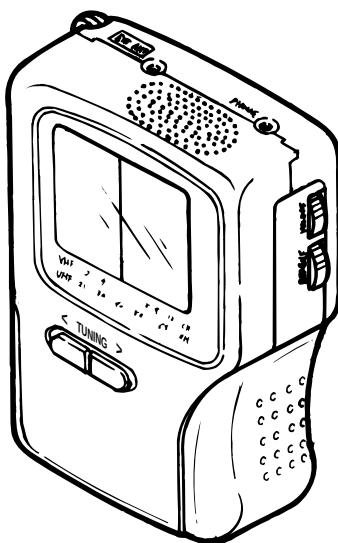


SERVICE MANUAL & PARTS LIST (without price)

TV-1800B (NTSC)
(KX-523)

FEB. 1997



INDEX

CASIO®

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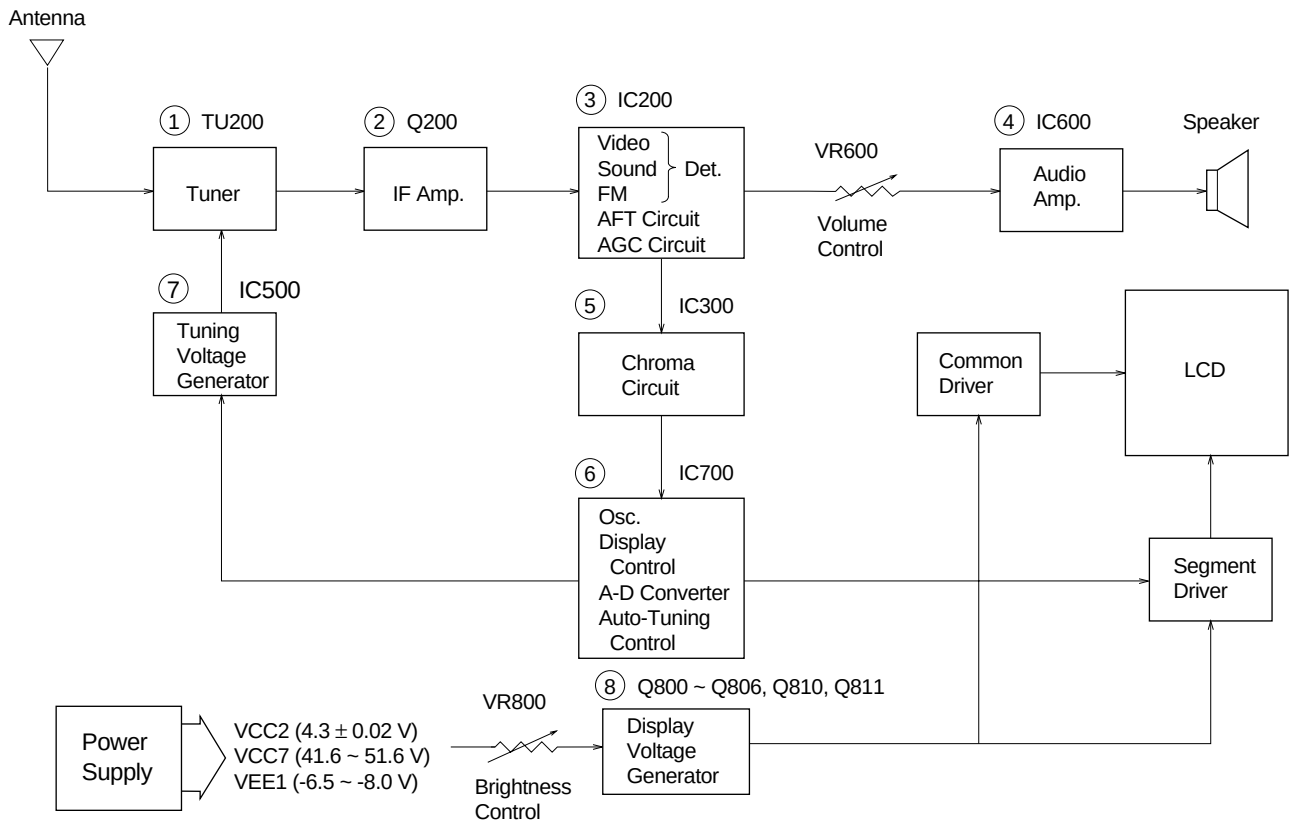
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SPECIFICATIONS

Item	Specification
1. Power voltage	DC 6.0 V
2. Power consumption	Approx. 3.6 W
3. Current consumption	Approx. 600 mA
4. Battery life (with alkaline batteries)	Approx. 2.5 hours
5. Power supply	Batteries : 4 × LR6 (D) size batteries Car adaptor : CA-K65 AC adaptor : AD-K65
6. Connection terminals	Earphone jack : 3.5 ø mini External power jack : 6.0 V DC IN External antenna jack : 3.5 ø mini
7. Screen size	2.5 inches
8. No. of picture element	118,800 (540 × 220) dots
9. Dimensions	135 mm (H) × 91 mm (W) × 38 mm (D)
10. Weight	240 g without batteries
11. Options	AC adaptor : AD-K65 Car adaptor : CA-K65 Antenna matching device : AS-35S

