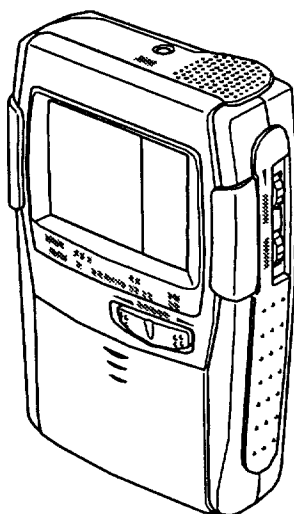


SERVICE MANUAL & PARTS LIST (without price)

TV-880B (KX-518B) (For NTSC)

NOV. 1998



TV-880B

CASIO®

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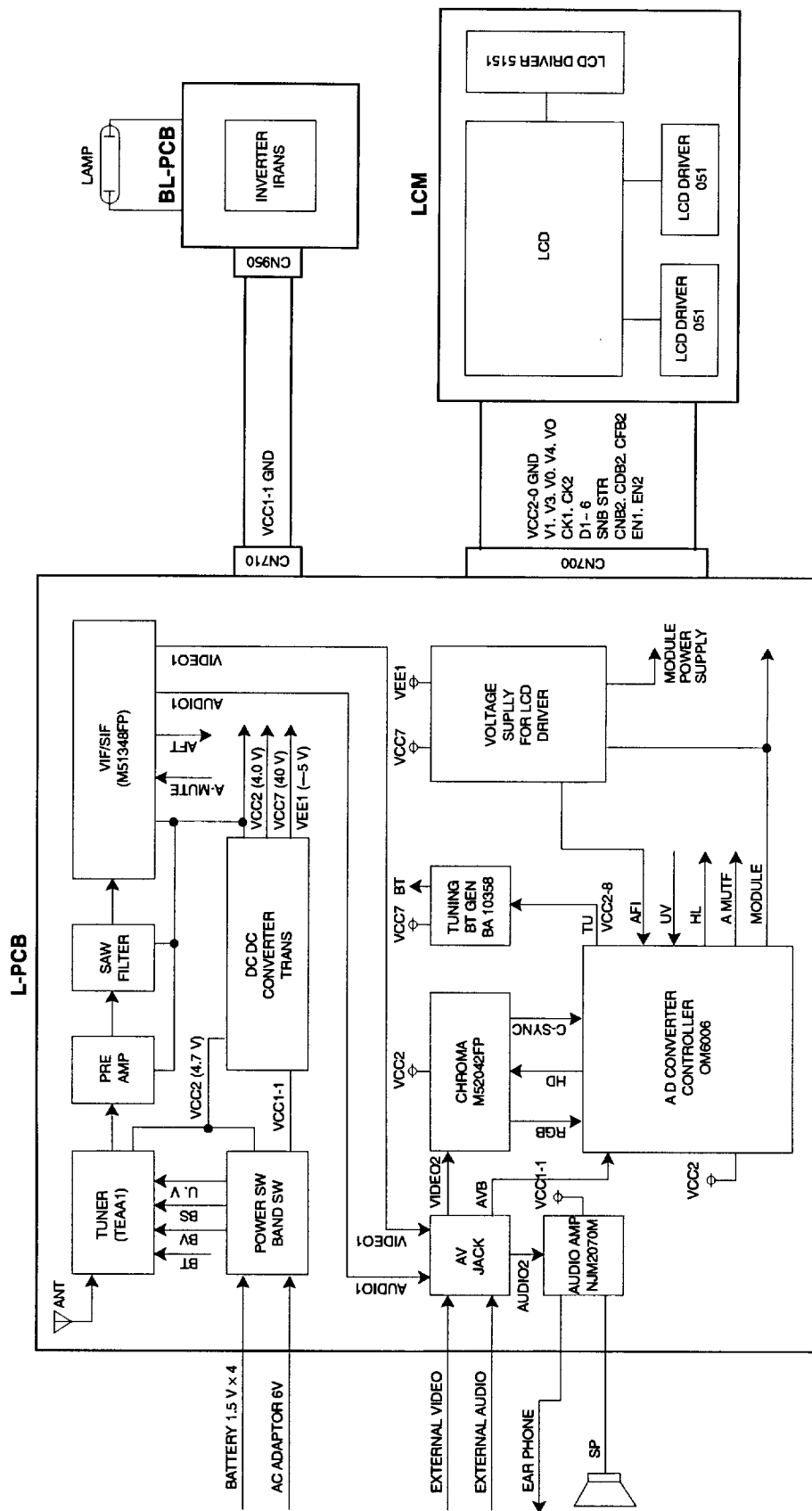
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SPECIFICATIONS

