

Service Manual

20" LCD TV

CHASSIS : SL-130P

**Model : DLP-20J1
DLP-20D7
DLP-20W2**

Caution

: In this Manual, some parts can be changed for improving. their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List)in Service Information Center.

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SOFTWARE INSTALL & UPGRADE

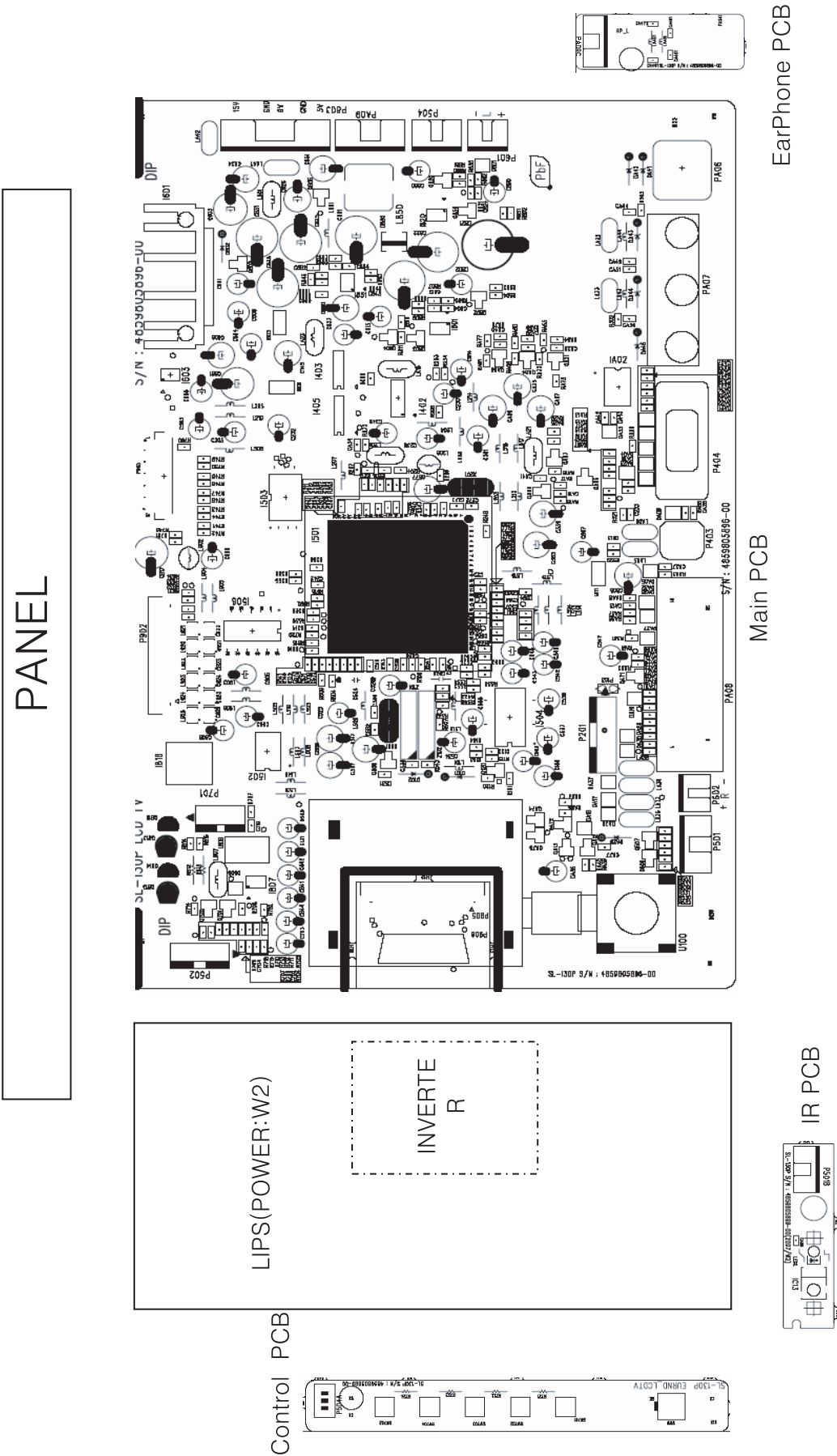
1. Safety Precautions

- (1) When moving or laying down a LCD Set, at least two people must work together. Avoid any impact towards the LCD Set.
- (2) Do not leave a broken LCD Set on for a long time. To prevent any further damages, after checking the condition of the broken Set, make sure to turn the power (AC) off.
- (3) When opening the BACK COVER, you must turn off power (AC) to prevent any electric shock.
- (4) When loosening screws, check the position and type of the screw. Sort out the screws and store them separately for reassembling. Because screws holding PCBs are working as electric circuit grounding, make sure to check if any screw is missing when assembling / reassembling. Do not leave any screws inside the set.
- (5) A LCD Set contains different kinds of connector cables. When connecting or disconnecting cables, check the direction and position of the cable beforehand.
- (6) Connect/disconnect the connectors slowly with care especially FFC (film) cables and FPC cables. Do not connect or disconnect connectors instantaneously with force, and handle them carefully for reassembling.
- (7) Connectors are designed so that if the number of pins or the direction does not match, connectors will not fit. When having problem in plugging the connectors, check their kind, position, and direction.

