Service Manual

Colour Television

TC-21RX20C
TC-21RX20CS

(GP41Z Chassis)

Specifications

Power Source :	AC AUTO 110-240 V, 50/60 Hz
Power Consumption :	86 W
Aerial Impedance :	75 unbalanced
	Coaxial type
Receiving System :	17 Systems
Receiving Channels :	
VHF	2-12 PAL / SECAM B, K1
	0-12 PAL B (AUST)
	1-9 PAL B (N. ZEALAND)
	1-12 PAL / SECAM D
	1-12 NTSC M (JAPAN)
	2-13 NTSC M (U.S.A.)
UHF	21-69 PAL G, H, I / SECAM G, K, K1
	28-69 PAL B (AUST)
	13-57 PAL D, K
	13-62 NTSC M (JAPAN)
	14-69 NTSC M (U.S.A.)
CATV	S1-S20 (OSCAR)
	1-125 (U.S.A. CATV)
	C13-C49 (JAPAN)
	S21-S41 (HYPER)
	Z1-Z37 (CHINA)
	5A, 9A (AUST)

Video / Audio Terminal :	
DVD	
Y	1.0 Vp-p 75
P_B	0.7 Vp-p 75
P_R	0.7 Vp-p 75
AV 1, 2, 3	
Video In	1 Vp-p 75
Audio In	Approx. 0.5 Vrms, 47 k
Monitor Out	
Video Out	1 Vp-p 75
Audio Out	Approx. 0.5 V, 1 k
High Voltage :	24.0 kV ± 1.5
	at zero beam current
Picture Tube (Size) :	51.0 cm (21 inches)
	Measured diagonally,
	90° deflection
Audio Output :	300W PMPO
Dimensions :	Height : 431 mm
	Width : 596mm
	Depth : 340 mm
Mass :	20.5 kg (Net)
	23kg (Gross)

Specifications are subject to change without notice.
Mass and dimensions shown are approximate.

Panasonic

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TQB4WSM21RX

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Safety Precautions

General Guidelines

1. It is advisable to insert an isolation transformer in the AC supply before servicing this hot chassis.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC power socket.
5. Potential, as high as 25.0 kV is present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube. After servicing, make the following leakage current check to prevent the customer from being exposed to shock hazards.

Leakage Current Cold Check

1. Unplug the power cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch.
   Measure the resistance value, with an ohmmeter, between the jumper and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 4M and 20M . When the exposed metal does not have a return path to the chassis, the reading must be infinite.

Leakage Current Hot Check

1. Plug the power cord directly into the power socket. Do not use an isolation transformer for this check.
2. Check that a 2 k non-inductive resistor and an AC/DC current meter are in series with each exposed metallic part on the receiver in turn and an earth such as a water pipe.
   The current from any point should not exceed 0.7 mA peak AC or 2 mA DC. In the case of a measurement being outside of these limits specified, there is a possibility of a shock hazard and the receiver should be repaired and rechecked before it is returned to the customer.

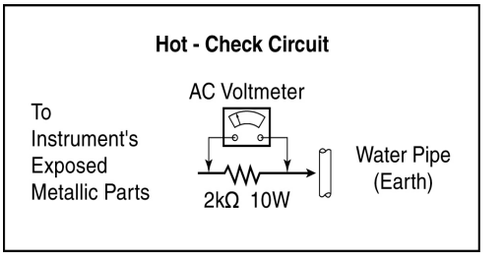


Fig. 1

X-Radiation

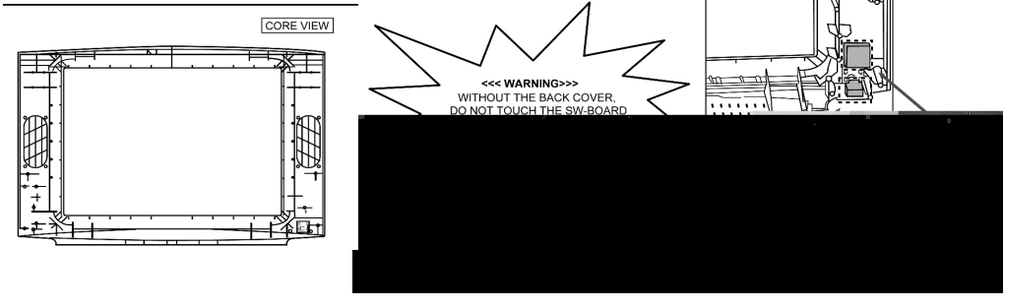
Warning:

The potential sources of X-Radiation in TV set are the EHT section and the picture tube. When using a picture tube test jig for service, ensure that the jig is capable of handling **25.5 kV** without causing X-Radiation.

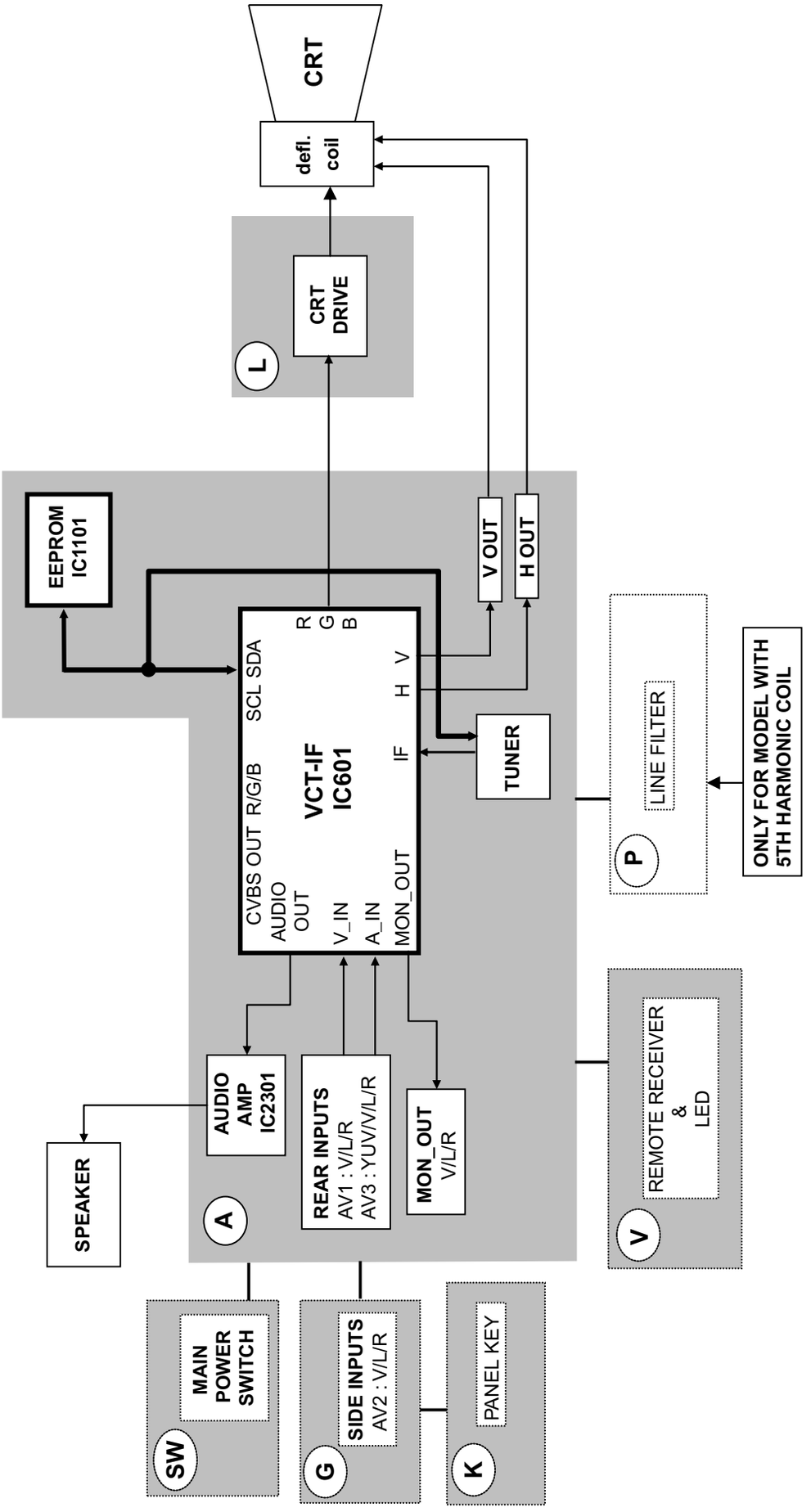
Note: It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Use the remote to get into Service Mode.
3. Measure the EHT. The meter reading should indicate **24.0 ± 1.5 kV**. If the meter indication is out of tolerance, immediate service and correction are required to prevent the possibility of premature component failure.
4. To prevent the possibility of X-Radiation, it is essential to use the specified picture tube, if service replacement becomes necessary.

SW-Board Fix to Cabinet



GP41Z Chassis Block Diagram



Factory Mode Adjustment

1. ADJUSTMENT

1) Set Timer ON (15 minutes) and Volume at 0 DAC.
Press remote's RECALL & panel's volume down (-) key together to select service mode. (Display will show Service 1)

< NOTE > To move from Service1 to Service 2 or Service 3 mode, please follow below rotation :-

Service1 —"1" or "2"→ Service2 —"1" or "2"→ Service3 —"1" or "2"→ Service1

< Service 1 >

2) Press digit key "4" to move forward in Service1 or Press key "3" to move backword.
The function rotation will be as follows :-

H-Pos ⇄ V-Pos ⇄ H-Amp ⇄ V-Amp ⇄ EW-Amp1 ⇄ DVCO ⇄

("4" forward / "3" backward)

High	309	------	350
Low	160	242	142

"4" ⇄ "3" Sub Brightness

3) After select the desire location.
4) Press volume up / volume down to adjust setting. To store the adjustment - Press OK key.