Item	Specification
1. Type	LCD Color Television
2. Reception Frequencies	UHF: UHF band CH 14 – CH 69 (model B) CH 21 – CH 69 (models C and N) CH 21 – CH 68 (model D) VHF: VHF band CH 2 – CH 13 (model B) CH 2 – CH 12 (models C and N)
3. Display Element	High resolution color liquid crystal display (TI-STN Type)
4. Drive System	Passive matrix system
5. Screen Size	2.3 inches
6. Backlight	High luminance fluorescent material
7. Antenna	Rod antenna (VHF, UHF)
8. Speaker	1 1/8" inches (28 mm) × 1
9. Connection Terminals	Earphone jack (3.5" mini) External power source jack (DC IN 6V) Audio/Video input jack (3.5" mini)
10. Power Supply	3-way power supply system Batteries: 4 AA-size dry batteries AC: AC adaptor AD-K64/AD-K65 (option) Car battery: Car adaptor CA-K65 (option)
11. Power Consumption	Approx. 3.1 W Approx. 3.4 W (Model B only)
12. Ambient Temperature Range	32°F (0°C) ~ 104°F (40°C)
13. Dimensions	3 1/4" (W) × 1 7/16" (D) × 5 1/16" (H) inches 83 (W) × 36 (D) × 128 (H) mm
14. Weight	Approx. 6.7 oz 190 g (excluding batteries)

BLOCK DIAGRAM



ADJUSTMENTS

1. VCC2 adjustment, VCC2-3, VCC7, VEE1 voltage check
2. LLD coil adjustment
3. Free running frequency adjustment
4. Contrast adjustment
5. TINT pot adjustment

Preparations

1. Connect AVB (CP725) to GND.
2. Set SW100 on UHF mode.

Adjustment procedures

1. VCC2 adjustment, VCC2-3, VCC7, VEE1 voltage check
 - Condition
Power supply: $V_{cc1-1} = 5.0 \pm 0.05$ [V]
 - Adjustment
Apply 5.0 ± 0.05 [V] on V_{cc1-1} (CP101).
Adjust VR100 so that V_{cc} voltage becomes 4.90 ± 0.02 [V].
 - Checking
 $VCC2-3$ (CP-105) = $3.87 \sim 4.13$ [V]
 $VCC7$ (CP103) = $36.0 \sim 44.0$ [V]
 $VEE1$ (CP104) = $-4.5 \sim -5.5$ [V]
2. LLD coil adjustment
 - Conditions
 - (1) Signals
Broadcasting system: M/M
Color system: NTSC color bar
 - (2) Signal level
Input electric field: 40 ± 5 dB μ (IF AGC full gain), P/S = 10dB
 - (3) Other conditions
US IF (Input electric field: terminated with 75-ohm resistance)
Power supply: $V_{cc1-1} = 5.0 \pm 0.05$ [V]
 - Adjustment
Monitor video detection signal (CP238) via a low-pass filter of 100 kHz cutoff frequency and adjust LLD coil T200 so that its DC level is minimum (waveform's amplitude is maximum).
(Reference: C= 1500 pF, R = 1 Kohm)
 - Confirmation
There should be no waveform distortion (erroneous synchronization, etc.), under sensitivity (video detector output level is abnormally small, etc.).
3. Free running frequency adjustment
 - Conditions
 - (1) Signal
No signal (NTSC standard signal should be applied only at synchronous check)
 - (2) Signal level
Input electric field only at synchronous check: 70 dB μ (terminated with 75-ohm resistance), P/S = 10 dB
 - (3) Other conditions
US IF input only at synchronous check (input electric field with 75-ohm termination).
Connect SYF terminal (CP729) and VCC2-7.
Power supply: $V_{cc1-1} = 5.0 \pm 0.05$ [V]
Room temperature: 20 ± 10 [°C]