Color System	TV System	Channel		
NTSC	M / M	US	VHF: 2 ~ 13 ch	UHF: 14 ~ 69 ch

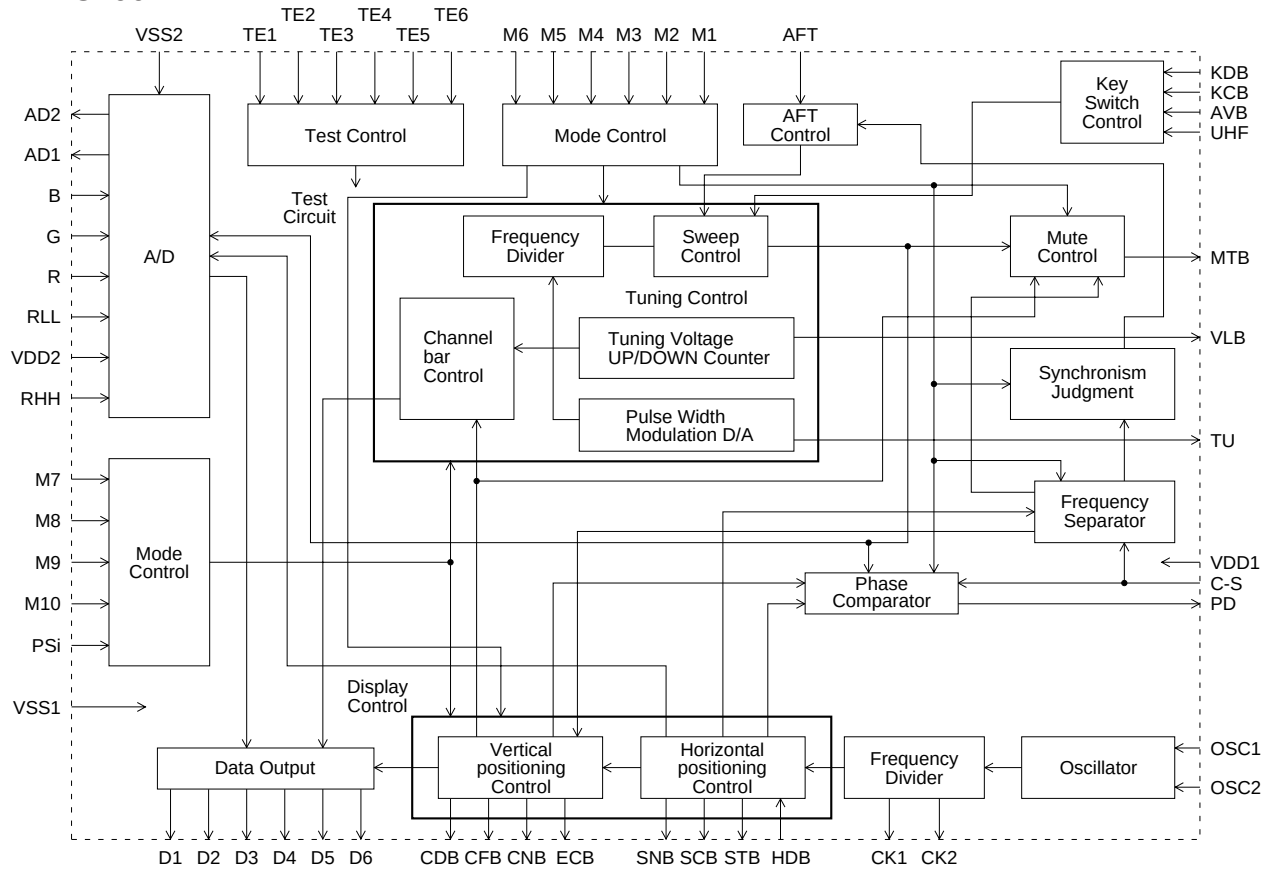
BLOCK DIAGRAM



- ① — Color Tuner: TU200 TEPE5-02
Selects a desired radio wave and changes it to the video IF signal.
- ② — Video IF Amp.: Q200 2SC4238
Amplifies the video IF signal output from the tuner TU by 10 times (20 dB).
- ③ — Video Det./Sound Det./FM Det./AFT/AGC: IC200 M51348FP
Eliminates the carrier wave in the video IF signal, and picks up the video signal and the sound IF signal. Also, the sound signal is picked up from the sound IF signal by FM detection.
- ④ — Audio Amp.: IC600 NJM2070M
Sound amplification.
- ⑤ — Chroma Circuit: IC300 M52045FP
Generates the tricolor (red, green, and blue) from the video signal.
- ⑥ — Osc./A-D Converter/Display Control/ Auto-Tuning Control : IC700 MSM6625-01 GSK-640E
Converts the color signal into a digital signal.
Also, generates the clock pulse for the display and controls the display.
- ⑦ — Tuning Voltage Generator: IC500 MSC1169MS-K
Generates the tuning voltage with the tuning pulse (TU) output from ⑥.
- ⑧ — Display Voltage Generator: IC800 BA10358F, Q800 ~ Q806 Q810 Q811 2SD1149-S, 2SD601A-R×3, 2SB709A-R
Generates the display voltages V0 ~ V4 with VEE1 and VCC7 outputs from the power supply.