2. Product Specification

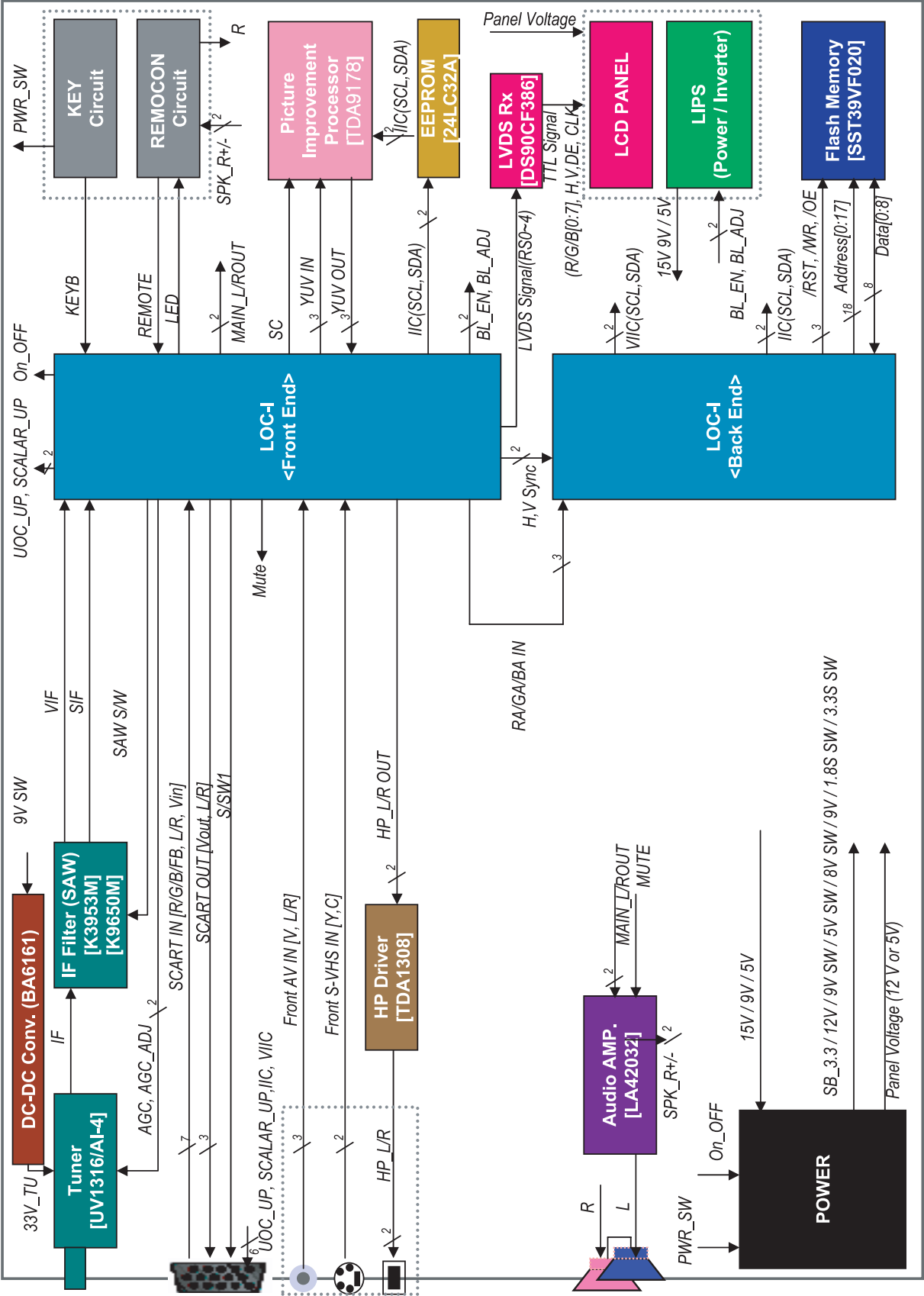
MODEL		DLP-20J1		DLP-20D7		DLP-20W2	
	CHASSIS NO	SL-130P		SL-130P		SL-130P	
	Country	Europe		Europe		Europe	
	Remote controller	R-49C 10		R-49C 10		R-49C 10	
LCD PANEL							
	LCD Type	HT201V01-101(5992)	LC201V02-SDA3	HT201V01-101(5992)	LC201V02-SDA3	T200XW02-V0	
	Screen Size	20.1"	20.1"	20.1"	20.1"	20.1"	
	Aspect Ratio	4 : 3	4 : 3	4 : 3	4 : 3	16 : 9	
	Resolution	640 x 480(VGA)	640 x 480(VGA)	640 x 480(VGA)	640 x 480(VGA)	1366 x 768(WXGA)	
	Pixel Pitch	0.6375(H) X 0.6375(V)	0.2125(H) X 0.6375(V)	0.6375(H) X 0.6375(V)	0.2125(H) X 0.6375(V)	0.32475 x 0.32475	
	Brightness	500cd/m²	450 cd/m²	500cd/m²	450 cd/m²	450cd/m²	
	Contrast Ratio	700 : 1	800 : 1	700 : 1	800 : 1	600 : 1	
	Viewing Angle(U/D/R/L)	160(H) / 140(V)	R/L : 178, U/D : /178	160(H) / 140(V)	R/L : 178, U/D : /178	80/80/80/60	
	Response Time	8ms	12ms	8ms	12ms	8ms	
TV SYSTEM							
	Color System	PAL/SECAM					
	Color System	PAL B/G, I/I', D/K, L-SECAM, L'-SECAM					
	Tuning Method	FVS					
	Tuner	UV1316/A I H-4(Philips)					
	Reception Channel	VHF :					
		BAND I : CH2 ~ CH4					
		BAND II : CH5 ~ CH12					
		CABLE BAND : S1' ~ S3', S1 ~ S20					
		UHF :					
		HYPER BAND : S21 ~ S41					
	IF & SubCarrier	BAND IV, V : CH21 ~ CH69					
		PIF :					
		38.9MHz(B/G, D/K, I/I', L), 34.2MHz(L')					
		SIF :					
33.4MHz(B/G), 32.4MHz(D/K, L), 32.9MHz(I/I'), 41.0MHz(L')							