- Adjustment
Monitoring HDB (CP305) with a frequency counter, adjust VR700 so that the frequency is 15.734 ± 0.1 [kHz].
 - Caution
 - (1) Disconnect the wire between SYF terminal and VCC2-7. Applying IF signal make sure that synchronization is normal on the display.
 - (2) Use input signal pattern conforming CCIR standard.
4. Contrast adjustment
- Conditions
 - (1) Signal
Broadcasting system: M/M
Color system: NTSC color bar
 - (2) Signal level
Input electric field: $70 \text{ dB}\mu$ (terminated with 75-ohm resistance), P/S = $10 \text{ dB}\mu$
 - (3) Other conditions
US IF input (input electric field should be terminated with 75-ohm resistance).
Apply voltage of $V_{cc1-1} = 5.0 \pm 0.05$ [V]
 - Adjustment
Connect color terminal (CP320) to GND (CP300) so that screen becomes black and white. Adjust contrast pot VR300 so that the voltage between pedestal level and white level of B signal (CP740) is 0.80 ± 0.05 [Vp-p].
 - Caution
 - (1) Make sure that there is no distortion on the waveforms.
 - (2) Connect COLOR terminal of Chroma IC (M52042FP) to GND.
 - (3) Monitor the B output signal with an oscilloscope via a low-pass filter ($C = 2700 \text{ pF}$, $R = 100 \text{ ohm}$).
5. TINT pot adjustment
- Condition
 - (1) Signal
Broadcasting system: M/M
Color system: NTSC color bar
 - (2) Signal level
Input electric field: $70 \text{ dB}\mu$ (75-ohm termination), P/S = 10 dB
 - (3) Other conditions
US IF input (input electric field should be terminated with 75-ohm resistance).
Apply voltage of $V_{cc1-1} = 5.0 \pm 0.05$ [V]
 - Adjustment
Observing B output signal (CP740) with an oscilloscope, adjust TINT pot VR301 so that amplitude difference between two center pulses is 0.1 [V].
 - Caution
Do not connect COLOR terminal to GND.
Monitor B output signal with an oscilloscope via a low-pass filter ($C = 2700 \text{ pF}$, $R = 100 \text{ ohm}$).