CIRCUIT OPERATIONS

IC700

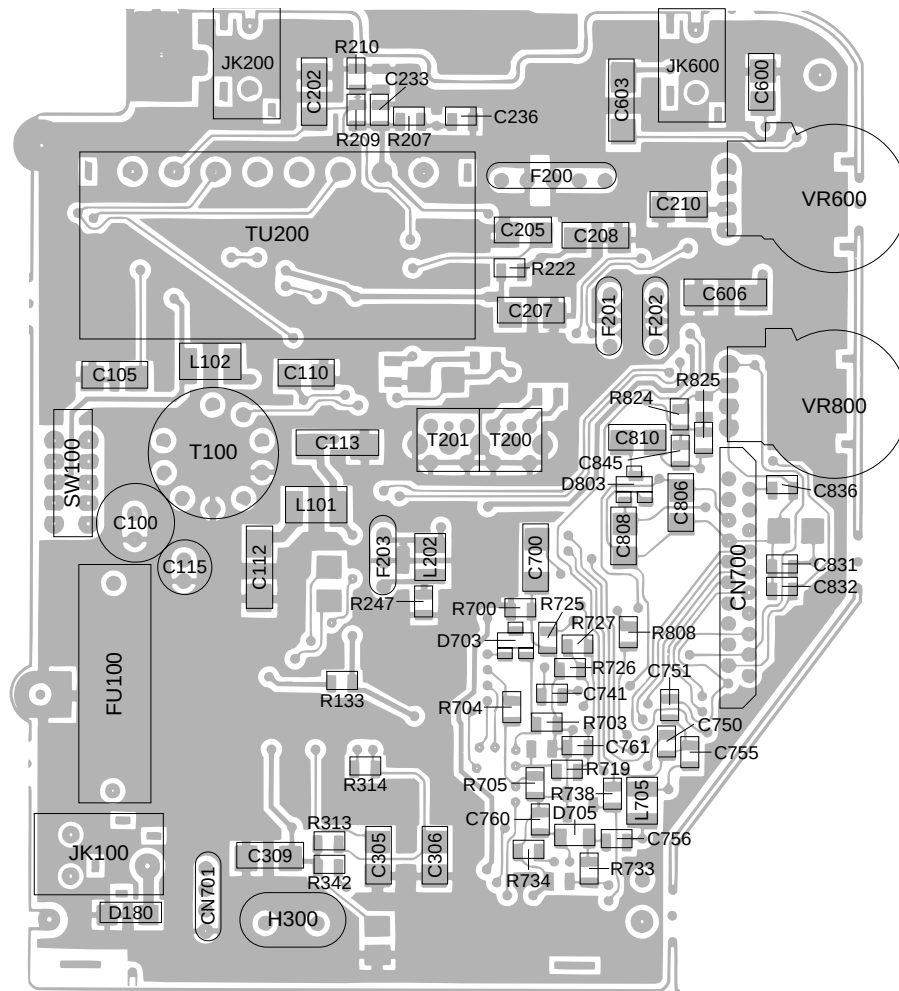


Signal Name	Function	Signal Name	Function
D1 ~ D6	Display data output terminal	MTB	Mute control terminal
SNB	Data latch signal	TU	Tuning control pulse output terminal
CDB	Scanning start signal	VLB	VHF High/Low channel select signal output terminal
CFB	Output voltage changeover signal	UHF	VHF/UHF select signal
CNB	Scanning signal shift lock signal	AVB KCB KDB	Key input terminal
SCB	Brightness modulation pulse control	AFT	AFT voltage input terminal
STB	Sampling start signal	M1 ~ M10	Mode select signal input terminal
ECB	Signal input terminal controlling the segment drive terminal to "H" during no display	TE1 ~ TE6	Test terminal
CK1, CK2	Clock pulse output terminal	R, G, B	Original color
OSC1 OSC2	Oscillator frequency control terminal	RLL	"L" level voltage input terminal of video signal
PD	Clock pulse adjustment terminal	RHH	"H" level voltage input terminal of video signal
C-S	Synchronizing pulse input terminal	PS1	Mode control signal
HDB	Horizontal synchronizing signal input terminal	VSS1	Power supply voltage input terminal
VDD1	VDD voltage input terminal		