SETTINGS IN SERVICE 2 MODE :

LOCATION \ MODEL	21RX20C	21RX20CS
OPTION 1	0F	0F
OPTION 2	FF	FF
OPTION 3	F1	F1
OPTION 4	00	00
OPTION 5	00	00
OPTION 6	90	90
OPTION 7	1F	1F
OPTION 8	0C	0C
OPTION 9	FF	FF
OPTION 10	A1	A1
OPTION 11	00	00
OPTION 12	00	00
OPTION 13	40	40
OPTION 14	08	08
OPTION 15	0D	0D

<Service 2>

5) Press digit key "4" to move option mode forward. Press digit key "3" to move option mode backward.
The function rotation will be as follows :-

Y/C DELAY ⇄ OPTION 1 ⇄ OPTION 2 ⇄ OPTION 3 ⇄ OPTION 4 ⇄ OPTION 5

OPTION 6 ⇄ OPTION 7 ⇄ OPTION 8 ⇄ OPTION 9 ⇄ OPTION 10 ⇄ OPTION 11

OPTION 12 ⇄ OPTION 13 ⇄ OPTION 14 ⇄ OPTION 15 ⇄ HOTEL MODE ⇄ HOURS

("4" forward / "3" backward)

6) After selecting the required option mode press digit key '8' or '9' to select the bit 0~7. To change the selected bit 0 or 1 press Vol Key '–' or '+'. OSD will change to BLUE colour with RED back ground. Press digit "OK" to memorize data.

<Service 3>

7) Press digit key "1" to move Service 3. The function rotation will be as follows :-

H-Pos 60Hz ⇄ V-Pose 60Hz ⇄ H-Amp 60Hz ⇄ V-Amp 60Hz ⇄ EW-Amp 1 60 Hz ⇄

Lower Corner ⇄ Trapez 1 ⇄ Upper Corner ⇄ V-Lin ⇄ V-Sym ⇄

Angle ⇄ BOW ⇄ V-ZOOM

("4" / "3")

8) Press digit key "4" to move and press digit key "3" to move backward.

9) Press volume up / volume down to adjust required setting.
Press digit "OK" to memorize data.

Self Check

Purpose Of Self Check :

To exit the set from CHK mode and returns to original factory adjusted shipment mode.

How to set : Press the Volume Down (-) button on TV together with TIMER button on the Remote Control

Hotel Mode Adjustment

Purpose of Hotel Mode :

To limit the level of main functions of TV like Volume, Brightness, Tone, Sharpness, Colour and Contrast for hotel use.

How To Set : To set the hotel mode, press VOLUME to any DAC on the TV & TIMER SETTING 15 MIN by the Remote Control, then Press Channel UP on the TV together with Recall button on the Remote Control.

How To Cancel : To cancel the hotel mode, press VOLUME (-) DOWN on the TV together with TIMER Button on the Remote Control.

Service Hints

1. Sevice Position for A-Board

1.Remove the back cover.
2.Stand the TV set as shown in Fig. 2.
3.Remove the A-Board from the TV set by pulling the main board out as shown in Figure 2.

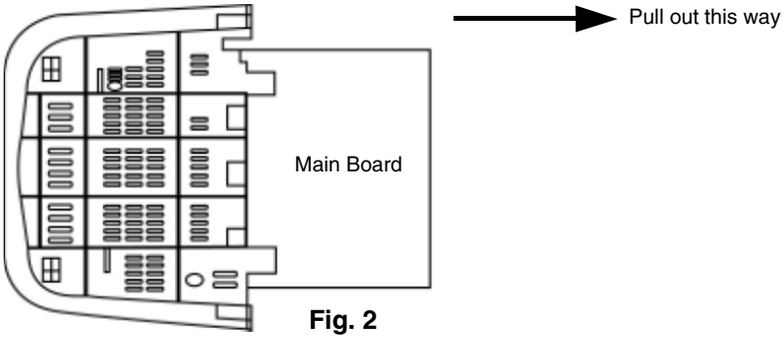


Fig. 2

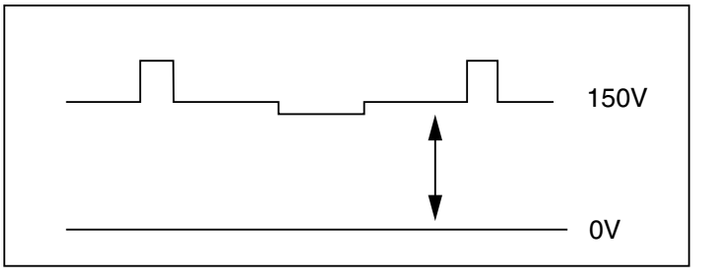
Adjustment Procedure

Item/Preparation	Adjustment Procedure
+B Voltage 1. Operate the TV set. 2. Set control as follows : Brightness ..... minimum Contrast ..... minimum	Confirm the DC voltage at the indicated test points as follows : TPA 15 : 3.35 ± 0.2 V TPA 16 : 130 ± 2 V TPA 17 : 8.25 ± 0.35 V TPA 18 : 1.85 ± 0.15 V TPA 19 : 5.30 ± 0.2 V TPA 20 : 188 ± 15 V
EHT & Heater Voltage 1. Receive the crosshatch pattern. 2. Set to 0 Beam Screen VR ..... minimum Contrast ..... minimum	1. Connect a DC voltage meter to TPA16 and confirm the +B voltage is 130 ± 2V. 2. Connect a high frequency voltmeter to heater and confirm that voltage reads 6.3 ± 0.24 (Vrms). 3. Confirm that high voltage is 24 ± 1.5 KV. 4. Normalize the brightness and contrast.

Adjustment for CRT Cut Off

Preparation :

1. Receive the Window pattern.
2. Connect the oscilloscope probe to TPL2.
3. Set the TV set in Dynamic normal.
4. Set the below data: in (Service 1)
   Sub-Bright - 0 DAC
   R,G,B Low - 242
5. Adjust the Screen VR to get the 150V by oscilloscope.
6. After cut off adjustment adjust the Sub-Bright in Service 1. Adjust the R,B Cut.



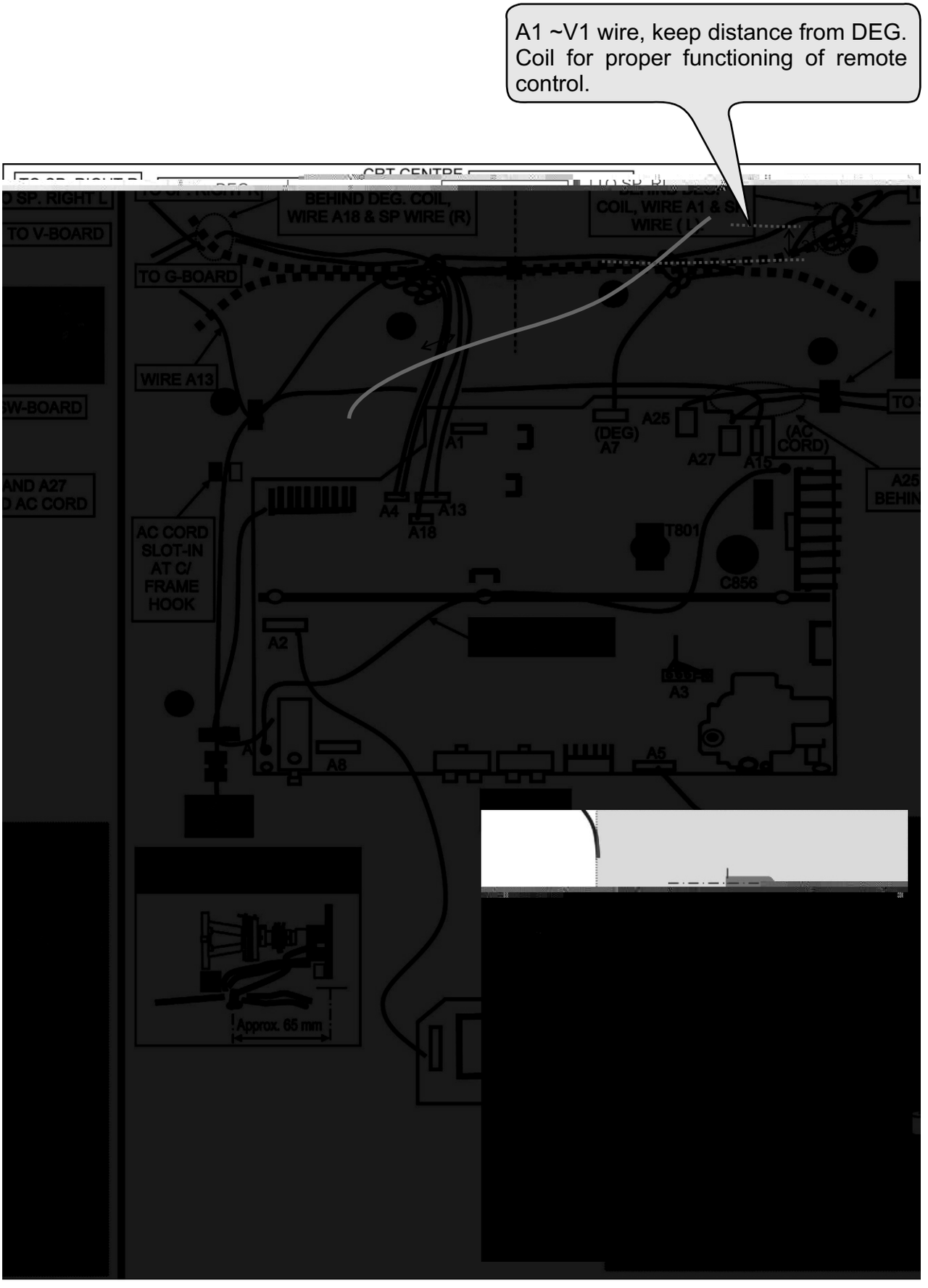
White Balance Data

	21"	
High	RDR	BDR
	309	250
Low	R Cut	B Cut
	160	142

Note:- Don't change the white balance data.

Location of Lead Wiring

Wire Dressing



Schematic Diagram

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Notes :

1. Resistor

All resistors are carbon 1/4 W resistors unless marked as follows :

Unit of resistance is
OHM ( ) (K = 1 000 M = 1 000 000)

○	Nonflammable	⊠	Metal Oxide
△	Solid	◎	Metal Film
⊠	Wire Wound	⊗	Fuse

2. Capacitor

All capacitors are ceramic 50 V capacitors unless marked as follows :

Unit of capacitance is µF unless otherwise noted.