S-subcarrier :							
Audio System	5.5MHz / 5.85MHz (NICAM) / 5.74MHz(2-Carrier)						
	Color-subcarrier :						
	4.43MHz (PAL), 4.25MHz / 4.40625MHz(SECAM)						
Channel Memory	99 Channel, Auto Preset						
Input							
	TV Input	75Ohm external input terminal(DIN Standard)					
	A/V(RGB/COMPOSITE)	Scart Jack x 1					
	S-Video Input	SVHS(Y/C) x 1					
	Video/Audio	COMPOSITE (NTSC/PAL/SECAM/NTSC4.43) RCA Jack x 1, Audio L/R x 1					
	Component/Audio	-					
	PC Input	-					
	PC Audio Input	-					
Ouput							
	Video/Audio	Scart Jack x 1					
	Headphone	3.5mm Mini Stereo Jack x 1					
Other Features							
	Comb Filter	2D					
	CTI	0					
	LTI	0					
	OSD	18 Languages					
	TELETEXT	10 Page Memory TOP/FLOF					
	Audio Output	4W(2W + 2W)					
	Speaker	3W 8Ω	5W 8Ω				
	Aspect ratio control	0					
	Auto power off	0					
	Wake up	0					
	Sleep timer	0					
	Wall mount hole	VESA compatible					
	Power Consumption						
	Consumption	45W	45W			53W	
	Stand-by	Under 1W					
	Power Source	LIPS, AC 100~240V, 50/60Hz					Power, same left
Dimension(W x H x D)mm							
	Set dimension(with STAND)	514(W) x 498(H) x 257.3(D) mm			608(W) x 456(H) x 215(D) mm		509(W) x 420.5(H) x 239(D) mm
	Tilt(Front/Back)	10 / 10					
	Weight	7.9KG			10.6 KG		10 KG
USER CONTROL & ACCESSORIES							
	Control button(SET)	Power	PR DN	PR UP	VOL DN	VOL UP	TV/VIDEO
	Accessories	Instruction manual	Remote controller		Battery(AAA x 2 : option)		