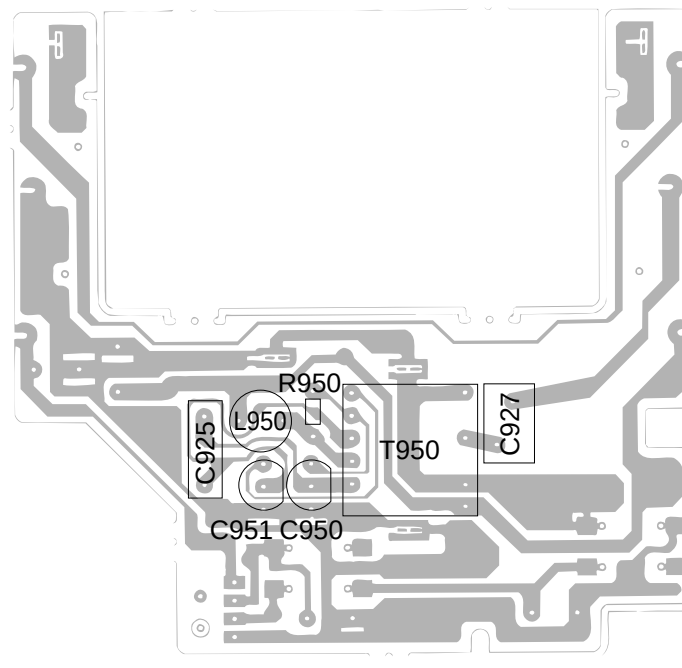
PRINTED CIRCUIT BOARDS

TOP VIEWS

Linear



Back Light



Linear



PARTS LIST

LINEAR PCB

Item	Code No.	Parts Name	Specification	Applicable	Q	R
Diodes						
D100	2390 1176	Chip diode	MA152WK-(TX)	Common	1	C
D150	2390 1176	Chip diode	MA152WK-(TX)	Common	1	C
D152	2390 1176	Chip diode	MA152WK-(TX)	Common	1	C
D155	2390 1302	Chip diode	MA153A-(TX)	Common	1	C
D180	2390 2450	Chip diode	SC016-2-TE12RA	Common	1	C
D500	2360 1344	Chip zener diode	MA3330-M(TX)	Common	1	C
D700	2390 0469	Chip diode	MA157A-(TX)	Common	1	C
D703	2390 0469	Chip diode	MA157A-(TX)	Common	1	C
D705	2390 1358	Variable diode	MA329-(TX)	Common	1	C
D803	2390 0469	Chip diode	MA157A-(TX)	Common	1	C
D805	2390 1253	Chip diode	MA152WA-(TX)	Common	1	C
Fuse						
FU100	3632 0245	Fuse	ATSCR0.80A	Common	1	B
ICs						
IC200	2114 1827	Linear IC	M51348FP-T1	Common	1	C
IC300	2114 3332	Linear IC	M52042FP-T1	Common	1	C
IC500	2114 2842	Linear IC	MSC1169MS-KR1-620	Common	1	C
IC600	2114 2464	Linear IC	NJM2070M-T1	Common	1	C
IC700	2011 2695	LSI	MSM6625-01GSK-640E	Common	1	C
IC800	2116 0119	OP AMP	BA10358F-T1	Common	1	C
Jacks						
JK100	3501 6846	Jack	HEC2500-010110	Common	1	C
JK200	3501 5439	Jack	HSJ1456-01-210	Common	1	C
JK600	3501 5439	Jack	HSJ1456-01-210	Common	1	C
Transistors						
Q100	2210 8026	Chip transistor	2SB709A-R(TX)	Common	1	B
Q101	2230 7011	Chip transistor	2SD601A-R(TX)	Common	1	B
Q111	2253 0308	Chip transistor	2SD1119-R(TX)	Common	1	B
Q200	2252 0707	Chip transistor	2SC4238-(TX)	Common	1	C
Q300	2210 8026	Chip transistor	2SB709A-R(TX)	Common	1	C
Q800	2230 7011	Chip transistor	2SD601A-R(TX)	Common	1	C
Q801	2210 8026	Chip transistor	2SB709A-R(TX)	Common	1	C
Q802	2230 7011	Chip transistor	2SD601A-R(TX)	Common	1	C
Q803	2230 7011	Chip transistor	2SD601A-R(TX)	Common	1	C
Q804	2230 7011	Chip transistor	2SD601A-R(TX)	Common	1	C
Q805	2253 0476	Chip transistor	2SD1149-S(TX)	Common	1	C
Q806	2230 7011	Chip transistor	2SD601A-R(TX)	Common	1	C
Q810	2210 8026	Chip transistor	2SB709A-R(TX)	Common	1	C
Q811	2230 7011	Chip transistor	2SD601A-R(TX)	Common	1	C
Switch						
SW100	3412 0938	Slide switch	ESD-11V231	Common	1	C
Converter						
SW100	3065 0469	DC-DC converter	LC12U-31	Common	1	B
Tuner						
TU200	1013 5511	Tuner	TEPU5-02	Common	1	C
Variable resistors						
VR600	2765 0616	Volume	RK09H11T-10KB	Common	1	C
VR800	2765 1582	Volume	RK09H11T-100KB	Common	1	C

Notes: Q – Quantity used per unit
R – Rank

BL PCB

Item	Code No.	Parts Name	Specification	Applicable	Q	R
Lamp						
LA900	3851 1484	Fluorescent lamp	8.76AD1P2-CA11	Common	1	A
Fuses						
FU900	3632 0308	Temperature fuse	EYP-1BF102L	Common	1	C
FU901	3632 0308	Temperature fuse	EYP-1BF102L	Common	1	C
Transistors						
Q950	2253 0287	Chip transistor	2SD965-R	Common	1	B
Q951	2253 0287	Chip transistor	2SD965-R	Common	1	B
Switches						
SW700	3412 1029	Switch	SKHHAL	Common	1	C
SW701	3412 1029	Switch	SKHHAL	Common	1	C
Transformer						
T950	3012 1001	Inverter trans	NT-04	Common	1	B