⊗	Temperature Compensation	+/-	Electrolytic
Ⓜ	Polyester	NP/-	Bipolar
ⓜ	Metalized Polyester	Ⓣ	Dipped Tantalum
⊠	Polypropylene	Ⓩ	Z-Type

3. Coil: Unit of inductance is µH, unless otherwise noted.

4. Test Point : ⚲ : Test Point position

5. Earth Symbol: ⏚ : Chassis Earth (Cold) ⏚ : Line Earth (Hot)

6. Voltage Measurement Voltage is measured using DC voltmeter.
Conditions of the measurement are the following :
Power Source.....AC AUTO 110-240 V, 50/60 Hz
Receiving Signal.....Colour Bar signal (RF)
All customer's controls.....Maximum positions

7. Number in red circle indicates waveform number.
(See waveform pattern table)

8. When an arrow mark (➶) is found, connection is easily found from the direction of the arrow.

9. ➔ : Indicates the major signal flow.

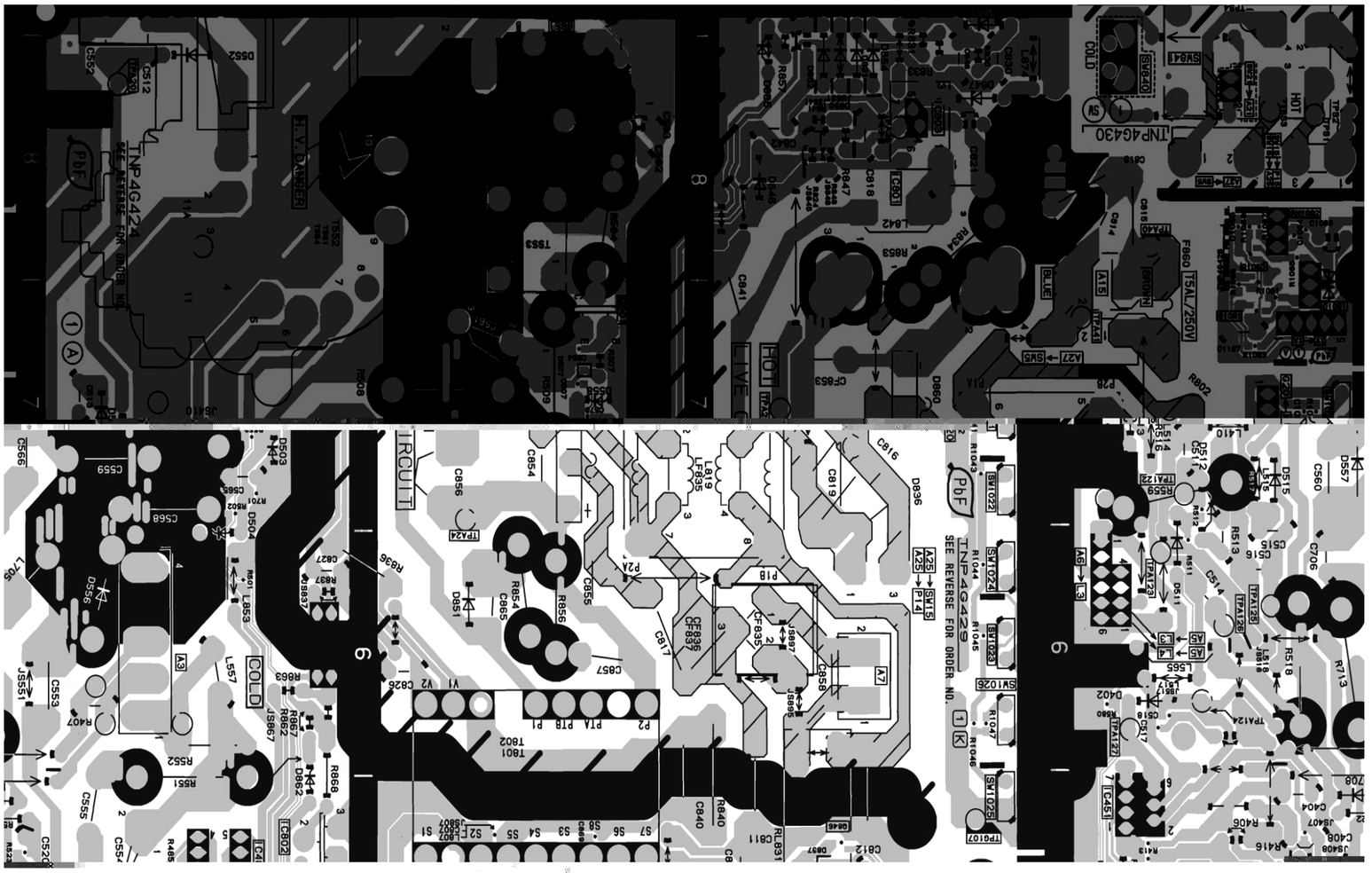
10. This schematic diagram is the latest at the time of printing and subject to change without notice.

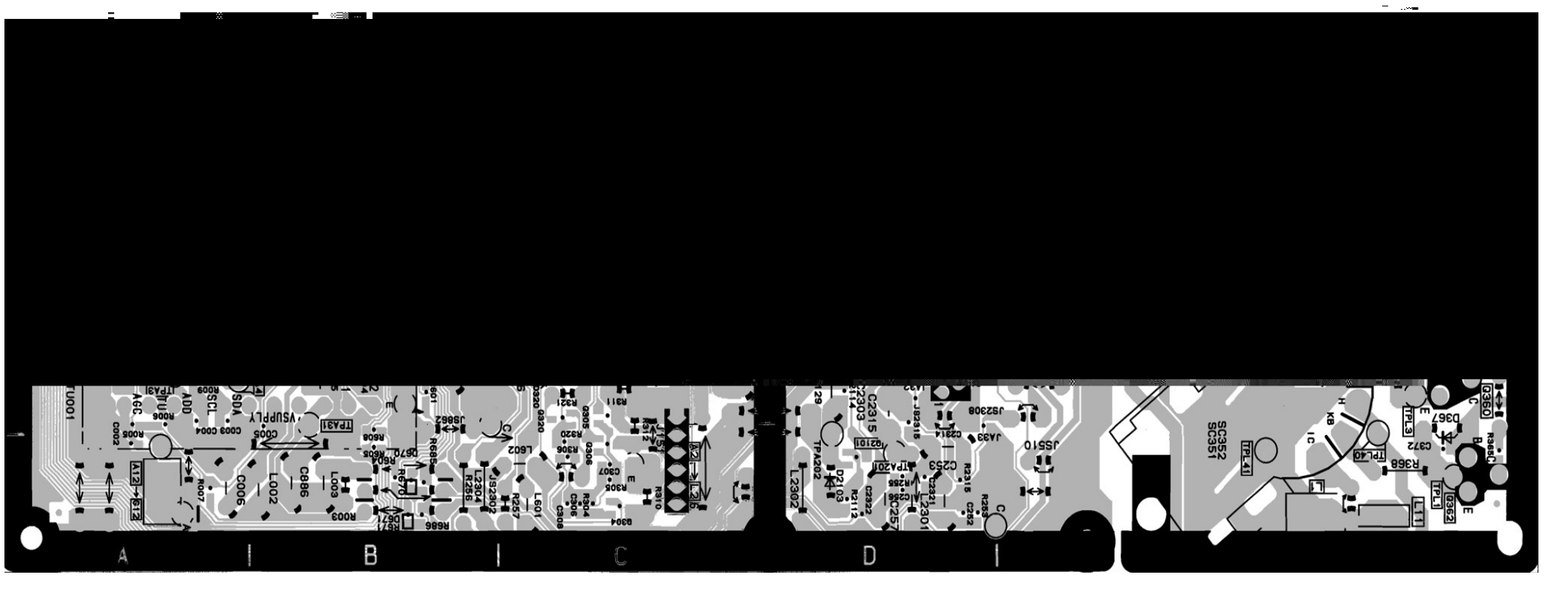
Remarks :

The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.
The circuit is defined by HOT and COLD indications in the schematic diagram.
Take the following precautions:
All circuits, except the Power Circuit are cold.
Precautions:

a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
b. Do not short-circuit the hot and cold circuits or a fuse may blow and parts may break.
c. Do not connect an instrument such as an oscilloscope to the hot and cold circuits simultaneously or a fuse may blow.
Connect the earth of instruments to the earth connection of the circuit being measured.
d. Make sure to disconnect the power plug before removing the chassis.

