	DOOR LOCKER		1
94893290100	PRESET DOOR HINGE CLIP		1
95488210000	AC LINE CORD CLIP		1
95488280300	HIGH VOLTAGE CABLE SPACER		2
99193290100	POWER KNOB		1



- NOTE:**
- ALL CAPACITORS ARE IN μ F UNLESS OTHERWISE NOTED
 - CAPACITORS NOT SPECIFICALLY DESIGNATED ARE CERAMIC CAPACITORS
 - ELECTROLYTIC CAPACITOR
 - POLAR ELECTROLYTIC CAPACITOR
 - MILAR CAPACITOR
 - METALLIZED POLYESTER
 - POLYESTER FILM CAPACITOR
 - POLYPROPYLENE CAPACITOR
 - ALL RESISTORS ARE IN Ω UNLESS OTHERWISE NOTED
 - RESISTORS NOT SPECIFICALLY DESIGNATED ARE CARBON FILM RESISTORS
 - CARBON COMPOSITION RESISTOR
 - METAL GLAZE RESISTOR
 - FUSIBLE RESISTOR
 - THERMISTOR
 - DC VOLTAGE IS MEASURED FROM POINTS INDICATED BY THE CIRCUIT
 - GROUND WITH A DIGITAL MULTIMETER TEST
 - WAVEFORMS ARE TAKEN WITH SETTING CONTROLS TO A NORMAL CONDITIONS (COLOR BAR PATTERN)
 - THIS CIRCUIT DIAGRAM IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE
 - ON THE SCHEMATIC SHOULD BE REPLACED WITH EXACT MANUFACTURER RECOMMENDED PARTS

IC601	IC801	IC307	IC701	IC102	IC802	IC201	IC303	IC304	IC101
IC601 ST4C01B1	IC801 SA45246P/T	IC307 TDA4650	IC701 SA43010T	IC102 TDA8305A	IC802 HY6264LP-10	IC201 L44445	IC303 TA8628N	IC304 TDA3504	IC101 TDA3857
IC602 ST4C01B1	IC802 SA45246P/T	IC308 TDA4650	IC702 SA43010T	IC103 TDA8305A	IC803 HY6264LP-10	IC202 L44445	IC304 TA8628N	IC305 TDA3504	IC102 TDA3857
IC603 ST4C01B1	IC803 SA45246P/T	IC309 TDA4650	IC703 SA43010T	IC104 TDA8305A	IC804 HY6264LP-10	IC203 L44445	IC305 TA8628N	IC306 TDA3504	IC103 TDA3857



CTM686STK

SAFETY CRITICAL DEVICE
 NOTE: WAVEFORM SEE ATTACH SHEET
 ART-TECH VIDEO ENGINEERING, INC.
 1100 S. GARDEN BLVD., SUITE 100, GARDEN CITY, N.Y. 11530
 (516) 466-1100
 FAX: (516) 466-1101