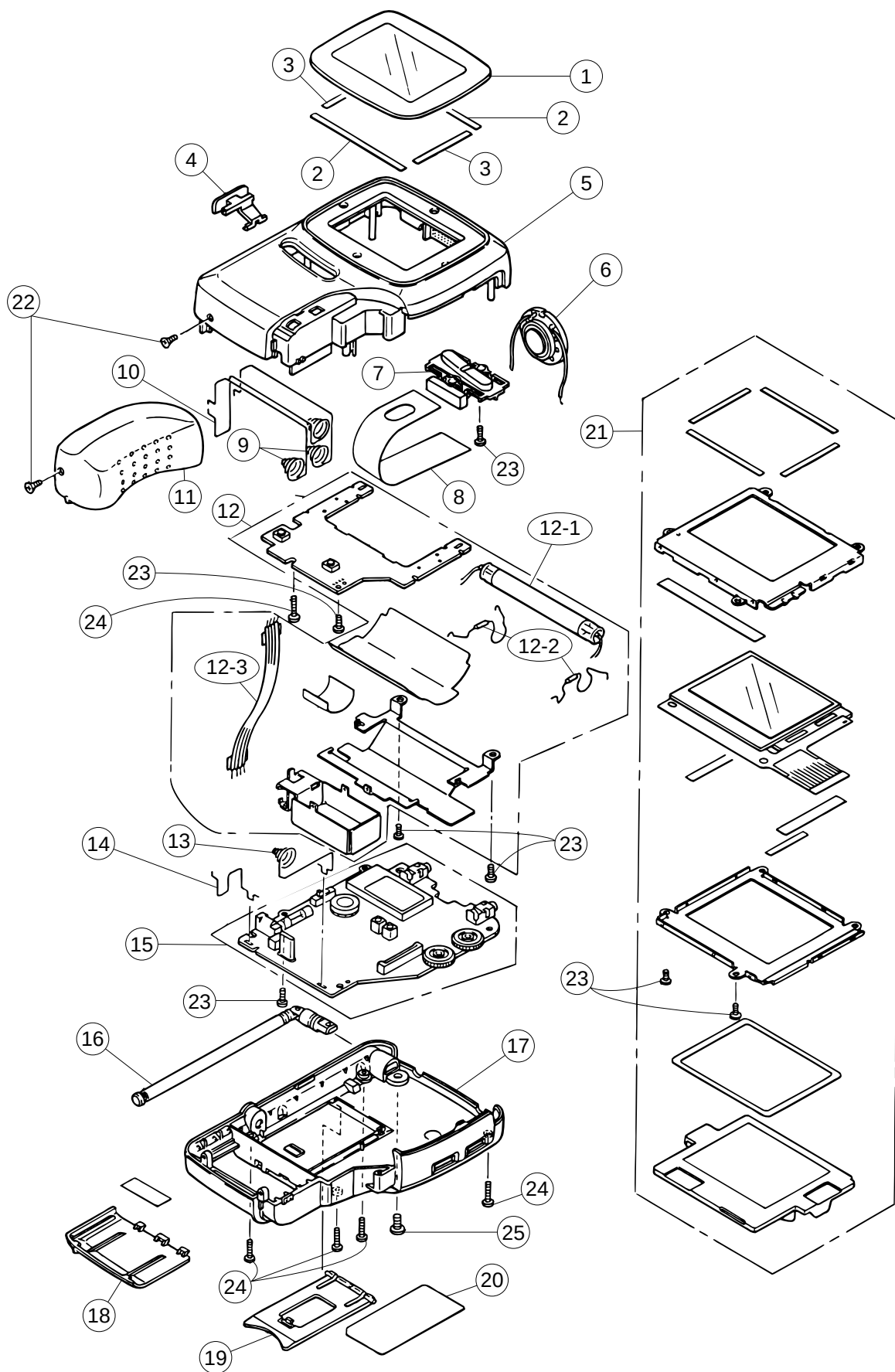
Notes: Q – Quantity used per unit
R – Rank