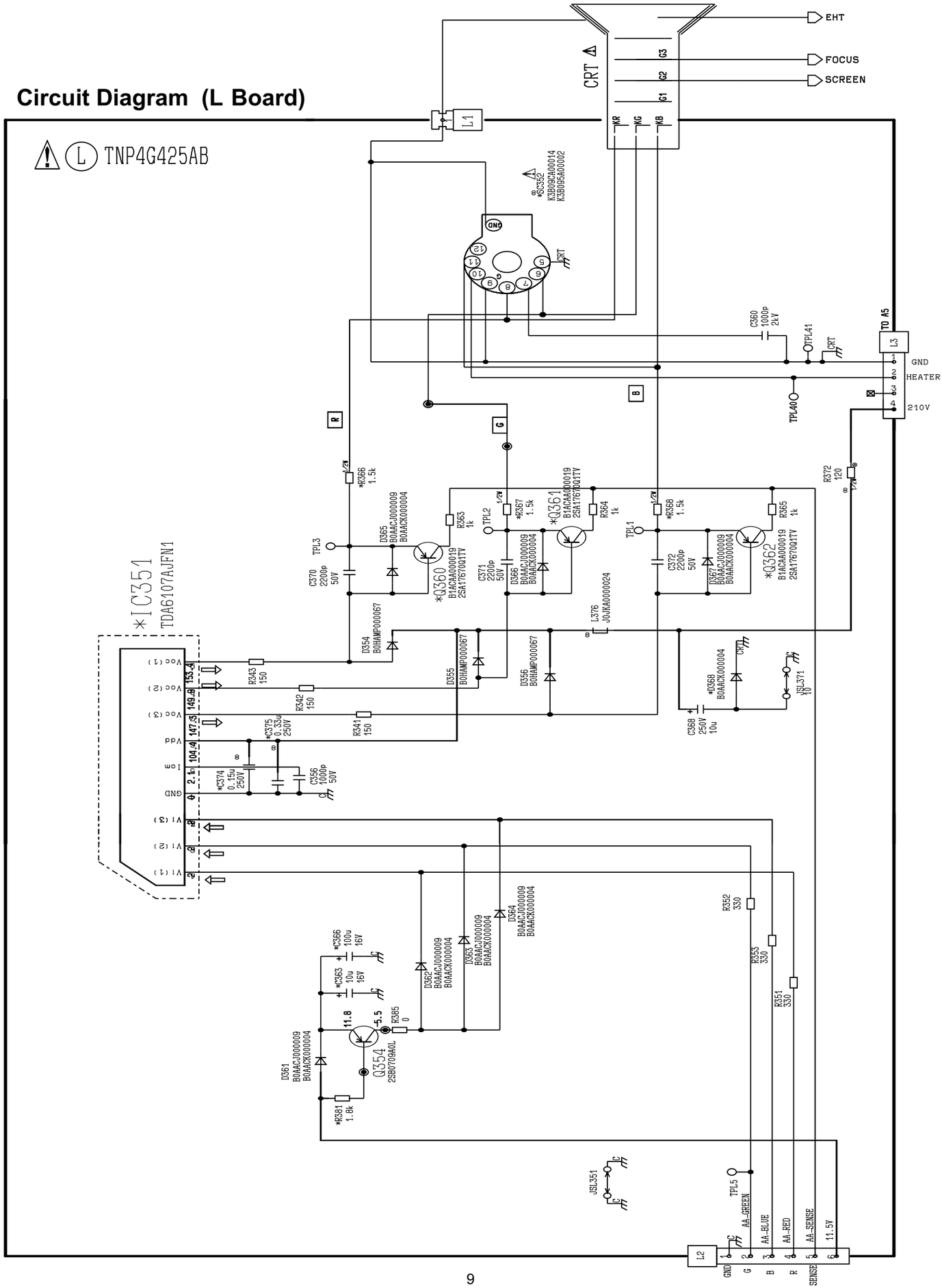
Conductor Views



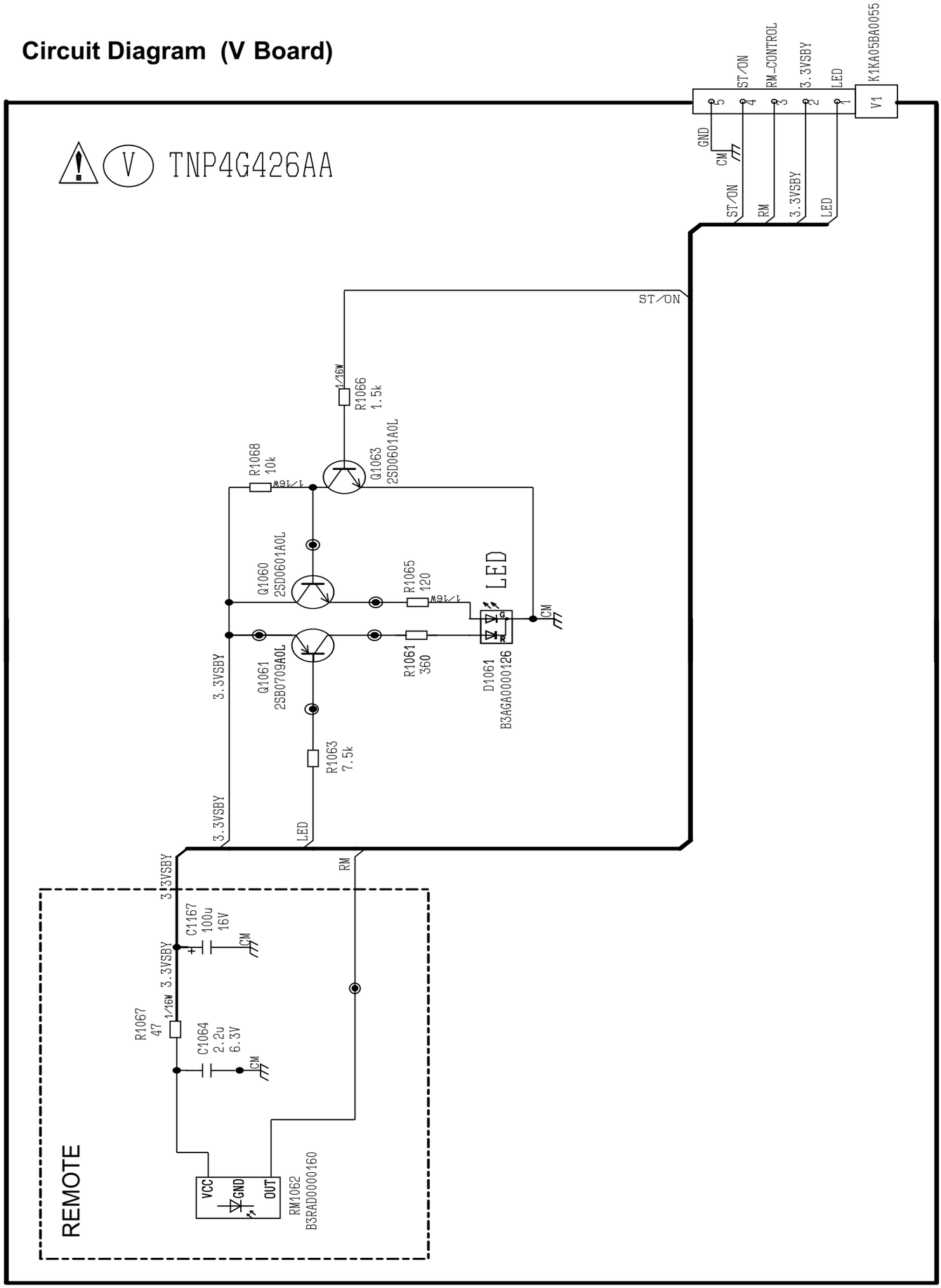


S11
S12
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
R31
R32
R33
R34
R35
R36
R37
R38
R39
R40
R41
R42
R43
R44
R45
R46
R47
R48
R49
R50

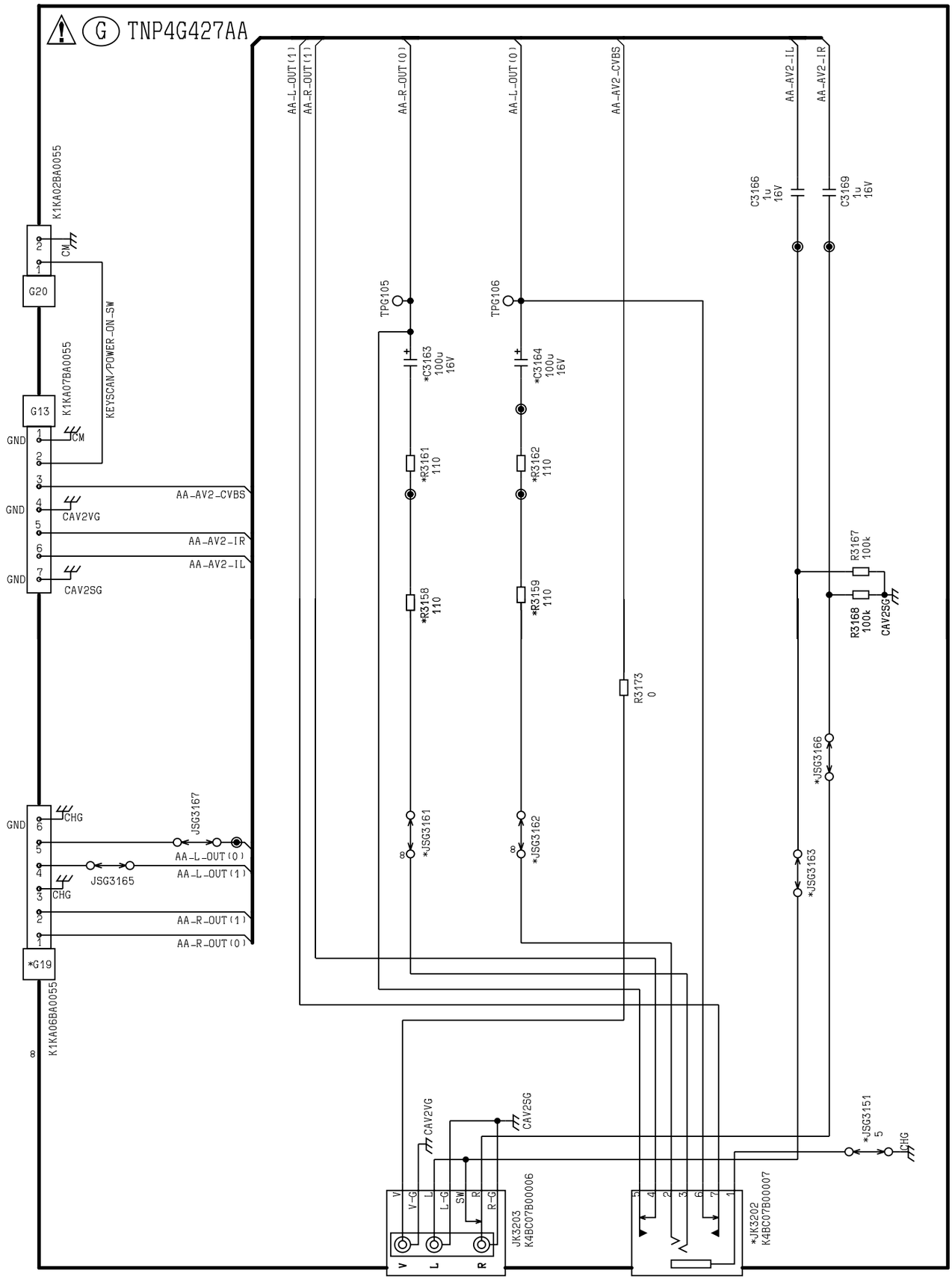
Circuit Diagram (L Board)