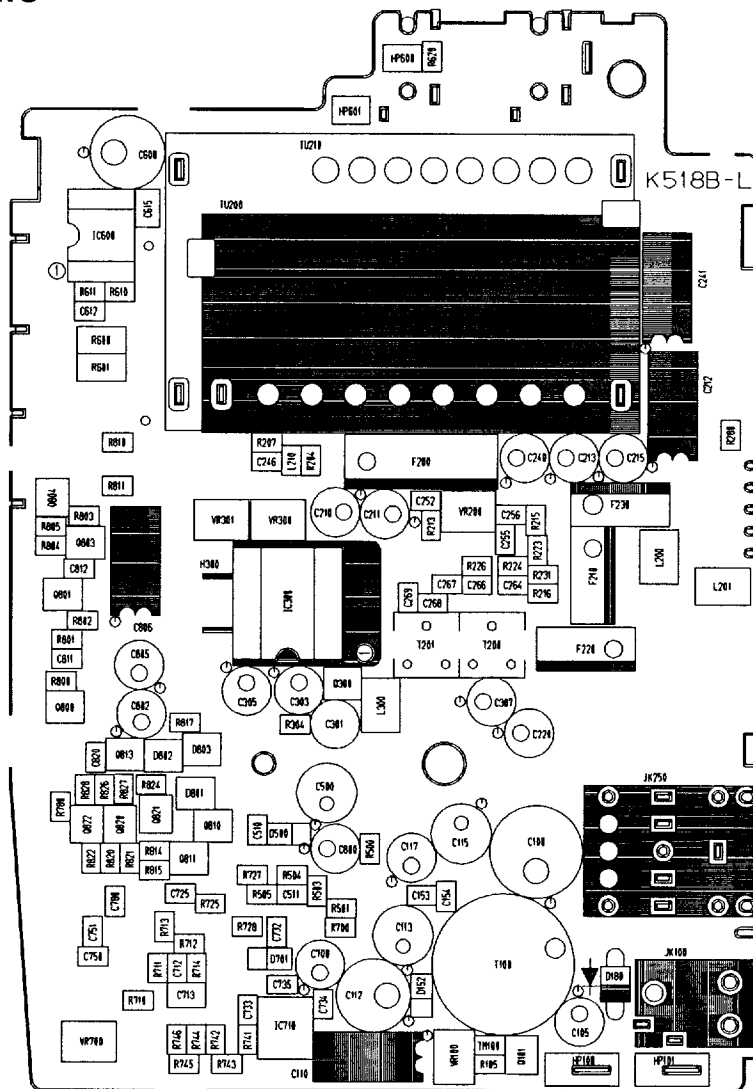
TOP VIEWS

Linear

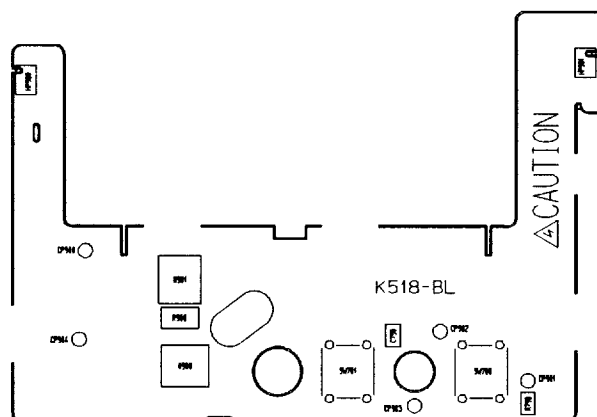


BOTTOM VIEWS

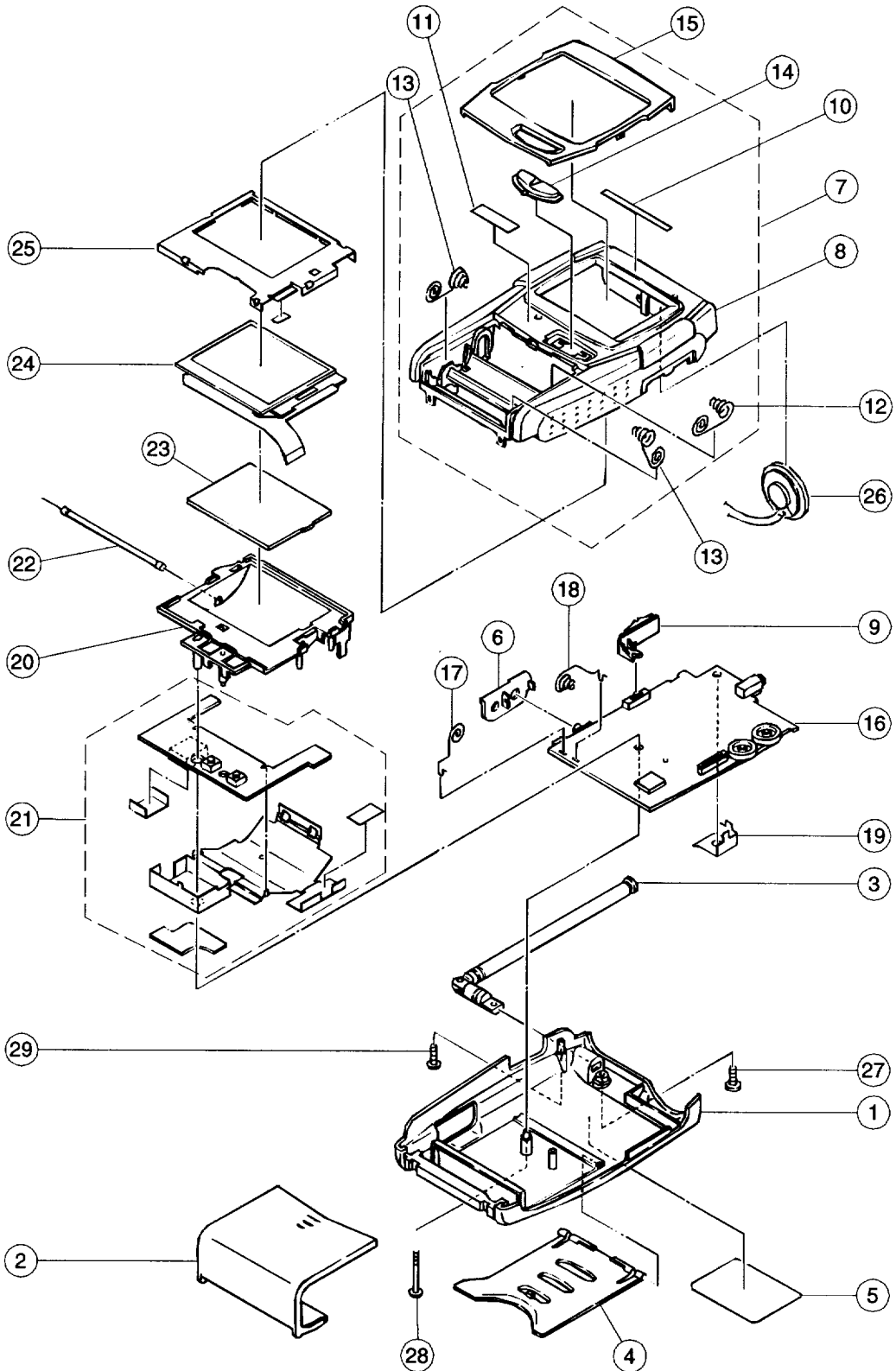
Linear



Back Light



EXPLODED VIEW



PARTS PRICE LIST

TV880B

LINEAR PCB

N	Item	Code No.	Parts Name	Specification	Q	Price Code	R
Diodes							
N	D100	7101 1194	Chip diode	MA111(TX)	1	AA	C
	D110	2360 2520	Chip zener diode	MA8051-L(TX)	1	AA	C
	D150	7101 1194	Chip diode	MA111(TX)	1	AA	C
	D152	2390 1379	Schottky diode	MA729-(TX)	1	AB	C
	D155	2390 1470	Chip diode	MA143A-(TX)	1	AA	C
	D180	2390 1190	Diode	ERA15-01Y	1	AA	C
	D200	7101 1194	Chip diode	MA111(TX)	1	AA	C
	D280	7101 1194	Chip diode	MA111(TX)	1	AA	C
	D500	2360 3079	Chip zener diode	MA8300-M(TX)	1	AA	C
	D701	7101 1194	Chip diode	MA111(TX)	1	AA	C
	D801	2390 1477	Chip diode	MA142WA-(TX)	1	AA	C
	D802	2390 1470	Chip diode	MA143A-(TX)	1	AA	C
	D803	2390 1470	Chip diode	MA143A-(TX)	1	AA	C
Filter							
	F200	3025 1948	SAW filter	SAF45MA210Z	1	AJ	C
	F210	3025 1949	SIF filter	SFSH4.5MCB	1	AB	C
	F220	3851 2105	Ceramic discriminator	CDSH4.5MC30K	1	AB	C
	F230	3850 1259	SIF trap	TPS4.5MB	1	AC	C
Fuse							
	FU100	2797 5598	Chip fuse	PI-R429.750	1	AC	A
Oscillator							
	H300	25902731	Crystal oscillator	HD-49-3.58M	1	AE	C
ICs							
	IC100	2114 5867	IC	TK11240BMCL	1	AE	B