COMPONENT

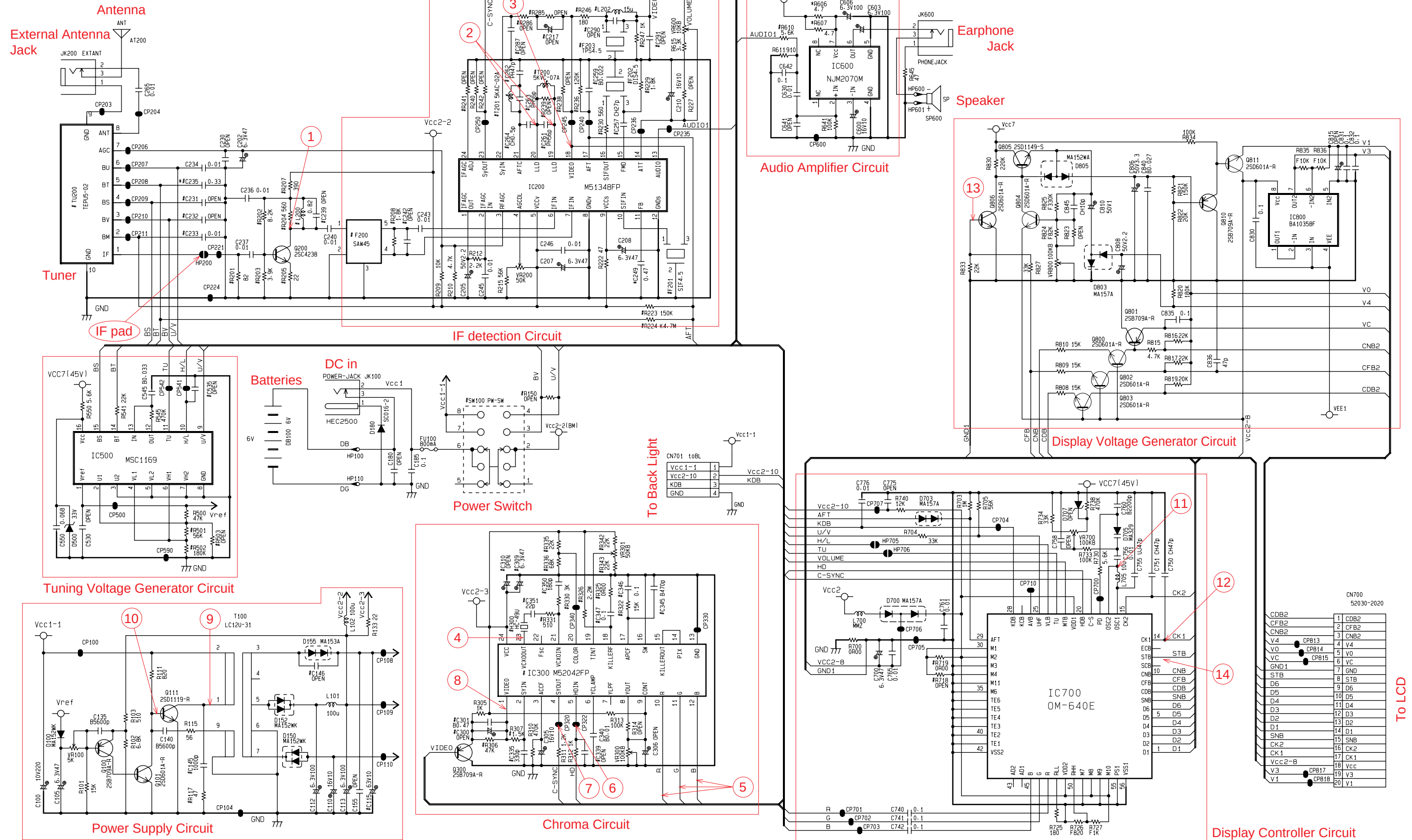
Item	Code No.	Parts Name	Specification	Applicable	Q	R
1	6611 6550	Display plate BXM-K523	K440953-1	Common	1	C
2	6600 2220	Adhesive tape A-K52	K451-5	Common	2	X
3	6608 7271	Adhesive tape B-K502	K410903A-2	Common	2	X
4	6608 6560	Switch knob A-K526	K311299-1	Common	1	X
5	6611 6511	Upper case BXM-K523	K110681A-7	For U.S.A., Canada	1	X
5	6611 9281	Upper case BIM-K523	K110681A-11	Others	1	X
6	3831 0854	Speaker	28-8F-03	Common	1	C
7	6608 6330	Tuning button A-K526	K311318-1	Common	1	X
8	6608 6340	Ribbon K526	K411841-1	Common	1	X
9	6608 6301	Battery spring C-K526	K311313A-1	Common	2	X
10	6608 6311	Battery spring D-K526	K311314A-1	Common	1	X
11	6608 6200	Side case A-K526	K110691-1	For U.S.A., Canada	1	X
11	6611 6610	Side case A-K523	K110691-2	Others	1	X
12	6610 9432	BL ass'y	K211111B*1	Common	1	B
12-1	3851 1484	Fluorescent lamp	8.76AD1P2-CA11	Common	1	A
12-2	3632 0308	Temperature fuse	EYP-1BF102L	Common	2	C
12-3	6608 0170	Flat cable A-K541	K411565-1	Common	1	C
13	6608 6360	Battery spring A-K526	K311321-1	Common	1	X
14	6608 6370	Battery spring B-K526	K411830-1	Common	1	X
15	6611 6476	Linear PCB ass'y	K340720*1	Common	1	B
16	3851 1463	Rod antenna	VR60114FA	Common	1	C
17	6608 6190	Lower case BAA-K526	K110682-2	For U.S.A., Canada	1	X
17	6611 6600	Lower case BXM-K523	K110682-4	Others	1	X
18	6608 6350	Battery cover A-K526	K211023-1	For U.S.A., Canada	1	X
18	6611 6620	Battery cover A-K523	K211023-2	Others	1	X
19	6606 2130	Stand A-K331	K310518-1	For U.S.A., Canada	1	C
19	6611 2300	Stand A-K503	K310518-7	Others	1	C
20	6611 6630	Rating plate BXM-K523	K440954-1	Common	1	X
21	6611 6491	Display unit	K340722*1	Common	1	C
22	5860 2380	Screw	PS3 1.7X3.5 Bk	Common	2	C
23	5860 0420	Screw	BT3 1.7X4 Ni	Common	7	C
24	5860 1449	Screw	BT3 1.7X8 Bk	Common	5	C
25	6605 0011	Screw A-K334	K410096A-1	Common	1	C