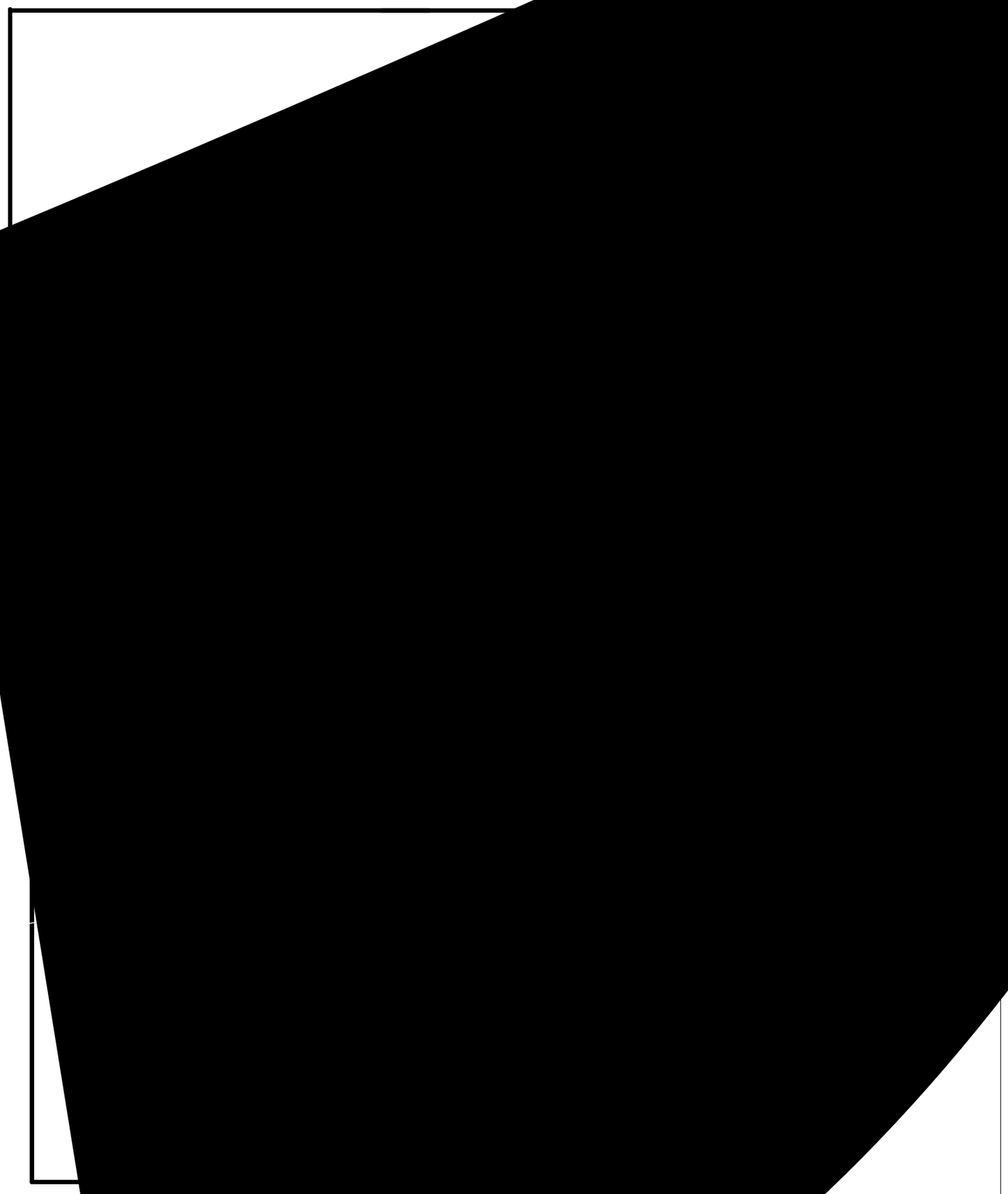
Circuit Diagram (V Board)



Circuit Diagram (G Board)



Circuit Diagram (SW Board)



Replacement Parts List

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Note : Printed circuit board assembly with "NLA" is no longer available after production discontinuation of the complete set.

Abbreviation of part name and description

1. **Resistor**

Example :

ERD25TJ104 **C** 100 k , **J**, 1/4 W

Type	Allowance
C: Carbon	F: ± 1%
F: Fuse	G: ± 2%
M: Metal Oxide Metal Film	J: ± 5% K: ± 10%
S: Solid	M: ± 20%
W: Wire Wound	

2. **Capacitor**

Example :

ECKF1H103ZF **C** 0.01 µF, **Z**, 50 V

Type	Allowance
C: Carbon	C: ± 0.25 pF
F: Electrolytic	D: ± 0.5 pF
P: Polyester Polypropylene	F: ± 1 pF G: ±3 %
S: Tantalum	J: ± 5%
	K: ± 10%
	L: ± 15%
	M: ± 20%
	P: ± 100%, -0%
	Z: ± 80%, -20%

Replacement Parts List

MECHANICAL PARTS

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
	A51QGT420X9P	YAMMED CRT	1	1
	L0AA11C00011	SPEAKER	2	2
	N2QAGB000042	REMOTE CONTROL	1	1
	TKY4W601BJ-A	CABINET ASSY.	1	X
	TKY4W601GJ-A	CABINET ASSY.	X	1
	TKU4W200BJ-A	BACK .COVER ASSY.	1	X
	TKU4W200GJ-A	BACK .COVER ASSY.	X	1
	TBM4WU004	AV2 INDICATION SHEET	1	1
	TBM4G3021	PANASONIC BADGE	1	1
	TKR4WA00301	ORNAMENT	1	1
	TLK4W9101J-S	DEGAUSSING COIL	1	1
	TPC4WA00301A	PACKING CASE	1	1
	TPD4WA0009	CUSHION SET	1	1
	K2C4WQ2YY00024	AC CORD ASSY	1	1
	TC1MFS04-A	CHASSIS ASSEMBLY	1	1
	TNP4G425AB	L-PRINT ASSEMBLY	1	1
	TNP4G426AA	V-PRINT ASSEMBLY	1	1
	TNP4G427AA	G-PRINT ASSEMBLY	1	1
	TNP4G429AA	K-PRINT ASSEMBLY	1	1
	TNP4G430AA	SW-PRINT ASSEMBLY	1	1

ELECTRICAL PARTS

CAPACITORS

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
C002	ECJ2VF1H103Z	C , 10nF , Z , 50V	1	1
C003	ECJ2VC1H330J	C , 33pF ,J, 50V	1	1
C004	ECJ2VC1H330J	C , 33pF ,J, 50V	1	1
C005	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C006	F2A1C101A310	E , 100uF , 16V	1	1
C1032	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C1064	ECJ2FB0J225K	C , 2200KpF , 50V	1	1
C1103	F1J1H103A590	C , 10nF , 50V	1	1
C1131	F1J1H103A590	C , 10nF , 50V	1	1
C1142	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C1167	F2A1C101A310	E , 100uF , 16V	1	1
C2113	F2A1H3R3A317	E , 3.3uF , 50V	1	1
C2117	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C2129	F2A1C221A338	E, 220uF , 16V	1	1
C2303	F2A1H4R7A317	E , 4.7uF , 50V	1	1
C2314	F2A1E101A273	E , 100uF ,25V	1	1
C2315	F2A1E471A299	E , 470uF ,25V	1	1
C2316	ECQV1H104JL3	P, 100nF , 50V	1	1
C2321	F1J1H102A018	C , 1nF , 50V	1	1
C2322	F1J1H102A018	C , 1nF , 50V	1	1
C2325	F2A1C470A310	E , 47uF , 16V	1	1
C2326	F2A1C470A310	E , 47uF , 16V	1	1
C253	ECA1HEN2R2B	E, 2.2uF , 50V	1	1
C254	F1J1H102A018	C , 1nF , 50V	1	1
C257	ECA1HEN2R2B	E, 2.2uF , 50V	1	1
C258	F1J1H102A018	C , 1nF , 50V	1	1
C3023	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C3024	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C3025	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C3027	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C3034	F2A1A471A274	E , 470uF , 10V	1	1
C3044	ECJ2VC1H222J	C , 2200pF ,J, 50V	1	1
C305	F2A1C471A339	E , 470uF , 16V	1	1
C306	F1J1H222A590	C, 2.2nF , 50V	1	1

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
C307	F1J1H222A590	C, 2.2nF , 50V	1	1
C308	F1J1H222A590	C, 2.2nF , 50V	1	1
C3163	F2A1C101A310	E , 100uF , 16V	1	1
C3164	F2A1C101A263	E , 100uF , 16V	1	1
C3166	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C3169	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C356	ECJ2VC1H102J	C , 1000pF , J , 50V	1	1
C360	ECKW3D102KBP	C , 1000pF,K, 2KV	1	1
C363	F2A1C220A180	E , 22uF , 16V	1	1
C366	F2A1C101A310	E , 100uF , 16V	1	1
C368	F2A2E1000011	E , 10uF , 250V	1	1
C370	F1J1H222A590	C, 2.2nF , 50V	1	1
C371	F1J1H222A590	C, 2.2nF , 50V	1	1
C372	F1J1H222A590	C, 2.2nF , 50V	1	1
C374	F0C2E154A087	P, 0.15uF , 250V	1	1
C375	F0C2E334A092	P, 0.33uF , 250V	1	1
C401	ECJ2VC1H560J	C , 56pF , J , 50V	1	1
C404	ECQB1333JF3	P , 33nF , J , 100V	1	1
C406	F2A1H221A247	E, 220uF , 50V	1	1
C407	ECJ2VC1H560J	C , 56pF , J , 50V	1	1
C408	ECQB1154JF3	P , 150nF , J , 100V	1	1
C454	ECQV1H154JL3	P , 150nF , J , 50V	1	1
C502	ECKR3A821KBP	C , 820pF , K , 1KV	1	1
C504	F1J1H681A590	C , 680pF , 50V	1	1
C507	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C511	F2A1V101A246	E, 100uF , 35V	1	1
C514	F2A1E102A199	E, 1000uF , 25V	1	1
C516	F2A1E102A199	E, 1000uF , 25V	1	1
C517	ECJ2FB1E105K	C , 1.0pF ,K, 25V	1	1
C518	ECJ2FB1E105K	C , 1.0pF ,K, 25V	1	1
C519	F2A2C1010015	E , 100uF , 160V	1	1
C520	F2A0J221A317	E , 220uF , 6.3V	1	1
C552	F2A2E1000023	E, 10uF , 250V	1	1
C553	F0C2E684A189	P, 0.68uF, 250V	1	1
C554	F0C2E754A040	P, 0.75uF, 250V	1	1
C555	F0C2E474A088	P, 0.47uF, 250V	1	1
C559	ECWH20133JVB	P , 13nF , 2KV	1	1
C560	ECQ2WM4153JZW	P, 15nF , J , 400V	1	1
C561	F0C3D222A003	P, 2200pF , 2KV	1	1
C565	F0A1H273A039	P , 27nF, 50V	1	1
C566	ECQ2WM4153JZW	P, 15nF , J , 400V	1	1
C568	F0C3D102A003	P , 1000 PF,J, 2KV	1	1
C601	F1J1H183A021	C , 18nF , 50V	1	1
C602	F1J1H222A590	C, 2.2nF , 50V	1	1
C604	F2A1C101A310	E , 100uF , 16V	1	1
C606	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C607	ECJ2VF1H103Z	C , 10nF , Z , 50V	1	1
C611	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C613	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C614	ECJ2VC1H100C	C , 10pF , J , 50V	1	1
C615	ECJ2VC1H100C	C , 10pF , J , 50V	1	1
C616	F2A1C101A310	E , 100uF , 16V	1	1
C618	F2A1C101A310	E , 100uF , 16V	1	1
C619	F2A1C101A310	E , 100uF , 16V	1	1
C620	ECJ2VB1H333K	C, 33nF , 50V	1	1
C622	F2A1C101A310	E , 100uF , 16V	1	1
C623	F2A1C101A310	E , 100uF , 16V	1	1
C625	ECJ2VB1C224K	C, 0.22uF , 16V	1	1
C626	F2A1C101A310	E , 100uF , 16V	1	1
C627	F2A1C101A310	E , 100uF , 16V	1	1
C628	F2A1A471A274	E , 470uF , 10V	1	1
C630	ECJ2VF1H103Z	C , 10nF , Z , 50V	1	1
C631	ECJ2VB1H333K	C, 33nF , 50V	1	1
C632	F2A1H4R7A317	E , 4.7uF , 50V	1	1