3. Block Diagram



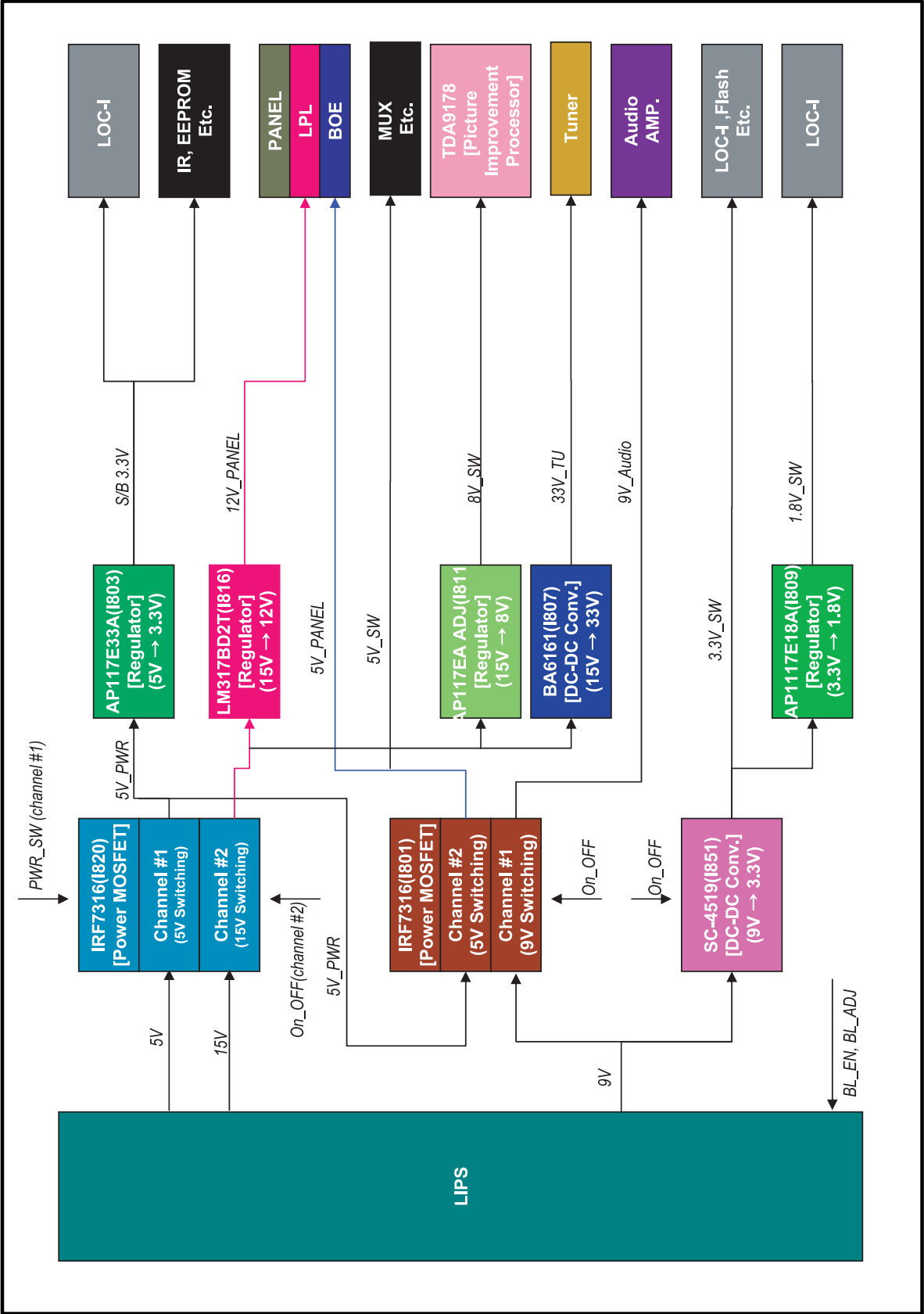
Block Diagram

DLP-20J1/D7(Main part)