Notes: Q – Quantity used per unit
R – Rank

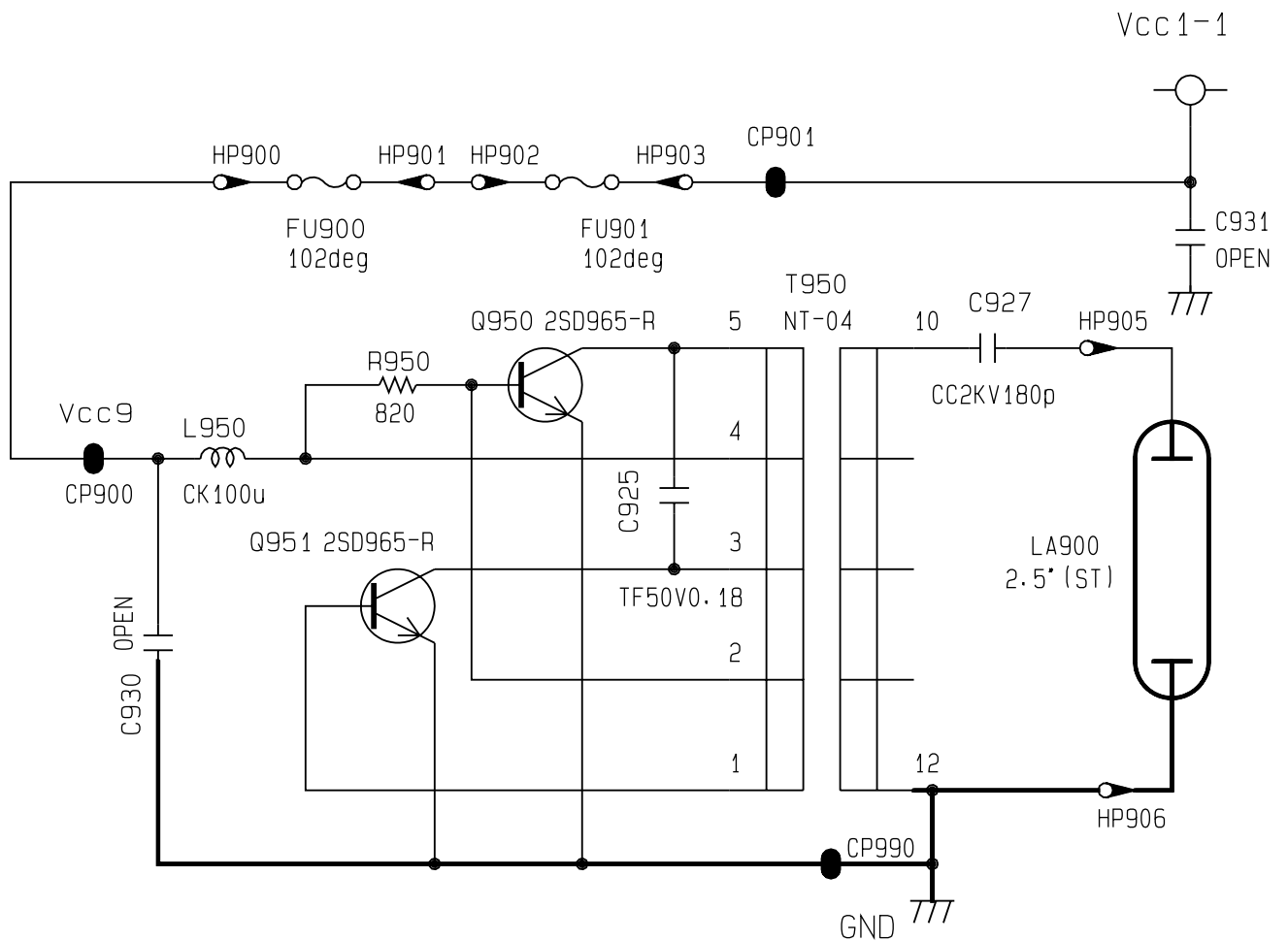
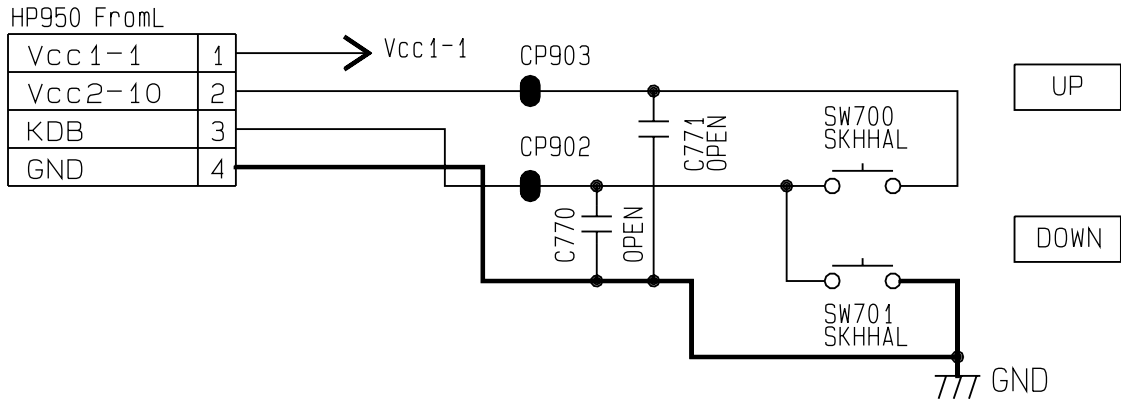
EXPLODED VIEW