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
C633	ECJ2VC1H471J	C , 470pF , J , 50V	1	1
C634	ECJ2VC1H471J	C , 470pF , J , 50V	1	1
C635	F2A1C101A310	E , 100uF , 16V	1	1
C639	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C640	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C642	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C645	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C646	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C650	F2A1C331A339	E , 330uF , 16V	1	1
C652	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C654	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C655	ECJ2VF1H104Z	C , 100nF ,Z, 50V	1	1
C656	ECJ2VC1H270J	C , 27 nF , J , 50V	1	1
C657	ECJ2VC1H560J	C , 56pF , J , 50V	1	1
C662	F2A0J101A317	E , 100uF , 6.3V	1	1
C704	F1B2H471A025	C , 470pF , 500V	1	1
C706	ECQ2WM4222JZW	P , 2.2nF ,J, 400V	1	1
C811	F1A2E681A002	C, 680pF , 250V	1	1
C812	F1A2E102A001	C, 1000pF , 250V	1	1
C813	F1AAF472A009	P , 4.7kpF , 315Vac	1	1
C815	F1AAF152A005	P , 1.5kpF , 315Vac	1	1
C816	F0CAF224A066	P , 0.22uF , 250Vac	1	1
C817	F0CAF224A066	P , 0.22uF , 250Vac	1	1
C818	F2A1H1R0A317	E, 1uF , 50V	1	1
C821	ECKW3D471KBP	C , 470pF,K, 2KV	1	1
C826	ECQV1H474JL3	P , 470nF , J , 50V	1	1
C827	ECQB1H273JF3	P , 27nF , J , 50V	1	1
C830	ECQB1H821KF3	P , 820pF , K , 50V	1	1
C831	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1
C840	F1A2E471A002	C , 470pF ,250V	1	1
C841	ECKW3D151KBR	C , 150pF , K, 2KV	1	1
C842	F2A1H220A536	E, 22uf , 50V	1	1
C843	F2A1E102A223	E , 1000 uF , 25V	1	1
C848	ECQB1H471JF3	P , 470pF , J , 50V	1	1
C849	F1B2H152A072	C, 1500pF , 500V	1	1
C854	ECKWAE472ZED	C , 4700pF , Z , 250V AC	1	1
C855	ECKWAE472ZED	C , 4700pF , Z , 250V AC	1	1
C856	F2B2W2210003	E , 220uF , 450V	1	1
C857	ECQ2WM4473JZW	P , 47nF , J , 400V	1	1
C858	ECQE2A473JFB	P , 47KpF , K , 100V	1	1
C859	ECKW3D821KBP	C , 820pF , K , 2KV	1	1
C863	F2A1C471A339	E , 470uF , 16V	1	1
C865	ECKW3D331JBP	C , 330pF , 2KV	1	1
C867	F2A2C2210013	E , 220uF , 160V	1	1
C869	ECJ2VB1E563K	C, 56nF , K , 25V	1	1
C870	F2A1C472A260	E , 4700uF , 16V	1	1
C871	F1B2H471A025	C , 470pF , 500V	1	1
C872	F2A1C222A232	E, 2200uF , 16V	1	1
C873	F1B2H122A022	C , 1200pF ,500V	1	1
C874	F2A1A101A271	E, 100uF , 10V	1	1
C875	F1J1H332A021	C , 3.3nF , 50V	1	1
C877	F2A1C1000079	E , 10uF , 16V	1	1
C879	F2A0J331A260	E , 330uF , 6.3V	1	1
C882	F2A1C101A310	E , 100uF , 16V	1	1
C884	F2A1C332A232	E , 3300uF , 16V	1	1
C886	F2A1H330A342	E , 33uF , 50V	1	1
C887	F2A1C102A317	E, 1000uF , 16V	1	1
C890	ECJ2VB1C104K	C , 100nF , K , 16V	1	1
C891	F2A1C101A310	E , 100uF , 16V	1	1
C893	F2A1C221A338	E, 220uF , 16V	1	1
C897	F1J1H332A021	C , 3.3nF , 50V	1	1
C898	ECJ2VF1C105Z	C , 1uF , Z , 16V	1	1

DIODE

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
D1132	B0BA3R800012	ZENER DIODE	1	1
D2103	B0AACJ000009	DIODE	1	1
D2107	B0AACJ000009	DIODE	1	1
D2108	B0AACJ000009	DIODE	1	1
D320	B0ACCK000005	DIODE	1	1
D321	B0ACCK000005	DIODE	1	1
D354	B0HAMP000067	DIODE	1	1
D355	B0HAMP000067	DIODE	1	1
D356	B0HAMP000067	DIODE	1	1
D361	B0AACJ000009	DIODE	1	1
D362	B0AACJ000009	DIODE	1	1
D363	B0AACJ000009	DIODE	1	1
D364	B0AACJ000009	DIODE	1	1
D365	B0AACJ000009	DIODE	1	1
D366	B0AACJ000009	DIODE	1	1
D367	B0AACJ000009	DIODE	1	1
D368	B0AACK000004	DIODE	1	1
D402	B0HAJL000003	DIODE	1	1
D503	B0AACJ000009	DIODE	1	1
D504	B0AACJ000009	DIODE	1	1
D507	B0ACCK000005	DIODE	1	1
D511	MAZ4108J0F	ZENER DIODE	1	1
D512	B0HAJL000003	DIODE	1	1
D513	B0HAMP000090	DIODE	1	1
D515	B0HAMP000090	DIODE	1	1
D520	B0ACQJ000001	DIODE	1	1
D552	B0HAMP000090	DIODE	1	1
D556	B0HAMV000027	DIODE	1	1
D557	B0HAMQ000001	DIODE	1	1
D558	MA2C18500E	DIODE	1	1
D601	B0ADDJ000025	3 PIN DIODE	1	1
D610	MAZ80560HL	ZENER DIODE	1	1
D670	MA2J72800L	ZENER DIODE	1	1
D671	MA2J72800L	ZENER DIODE	1	1
D683	MA2J72800L	ZENER DIODE	1	1
D684	MA2J72800L	ZENER DIODE	1	1
D702	B0ACCK000005	DIODE	1	1
D708	B0HAMC000013	DIODE	1	1
D830	B0HAJL000001	DIODE	1	1
D831	B0BA04600008	ZENER DIODE 46V	1	1
D832	B0BA3R300010	ZENER DIODE	1	1
D836	D4EAC6210002	SURGE ABSORBER	1	1
D846	B0BA8R000010	ZENER DIODE	1	1
D847	B0BA8R000010	ZENER DIODE	1	1
D848	B0HAQL000004	DIODE	1	1
D851	B0EAKT000018	DIODE	1	1
D852	B0HAJL000003	DIODE	1	1
D853	B0AACJ000009	DIODE	1	1
D854	B0AACJ000009	DIODE	1	1
D855	B0BA4R100013	ZENER DIODE	1	1
D860	B0EBNT000022	BRIDGE RECTIFIER	1	1
D861	B0BA8R000010	ZENER DIODE	1	1
D862	B0BA2R100016	ZENER DIODE	1	1
D863	B0HAJL000003	DIODE	1	1
D865	B0BA3R500008	ZENER DIODE	1	1
D866	B0HAPV000009	DIODE	1	1
D867	B0JAME000058	DIODE	1	1
D872	B0JAPK000011	DIODE	1	1
D873	B0AACJ000009	DIODE	1	1
D876	B0AACJ000009	DIODE	1	1
D881	B0BA01500052	ZENER DIODE	1	1
D882	B0BA01500052	ZENER DIODE	1	1
D883	B0JAPK000013	DIODE	1	1
D884	B0AACJ000009	DIODE	1	1
D887	B0AACJ000009	DIODE	1	1

INTEGRATED CIRCUITS

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
IC601	TVR4W4Z-3000	MICON ASSEMBLY (C5AA00000218)	1	1
IC1101	C3EBHC000030	EEPROM IC	1	1
IC2301	C0ZAZ0000220	IC	1	1
IC351	TDA6107AJFN1	RGB IC	1	1
IC451	C1AA00000736	VERTICAL IC	1	1
IC802	C0EAS0000024	140 V REGULATOR	1	1
IC803	C5HABZZ00116	STR	1	1
IC851	C0DAEJG00001	8 V REGULATOR	1	1
IC857	C0DBEHE00005	VOLTAGE CONTROL	1	1
IC871	C0DAZGG00012	IC	1	1
IC875	C0DBEHE00005	VOLTAGE CONTROL	1	1