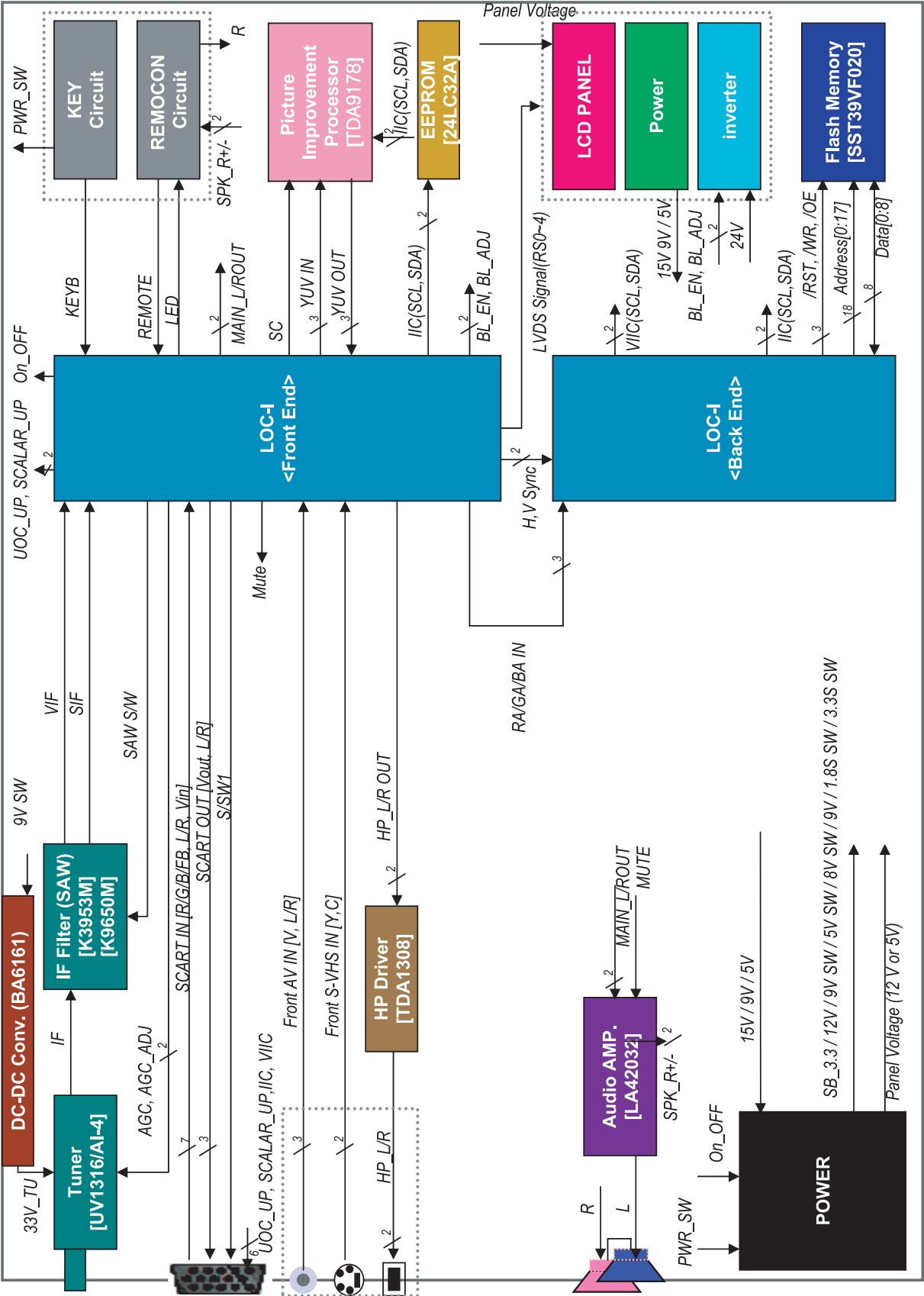
Block Diagram

DLP-20J1/D7(Power part)