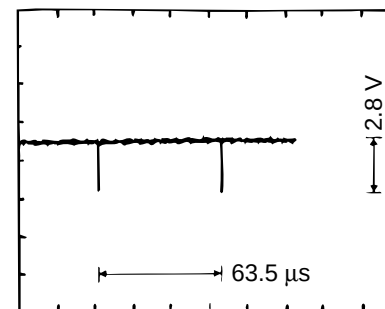
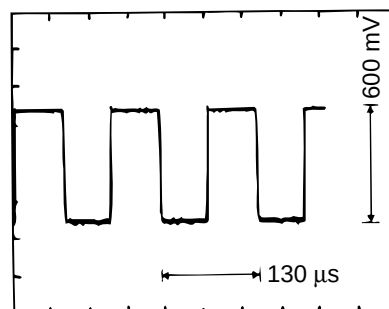
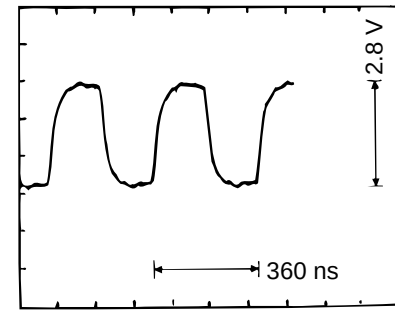
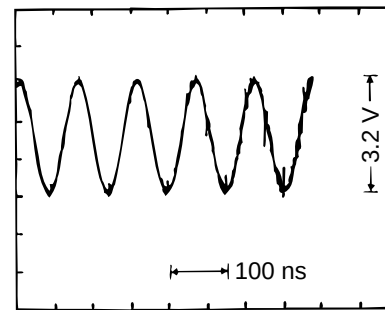
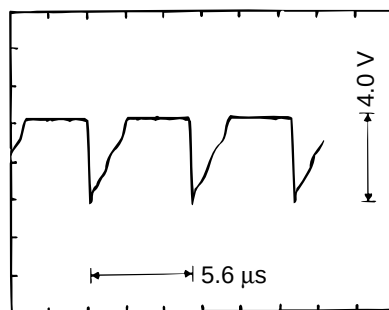
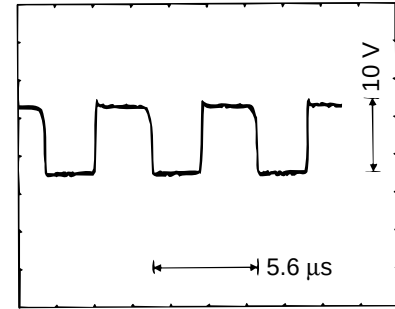
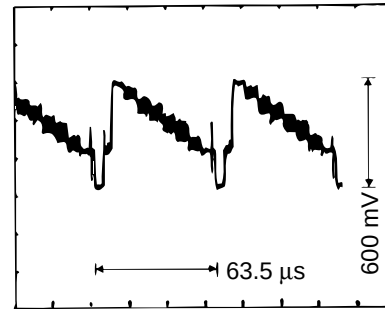
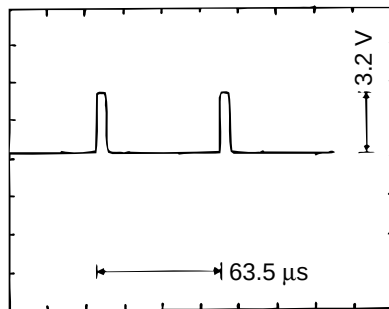
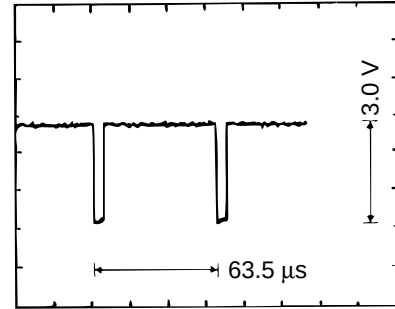
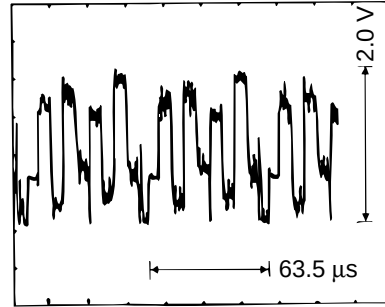
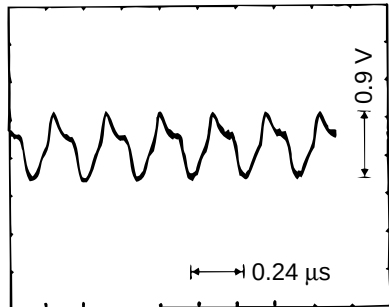
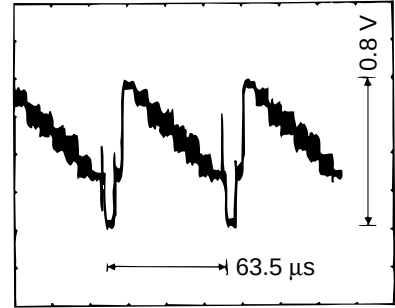
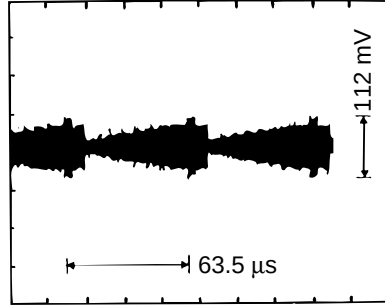
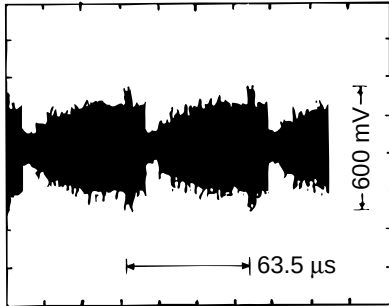
LINEAR



BACK LIGHT



WAVEFORMS



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