RESISTORS

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
JA10	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA11	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA12	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA13	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA16	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA17	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA2	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA29	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA30	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA31	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA32	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA33	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA35	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA36	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA4	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA45	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA5	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA6	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA7	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA8	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JA9	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS104	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS105	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS110	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS2315	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS2341	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS2342	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS3043	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS3044	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS3045	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS3046	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS3131	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS3132	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS631	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS632	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS633	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS634	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS670	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS807	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS878	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS879	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JS883	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JSG3161	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JSG3162	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JSG3163	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JSG3165	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JSG3166	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
JSG3167	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R005	D0GD512JA017	M , 5.1 KOHM ,J, 1/10W	1	1

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
R006	D0GD473JA017	M , 47 KOHM ,J, 1/10W	1	1
R007	D0GD682JA017	M , 6.8 KOHM ,J, 1/10W	1	1
R008	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R009	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R1041	D1BD2321A027	M , 23.2 OHM , F , 1/10W	1	1
R1043	D1BD2211A027	M , 22.1 OHM , F , 1/10W	1	1
R1044	D1BD3241A027	M , 32.4 OHM , F , 1/10W	1	1
R1045	D1BD5111A027	M , 51.1 OHM , F , 1/10W	1	1
R1046	D1BD9091A027	M , 90.9 OHM , F , 1/10W	1	1
R1047	ERJ6ENF1802V	M , 18 KOHM ,J, 1/10W	1	1
R1061	D0GD361JA017	M , 360 OHM ,J, 1/10W	1	1
R1062	D0AE102JA046	C , 1K OHM , J , 1/4W	1	1
R1063	D0GD752JA017	M , 7.5 KOHM ,J, 1/10W	1	1
R1065	D0GD121JA017	M , 120 OHM ,J, 1/10W	1	1
R1066	D0GD152JA017	M , 1.5 KOHM ,J, 1/10W	1	1
R1067	D0GD470JA017	M , 47 OHM ,J, 1/10W	1	1
R1068	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R1105	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R1106	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R1108	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R1109	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R1112	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R1114	D0GD151JA017	M , 150 OHM ,J, 1/10W	1	1
R1115	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R1131	D0GD220JA017	M , 22 OHM ,J, 1/10W	1	1
R1132	D0GD220JA017	M , 22 OHM ,J, 1/10W	1	1
R1140	D1AC1002A094	M , 10 KOHM , 1/10W	1	1
R1142	D1BD1001A027	M , 1.KOHM ,F, 1/10W	1	1
R1150	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R1201	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R1202	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R1228	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R1229	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R2112	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R2114	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R2317	D0GD622JA017	M , 6.2 KOHM ,J, 1/10W	1	1
R2321	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R2322	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R253	D0GD751JA017	M , 750 OHM ,J, 1/10W	1	1
R255	D0GD751JA017	M , 750 OHM ,J, 1/10W	1	1
R256	D0AE272JA046	M , 2.7 KOHM ,J, 1/10W	1	1
R257	D0AE272JA046	M , 2.7 KOHM ,J, 1/10W	1	1
R3002	D0GD750JA017	M , 75 OHM ,J, 1/10W	1	1
R3004	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R3008	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R3009	D0GD750JA017	M , 75 OHM ,J, 1/10W	1	1
R3010	D0GD750JA017	M , 75 OHM ,J, 1/10W	1	1
R3011	D0GD750JA017	M , 75 OHM ,J, 1/10W	1	1
R3022	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R3024	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R3026	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R304	D0GD240JA017	M, 24 OHM ,J, 1/10W	1	1
R305	D0GD240JA017	M, 24 OHM ,J, 1/10W	1	1
R306	D0GD240JA017	M, 24 OHM ,J, 1/10W	1	1
R307	D0GD121JA017	M , 120 OHM ,J, 1/10W	1	1
R308	D0GD121JA017	M , 120 OHM ,J, 1/10W	1	1
R309	D0GD121JA017	M , 120 OHM ,J, 1/10W	1	1
R310	D0AE181JA046	C , 180 OHM , J , 1/4W	1	1
R3101	D0AE470JA046	C , 47 OHM , J , 1/4W	1	1
R3102	D0AE470JA046	C , 47 OHM , J , 1/4W	1	1
R3104	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R3105	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R311	D0AE181JA046	C , 180 OHM , J , 1/4W	1	1
R312	D0AE181JA046	C , 180 OHM , J , 1/4W	1	1

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
R3158	D0GD111JA017	M , 110 OHM ,J, 1/10W	1	1
R3159	D0GD111JA017	M , 110 OHM ,J, 1/10W	1	1
R3161	D0GD111JA017	M , 110 OHM ,J, 1/10W	1	1
R3162	D0GD111JA017	M , 110 OHM ,J, 1/10W	1	1
R3167	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R3168	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R3173	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R320	D0GD821JA017	M , 820 OHM ,J, 1/10W	1	1
R321	D0AE220JA046	C , 22 OHM , J , 1/4W	1	1
R341	D0GD151JA017	M , 150 OHM ,J, 1/10W	1	1
R342	D0GD151JA017	M , 150 OHM ,J, 1/10W	1	1
R343	D0GD151JA017	M , 150 OHM ,J, 1/10W	1	1
R351	D0GD331JA017	M , 330 OHM ,J, 1/10W	1	1
R352	D0GD331JA017	M , 330 OHM ,J, 1/10W	1	1
R353	D0GD331JA017	M , 330 OHM ,J, 1/10W	1	1
R363	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R364	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R365	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R366	ERDS1TJ152T	C , 1.5K OHM , J , 1/2W	1	1
R367	ERDS1TJ152T	C , 1.5K OHM , J , 1/2W	1	1
R368	ERDS1TJ152T	C , 1.5K OHM , J , 1/2W	1	1
R372	ERQ12AJ121P	F , 120 OHM , J , 1/2W	1	1
R381	D0GD182JA017	M , 1.8 KOHM , J, 1/10W	1	1
R385	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R401	D0AE104JA046	C , 100K OHM , J , 1/4W	1	1
R403	D0GD563JA017	M , 56 KOHM ,J, 1/10W	1	1
R404	D0GD153JA017	M , 15 KOHM ,J, 1/10W	1	1
R405	D0AE563JA046	C , 56 KOHM . J , 1/4W	1	1
R406	ERDS1TJ1R5T	C , 1.5 OHM , J , 1/2W	1	1
R407	ERG1SJ221E	M , 220 OHM ,J, 1W	1	1
R413	D0GD183JA017	M , 18 KOHM ,J, 1/10W	1	1
R416	ERX2SJR56E	M , 0.56 OHM , J , 2W	1	1
R451	D0GD223JA017	M , 22 KOHM ,J, 1/10W	1	1
R453	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R501	D0GD273JA017	M , 27 KOHM ,J, 1/10W	1	1
R502	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R504	ERG2SJS332H	M , 3.3K OHM , J , 2W	1	1
R507	D0AE561JA046	C , 560 OHM . J , 1/4W	1	1
R508	ERG3FJ561H	M , 560 OHM ,J, 3W	1	1
R509	ERG3FJ561H	M , 560 OHM ,J, 3W	1	1
R511	D1BD1102A028	M , 11K OHM , F , 1/10W	1	1
R512	D1BD1152A028	M , 11.5K OHM , F , 1/10W	1	1
R513	ERQ14AJ100E	F , 10 OHM , J , 1/4W	1	1
R518	D0DK3R3J0002	W , 3.3 OHM ,J, 1/10W	1	1
R522	ERDS2TJ363T	C , 36 KOHM , J , 1/4W	1	1
R523	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R524	D0AE104JA046	C , 100K OHM , J , 1/4W	1	1
R525	D0GD392JA017	M , 3.9 KOHM ,J, 1/10W	1	1
R551	ERG1FJ101P	M , 100 OHM ,J, 1W	1	1
R552	ERG1SJ102P	M , 1K OHM , J , 1W	1	1
R553	D0GD183JA017	M , 18 KOHM ,J, 1/10W	1	1
R559	D0C12R2JA042	F , 2.2 ? , 1W	1	1
R580	D0GD512JA017	M , 5.1 KOHM ,J, 1/10W	1	1
R601	D0GD470JA017	M , 47 OHM ,J, 1/10W	1	1
R602	D0AE103JA046	C , 10K OHM , J , 1/4W	1	1
R604	D0GD470JA017	M , 47 OHM ,J, 1/10W	1	1
R605	D0GD470JA017	M , 47 OHM ,J, 1/10W	1	1
R606	D0GD752JA017	M , 7.5 KOHM ,J, 1/10W	1	1
R607	D0GD752JA017	M , 7.5 KOHM ,J, 1/10W	1	1
R608	D0GD470JA017	M , 47 OHM ,J, 1/10W	1	1
R609	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R611	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R612	D0GD392JA017	M , 3.9 KOHM ,J, 1/10W	1	1
R614	D0GD221JA017	M , 220 OHM ,J, 1/10W	1	1