	IC200	2114 1827	Linear IC	M51348FP-T1	1	AR	B
	IC300	2114 3332	Linear IC	M52042FP-T1	1	AW	B
	IC500	2116 0119	OP amplifier	BA10358F-T1	1	AC	B
	IC600	2114 2464	Linear IC	NJM2070M-T1	1	AF	B
	IC700	2012 6038	LSI	ML9661GA-6006	1	BB	B
	IC710	2114 5866	IC	S-81230SGUP-DQB-T1	1	AC	B
Jacks							
	JK100	3501 8281	Power jack	HEC0811-010010	1	AD	C
	JK250	3501 3773	Headphone jack	HSJ6063-01-410	1	AH	C
	JK600	3501 5439	Jack	HSJ1456-01-210	1	AC	C
Transistors							
N	Q101	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q110	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q111	2253 0308	Chip transistor	2SD1119-R(TX)	1	AC	C
	Q200	2250 1617	Chip transistor	2SC4417-(TX)	1	AB	C
	Q210	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q211	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q280	2259 2723	Digital transistor	UN5211-(TX)	1	AA	C
	Q281	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q282	7101 5686	Digital transistor	UN5111-(TX)	1	AA	C
	Q283	7101 5686	Digital transistor	UN5111-(TX)	1	AA	C
	Q300	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q800	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q801	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q803	2251 0189	Chip transistor	2SB1218A-R(TX)	1	AA	C
	Q804	2251 0189	Chip transistor	2SB1218A-R(TX)	1	AA	C