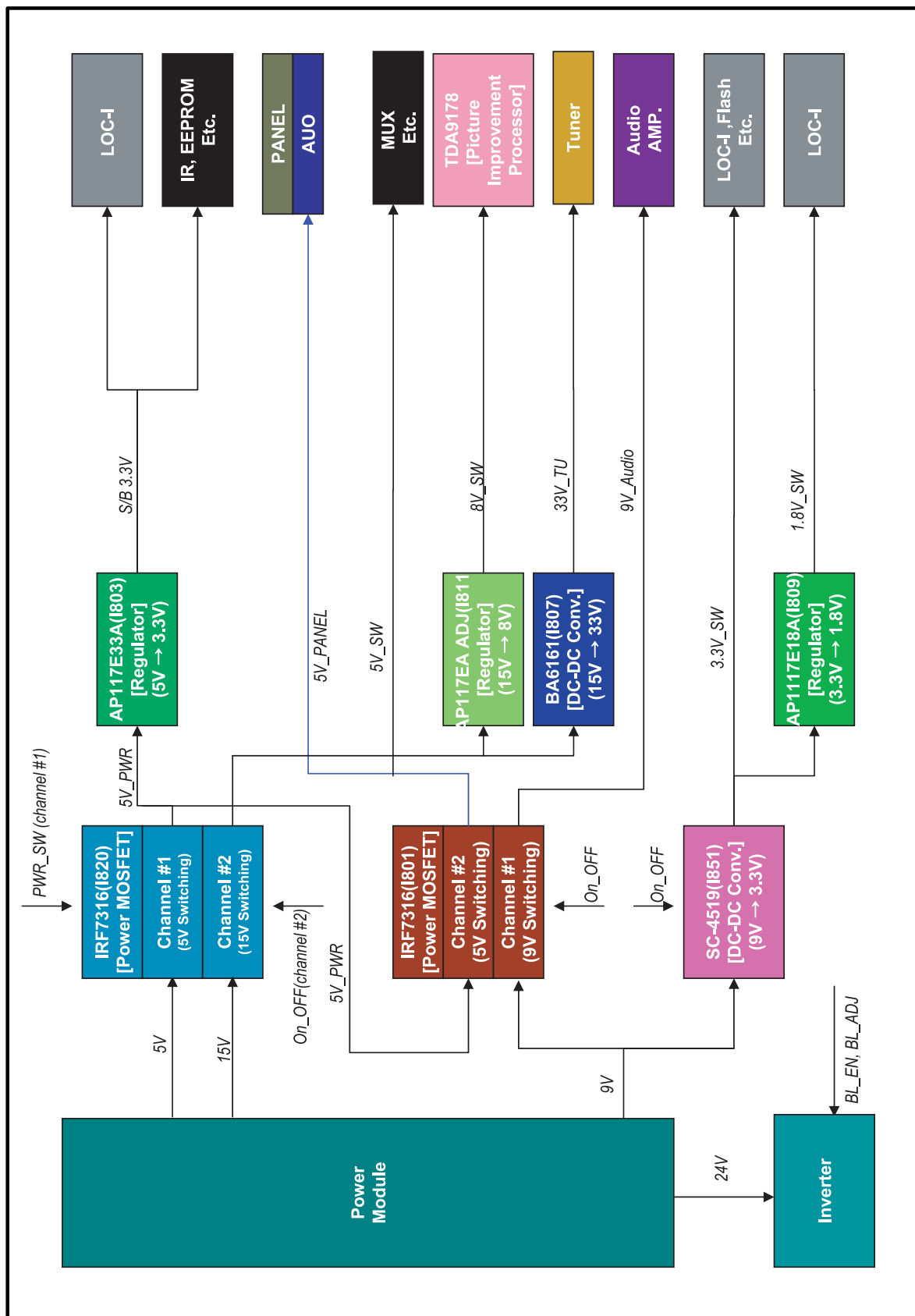
Block Diagram

DLP-20W2(Main part)



Block Diagram

DLP-20W2(Power part)



4.Description of Video Circuit

SL-130P video circuit:

Process input signals <Analog-TV signal,CVBS(NTSC),Y/C Signal> to produce Output signal for LCD panel.(J1/D7 : 640 x 480 , W2 : 1366 x 768)

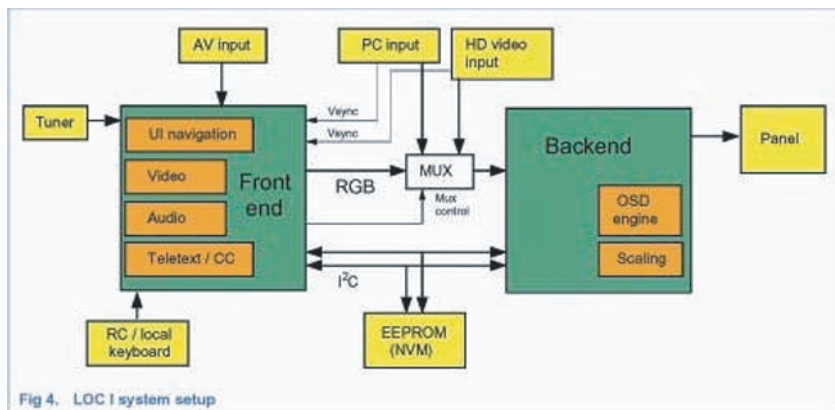
Introduction for main IC

4-1 I501(TDA15521E)