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
R615	D0GD122JA017	M , 1.2 KOHM ,J, 1/10W	1	1
R616	D0GD563JA017	M , 56 KOHM ,J, 1/10W	1	1
R619	D0GD332JA017	M , 3.3 KOHM ,J, 1/10W	1	1
R620	D1BD1002A028	M , 10K OHM , F , 1/10W	1	1
R621	D1BD2002A028	M , 20K OHM , F , 1/10W	1	1
R624	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R625	D0GD102JA017	M , 1 KOHM ,J, 1/10W	1	1
R626	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R627	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R628	D0GD823JA017	M , 82 KOHM ,J, 1/10W	1	1
R629	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R632	D0GD682JA017	M , 6.8 KOHM ,J, 1/10W	1	1
R634	D0GD151JA017	M , 150 OHM ,J, 1/10W	1	1
R635	D0GD151JA017	M , 150 OHM ,J, 1/10W	1	1
R636	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R638	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R640	D0GD471JA017	M , 470 OHM ,J, 1/10W	1	1
R641	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R643	TRJ6GEY0R00V	M , 0 OHM , 1/10W	1	1
R644	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R645	D0GD101JA017	M , 100 OHM ,J, 1/10W	1	1
R646	D0GD183JA017	M , 18 KOHM ,J, 1/10W	1	1
R647	D0GD750JA017	M , 75 OHM ,J, 1/10W	1	1
R652	D0GD750JA017	M , 75 OHM ,J, 1/10W	1	1
R653	D0GD750JA017	M , 75 OHM ,J, 1/10W	1	1
R656	D0GD823JA017	M , 82 KOHM ,J, 1/10W	1	1
R658	D0AE470JA046	C , 47 OHM , J , 1/4W	1	1
R659	D0GD470JA017	M , 47 OHM ,J, 1/10W	1	1
R660	D0GD470JA017	M , 47 OHM ,J, 1/10W	1	1
R664	ERDS2T0T	C , 0 OHM	1	1
R665	ERDS2T0T	C , 0 OHM	1	1
R669	ERDS2T0T	C , 0 OHM	1	1
R681	D0GD472JA017	M , 4.7 KOHM ,J, 1/10W	1	1
R682	D0GD472JA017	M , 4.7 KOHM ,J, 1/10W	1	1
R685	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R686	D0GD104JA017	M , 100 KOHM ,J, 1/10W	1	1
R701	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R702	D0GD680JA017	M , 68 OHM ,J, 1/10W	1	1
R703	D0GD472JA017	M , 4.7 KOHM ,J, 1/10W	1	1
R704	D0GD471JA017	M , 470 OHM ,J, 1/10W	1	1
R705	D0GD203JA017	M , 20K OHM ,J, 1/10W	1	1
R713	ERG3FJ100H	M , 10 OHM ,J, 3W	1	1
R715	D0AE472JA046	C, 4.7K OHM . J , 1/4W	1	1
R802	ERC12ZGK225D	C , 2.2 MOHM , Z , 1/2W	1	1
R824	ERX12SJR27E	M, 0.27 OHM , J , 1/2W	1	1
R830	D0AE221JA046	C , 220 OHM , J , 1/4W	1	1
R831	D0AE333JA046	C , 33 KOHM ,J, 1/4W	1	1
R832	D1BD4022A028	M , 40.2K OHM , F , 1/10W	1	1
R833	D0AE102JA046	C , 1K OHM , J , 1/4W	1	1
R834	ERG3FJ473H	M , 47K OHM ,J, 3W	1	1
R836	ERG1SJ220P	M , 22 OHM ,J, 1W	1	1
R840	D0AW825JA001	C , 8.2 MOHM , J	1	1
R842	ERG2FJ150H	M , 15 OHM ,J, 2W	1	1
R848	ERX12SJR22E	M , 0.22 OHM , J , 1/2W	1	1
R850	ERG3SJS560H	M , 56 OHM ,J, 3W	1	1
R851	D0AE104JA046	C , 100K OHM , J , 1/4W	1	1
R852	D0AE162JA046	C , 1.6K OHM , J , 1/4W	1	1
R853	D0DM2R2KA001	W , 2.2 OHM ,7W	1	1
R854	ERG2FJ470H	M , 47 OHM , J , 2W	1	1
R856	ERG2SJS104H	M , 100K OHM , J , 2W	1	1
R857	D0AE102JA046	C , 1K OHM , J , 1/4W	1	1
R858	ERX2SJ7R5E	M , 7.5 OHM , J , 2W	1	1
R861	ERG1SJ390P	M , 39 OHM , J , 1W	1	1
R862	D0AE182JA046	C , 1.8 KOHM , J , 1/4W	1	1

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
R863	D0AE101JA046	C , 100 OHM , J , 1/4W	1	1
R864	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R866	D0GD392JA017	M , 3.9 KOHM ,J, 1/10W	1	1
R867	D0AE202JA046	C , 2 KOHM , J , 1/4W	1	1
R868	ERDS1TJ101T	C , 100 OHM , J , 1/2W	1	1
R871	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R872	D1BD1052A028	M , 10.5 K OHM , F , 1/10W	1	1
R873	ERJ6ENF1802V	M , 18 KOHM ,J, 1/10W	1	1
R875	D0GD822JA017	M , 8.2 KOHM , J , 1/10W	1	1
R876	D1BD1002A028	M , 10K OHM , F , 1/10W	1	1
R877	TSR6GTF5101V	M , 510 OHM , 1/8W	1	1
R882	D0GD332JA017	M , 3.3 KOHM ,J, 1/10W	1	1
R884	D0AE562JA046	C , 5.6 KOHM . J , 1/4W	1	1
R885	D0GD752JA017	M , 7.5 KOHM ,J, 1/10W	1	1
R886	D0GD433JA017	M , 43K OHM , 1/10W	1	1
R888	D0GD103JA017	M , 10 KOHM ,J, 1/10W	1	1
R889	ERX3FJ8R2H	M , 8.2 OHM , J , 3W	1	1
R890	ERG1SJ273P	M , 27K OHM , J , 1W	1	1
R894	D1BD1303A029	M , 30 KOHM ,F, 1/10W	1	1

COIL

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
L002	G0C100K00008	PEAKING COIL , 10uH	1	1
L003	G0C4R7JA0055	PEAKING COIL 4.7uF	1	1
L2302	EXCELSA35T	BEAD CORE	1	1
L2304	EXCELSA35T	BEAD CORE	1	1
L2306	EXCELSA39V	BEAD CORE	1	1
L2323	EXCELSA35T	BEAD CORE	1	1
L2324	EXCELSA35T	BEAD CORE	1	1
L376	EXCELSA39V	BEAD CORE	1	1
L501	EXCELSA35T	BEAD CORE	1	1
L505	EXCELSA39V	BEAD CORE	1	1
L514	EXCELSA35T	BEAD CORE	1	1
L515	EXCELSA35T	BEAD CORE	1	1
L517	EXCELSA35T	BEAD CORE	1	1
L518	EXCELSA35T	BEAD CORE	1	1
L550	EXCELDR35V	COIL	1	1
L554	ELC08D682E	COIL 6800uH	1	1
L565	EXCELSA39V	BEAD CORE	1	1
L566	ELC16B471L	CHOKE COIL , 470uH	1	1
L601	G0C100K00008	PEAKING COIL , 10uH	1	1
L602	G0C100K00008	PEAKING COIL , 10uH	1	1
L603	G0C100K00008	PEAKING COIL , 10uH	1	1
L604	G0C100K00008	PEAKING COIL , 10uH	1	1
L605	G0C8R2KA0030	PEAKING COIL , 8.2uH	1	1
L606	G0C100K00008	PEAKING COIL , 10uH	1	1
L607	G0C8R2KA0030	PEAKING COIL , 8.2uH	1	1
L608	G0C3R9KA0030	PEAKING COIL 3.9uF	1	1
L610	EXCELDR35V	COIL	1	1
L611	G0C100K00008	PEAKING COIL , 10uH	1	1
L630	J0JCC0000411	BEAD CORE	1	1
L635	J0JCC0000411	BEAD CORE	1	1
L657	J0JCC0000411	BEAD CORE	1	1
L705	ELC18B103L	CHOKE COIL , 10mH	1	1
L842	J0JKA0000025	BEAD CORE	1	1
L845	EXCELSA35B	BEAD CORE	1	1
L865	J0JKA0000025	BEAD CORE	1	1
L866	EXCELSA35B	BEAD CORE	1	1
L867	J0JKB0000039	BEAD CORE	1	1
L894	G0A220GA0002	CHOKE COIL	1	1

TRANSISTORS

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
Q1060	B1ABCE000015	TRANSISTOR	1	1
Q1061	2SB0709A0L	TRANSISTOR	1	1
Q1062	B1ABCE000015	TRANSISTOR	1	1
Q1063	B1ABCE000015	TRANSISTOR	1	1
Q2101	2SB0709A0L	TRANSISTOR	1	1
Q304	2SB0709A0L	TRANSISTOR	1	1
Q305	2SB0709A0L	TRANSISTOR	1	1
Q306	2SB0709A0L	TRANSISTOR	1	1
Q320	B1ABCE000015	TRANSISTOR	1	1
Q354	2SB0709A0L	TRANSISTOR	1	1
Q360	B1ACAA000019	TRANSISTOR	1	1
Q361	B1ACAA000019	TRANSISTOR	1	1
Q362	B1ACAA000019	TRANSISTOR	1	1
Q501	2SC4212H00LB	TRANSISTOR	1	1
Q520	2SB0792A0L	TRANSISTOR	1	1
Q551	2SC6073000LK	TRANSISTOR, H OUT	1	1
Q603	B1ABCE000015	TRANSISTOR	1	1
Q604	B1ABCE000015	TRANSISTOR	1	1
Q605	B1ABCE000015	TRANSISTOR	1	1
Q608	B1ABCE000015	TRANSISTOR	1	1
Q610	2SB0709A0L	TRANSISTOR	1	1
Q701	B1MBDLB00002	TRANSISTOR	1	1
Q702	B1ABCE000015	TRANSISTOR	1	1
Q703	B1ABCE000015	TRANSISTOR	1	1
Q850	B1BCCM000002	TRANSISTOR	1	1
Q857	2SC54190QA	TRANSISTOR	1	1
Q870	2SB0709A0L	TRANSISTOR	1	1

MISC. ITEMS

REF No.	PART No.	DESCRIPTION	MODEL NO.	
			21RX20C	21RX20CS
D1061	B3AGA0000126	LED LIGHT	1	1
RM1062	B3RAD0000160	REMOCON RECEIVER	1	1
SC352	K3B09CA00014	CRT SOCKET	1	1
SW1021	EVQ11G05R	TACT SWITCH	1	1
SW1022	EVQ11G05R	TACT SWITCH	1	1
SW1023	EVQ11G05R	TACT SWITCH	1	1
SW1024	EVQ11G05R	TACT SWITCH	1	1
SW1025	EVQ11G05R	TACT SWITCH	1	1
SW1026	EVQ11G05R	TACT SWITCH	1	1
SW841	ESB92DA1B	POWER SWITCH	1	1
JK3002	K4BK10B00005	AV TERMINAL (AV1 & AV3)	1	1
JK3003	K4BK10B00006	AV TERMINAL (Monitor out & YUV in)	1	1
CF835	TAP4GA0005	PTC	1	1
T553	ETH19Y210BZ	HDT	1	1
L557	ELH4W5L7159	LINEARITY COIL	1	1
T554	BSC27-0102K	FBT	1	1
LF835	ELF21V012S	LINE FILTER	1	1
PC860	B3PAA0000363	OPTO COUPLER	1	1
T801	ETS35AH1P6AC	SMPS	1	1
TU001	ENV59K33G3F	TUNER	1	1
X601	H0D202500007	CRYSTAL	1	1
XF101	J0C3525A0005	SAW FILTER	1	1