Notes: Q - Quantity per unit

R - Rank

N - New Parts

N	Item	Code No.	Parts Name	Specification	Q	Price Code	R
	Q810	2253 0716	Chip transistor	2SD1824-S(TX)	1	AA	C
	Q811	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q813	2251 0189	Chip transistor	2SB1218A-R(TX)	1	AA	C
	Q820	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q821	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
	Q822	2253 0133	Chip transistor	2SD1819A-R(TX)	1	AA	C
Switch							
	SW100	3412 0938	Slide switch	ESD-11V231	1	AD	C
Converter							
	T100	3065 0728	DC/DC converter	LC12U-44	1	AE	B
Thermistor							
N	TM100	2775 3419	Chip thermistor	NTH5G1M31B102K04TE	1	AB	C
Tuner							
	TU210	1014 9977	Tuner	TEAA1-001B	1	CF	C
Variable resistors							
	VR100	2775 2751	Chip semi-fixed resistor	EVN5ESX50B23	1	AA	C
	VR200	2775 2765	Chip semi-fixed resistor	EVN5ESX50B54	1	AA	C
	VR300	2775 2758	Chip semi-fixed resistor	EVN5ESX50B14	1	AA	C
	VR301	2775 2765	Chip semi-fixed resistor	EVN5ESX50B54	1	AA	C
	VR600	2765 0616	Volume	RK09H11T-10KB	1	AD	C
	VR700	2775 2786	Chip semi-fixed resistor	EVN5ESX50B53	1	AA	C
	VR800	2765 0623	Volume	RK09H11T-20KB	1	AD	C

BL PCB

N	Item	Code No.	Parts Name	Specification	Q	Price Code	R
Transistors							
	Q900	2253 0308	Chip transistor	2SD1119-R(TX)	1	AC	C
	Q901	2253 0308	Chip transistor	2SD1119-R(TX)	1	AC	C
Switch							
	SW700	3412 1029	Switch	SKHHAL	1	AA	C
	SW701	3412 1029	Switch	SKHHAL	1	AA	C
Transformer							
	T900	3012 1588	Inverter trans	C-8123	1	AL	B

Notes: Q - Quantity per unit
R - Rank
N - New Parts

MAIN COMPONENT

N	Item	Code No.	Parts Name	Specification	Q	Price Code	R
N	1	6613 7030	Lower case BIM-K518	K140511-1	1	AF	X
	2	6613 7060	Battery cover A-K518	K241047-1	1	AA	C
	3	3851 1267	Rod antenna	YH810721	1	AQ	B
	4	6613 7180	Stand B-K518	K241040-1	1	AA	C
N	5	6613 7190	Rating plate BIM-K518	K341435-1	1	AA	X
	6	6613 7170	Jack plate B-K518	K241058-1	1	AA	X
	7	6613 7014	Upper case ass'y	K341446*1	1	AL	X
	8	6613 7240	Upper case BIM-K518	K140510-1	1	AG	X
N	9	6613 7040	Switch knob A-K518	K341342-1	1	AA	X
	10	6613 7250	Adhesive tape A-K518	K441586-1	1	AA	X
	11	6613 7260	Adhesive tape B-K518	K441586-2	1	AA	X
	12	6020 7658	Battery spring B-1-G513	P408A-1	1	AB	X
	13	6020 7666	Battery spring B-2-G513	P409A-1	2	AA	X
	14	6613 7270	Tuning button A-K518	K241046-1	1	AA	X
	15	6613 7280	Display plate BIM-K518	K241045-1	1	AK	C
	16	6613 7017	Linear PCB ass'y	K241083*1	1	DG	B
	17	6613 7210	Battery spring A-K518	K441546-1	1	AA	X
	18	6613 7220	Battery spring B-K518	K441547-1	1	AA	X
	19	6613 7230	antenna terminal A-K518	K341343-1	1	AA	X
	20	6613 7290	Reflector case A-K518	K140528-1	1	AJ	X
	21	6613 7018	BL unit	K341437*1	1	BK	B
	22	3851 2093	Fluorescent lamp	3064BB-CA48	1	AV	A
	23	6612 9730	Light diffuser sheet A-K516	K340975-1	1	AC	X
	24	2725 1363	LCD	CMG23C1-TO	1	CZ	C
	25	6613 7300	sealed case A-K518	K241038-1	1	AB	X
	26	3831 1087	Speaker	28-8F-03N	1	AL	C
	27	6609 1290	Screw A-K610	K412031-1	1	AA	C
	28	6609 9630	Screw A-K720	K410188-6	1	AA	C
	29	5860 0532	Screw		1	AA	C