The LCD One Chip 1(LOC 1)series combines the functions of a Video Signal Processor(VSP) together with a FLASH embedded main microcontroller(doen TEXT and TV control)and an LCD

panel controller.In addition the following functions are available:

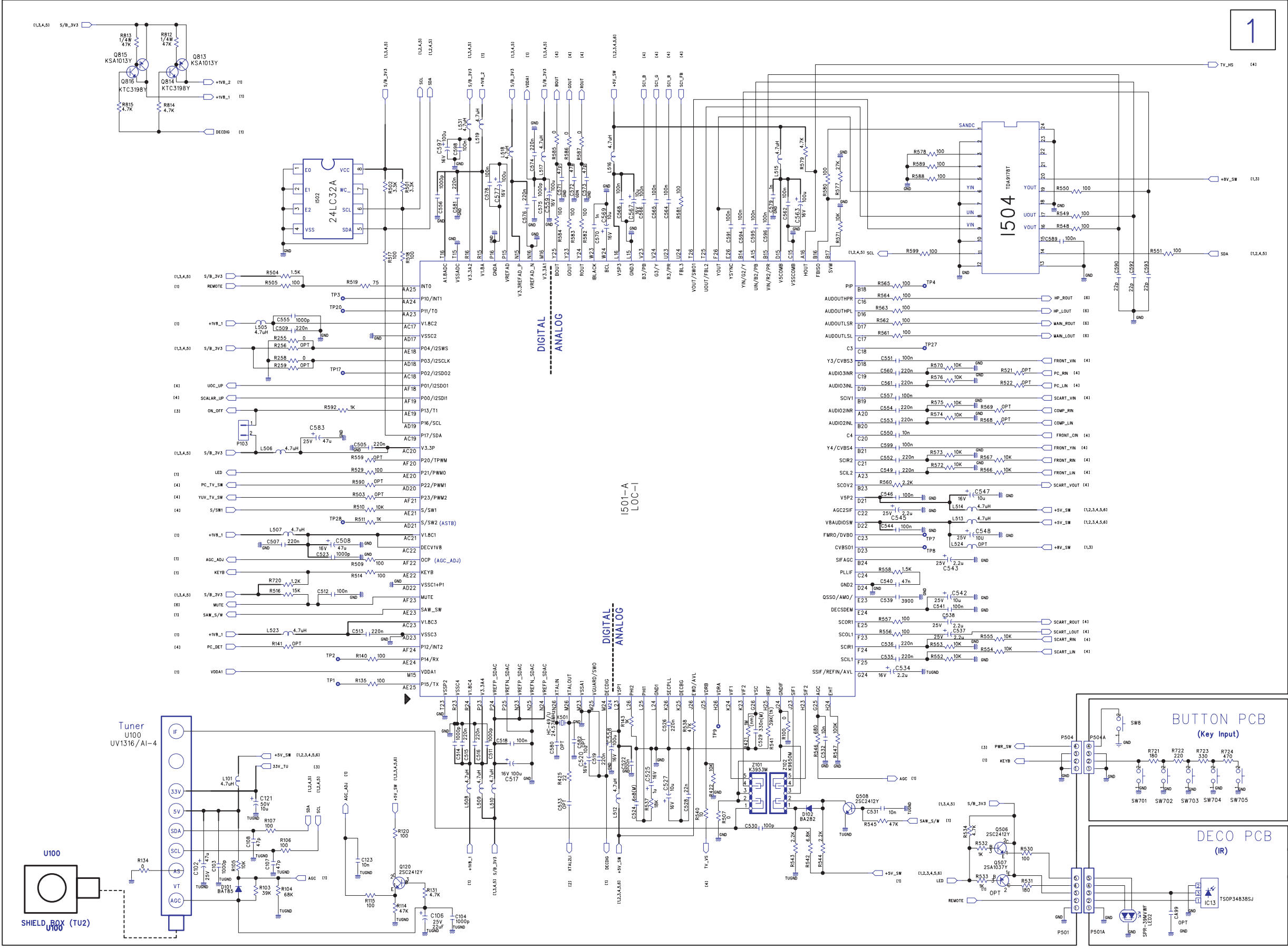
- Adaptive digital(4H/2H)PAL/NTSC comb filter
- Teletext decoder with 10 page text memory
- Multi-standard stereo decoder