Notes: Q - Quantity per unit
R - Rank
N - New Parts

SCHEMATIC DIAGRAMS

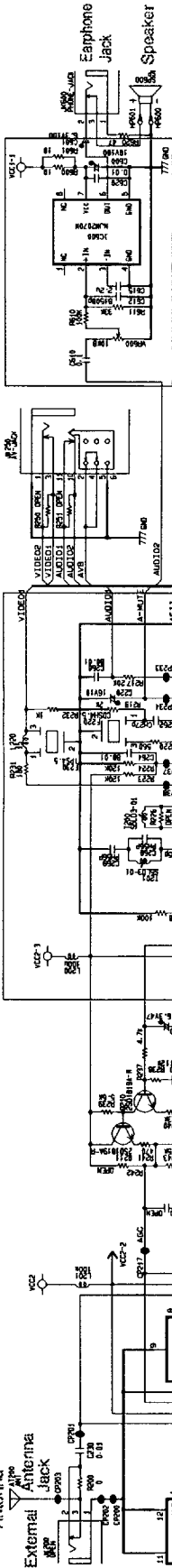
LINEAR

Antenna

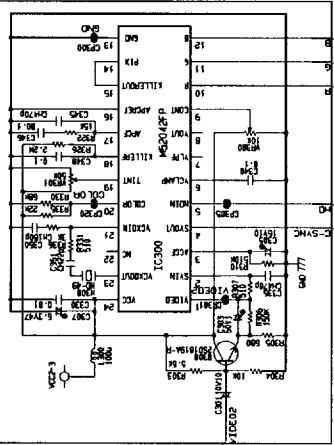
External Antenna Jack

IF Detection Circuit

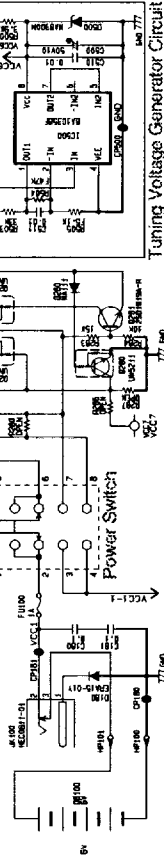
Audio Amplifier Circuit



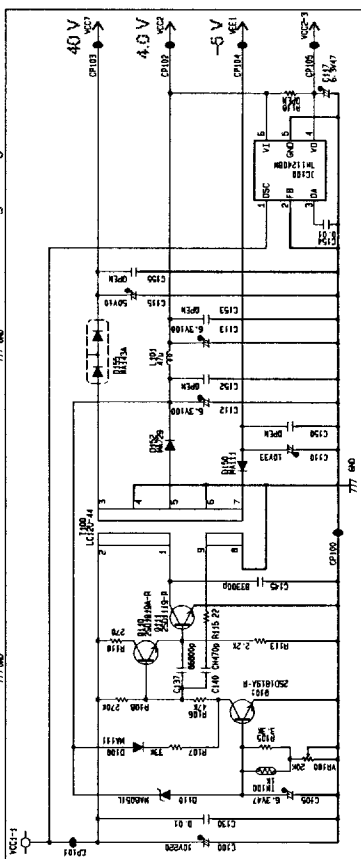
Chroma Circuit



Power Switch



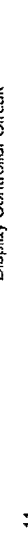
Tuning Voltage Generator Circuit



Power Supply Circuit



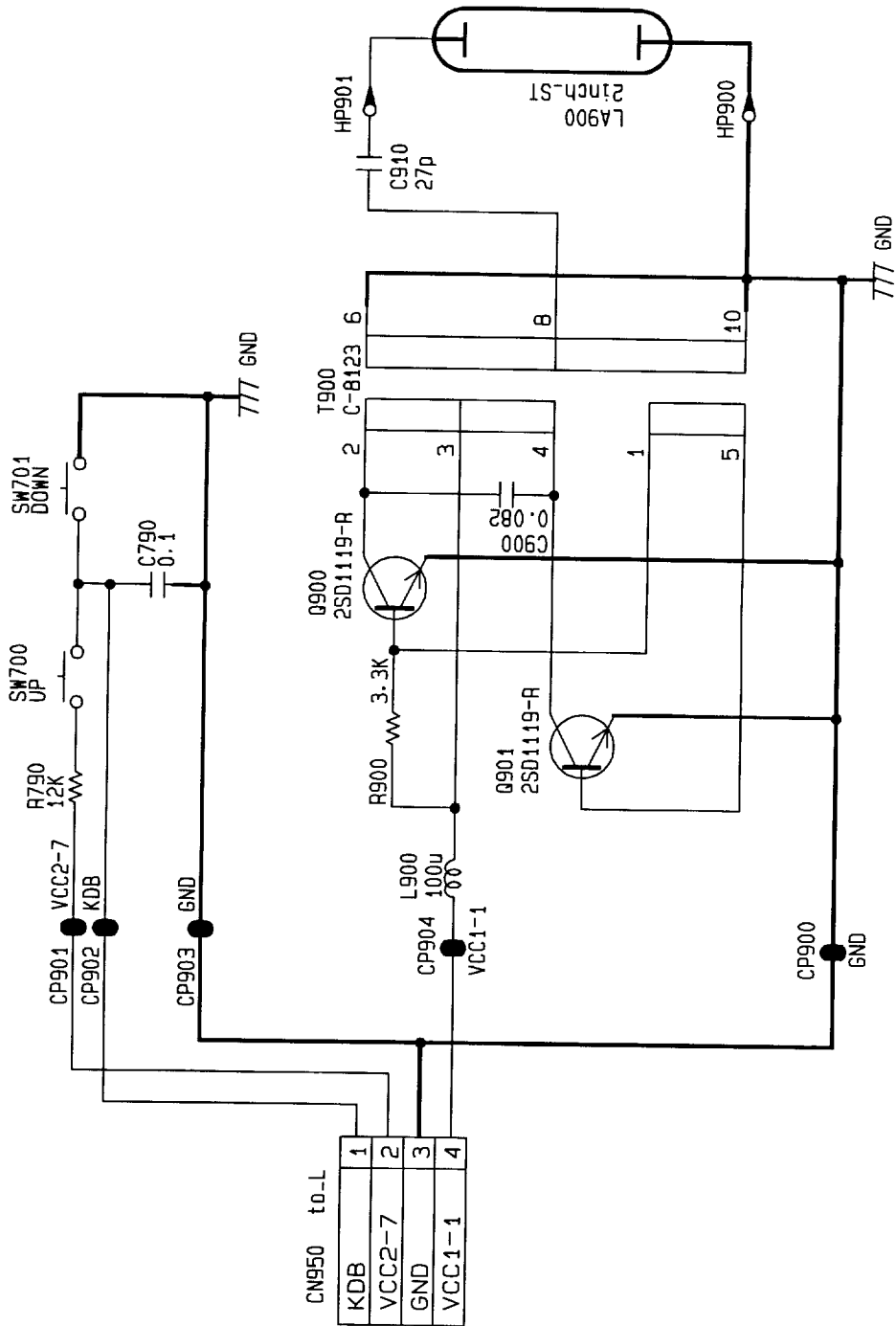
Display Controller Circuit



Display Generator Voltage Circuit



BACK LIGHT



Notes:

1. All resistance values are indicated in "ohms" ($k=10^3$ ohms, $M=10^6$ ohms).
2. All capacitance values are indicated in " μF " ($p=10^{-9}$ μF).
3. All inductance values are indicated in " μH ".