Microcontroller

- 80C51 microcontroller core standard instruction set and timing
- 256k x 8bit program ROM
- 8k x 8bit auxiliary RAM
- 8bit ADC with 4 multiplexed inputs.
- I2C byte level bus interface

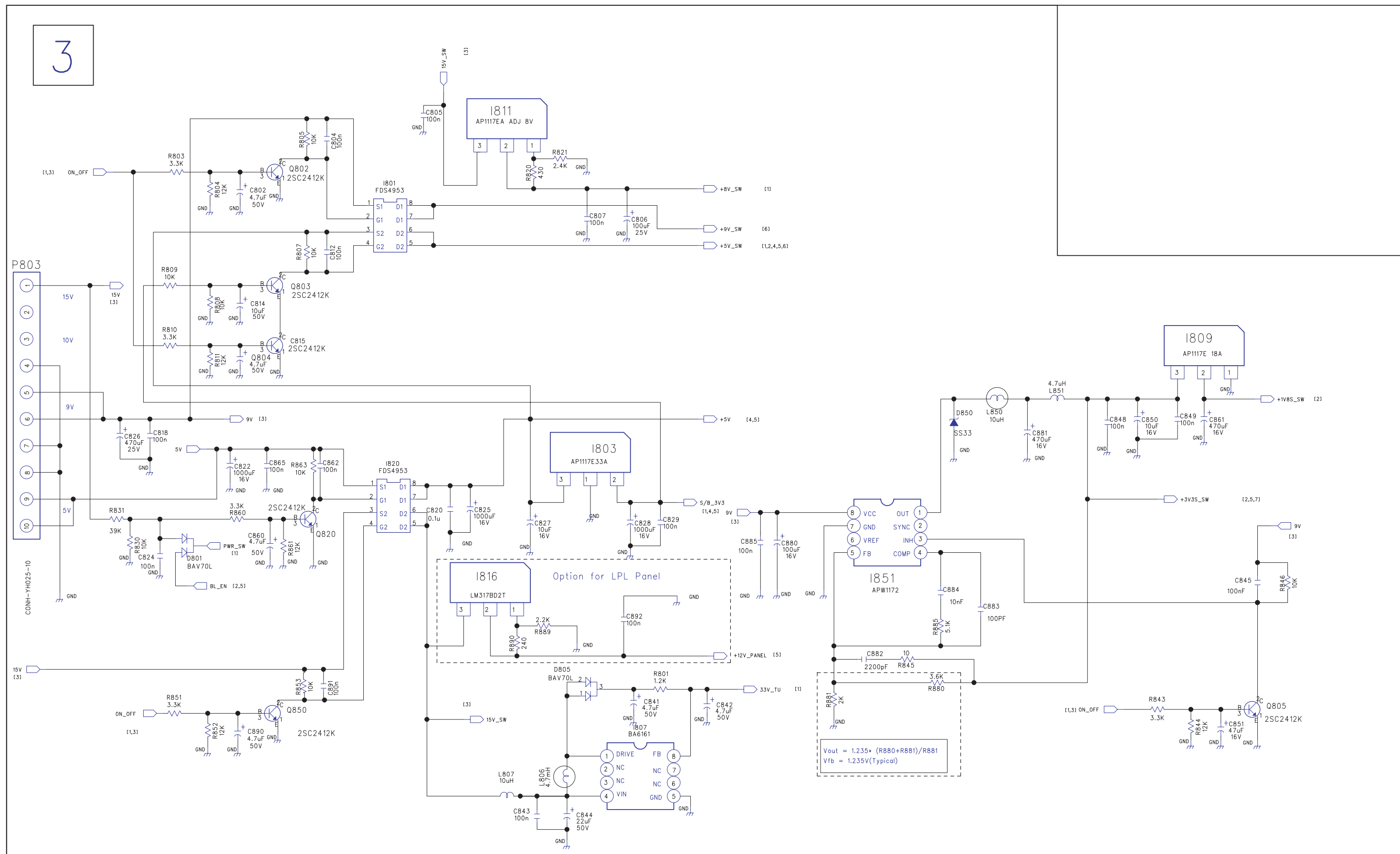
5. Schematic Diagram

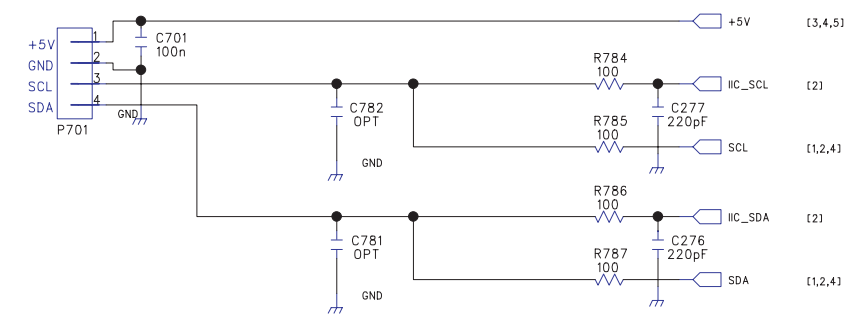
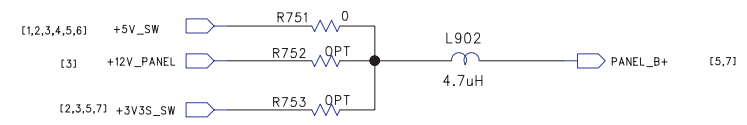
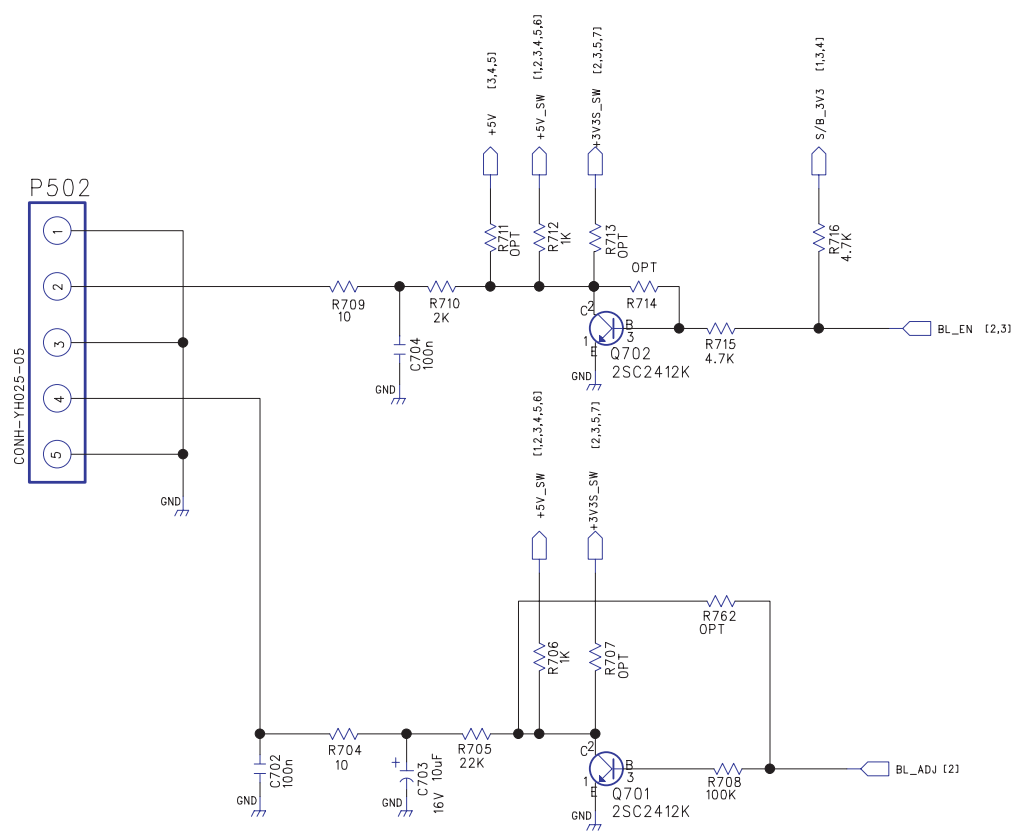


Schematic Diagram

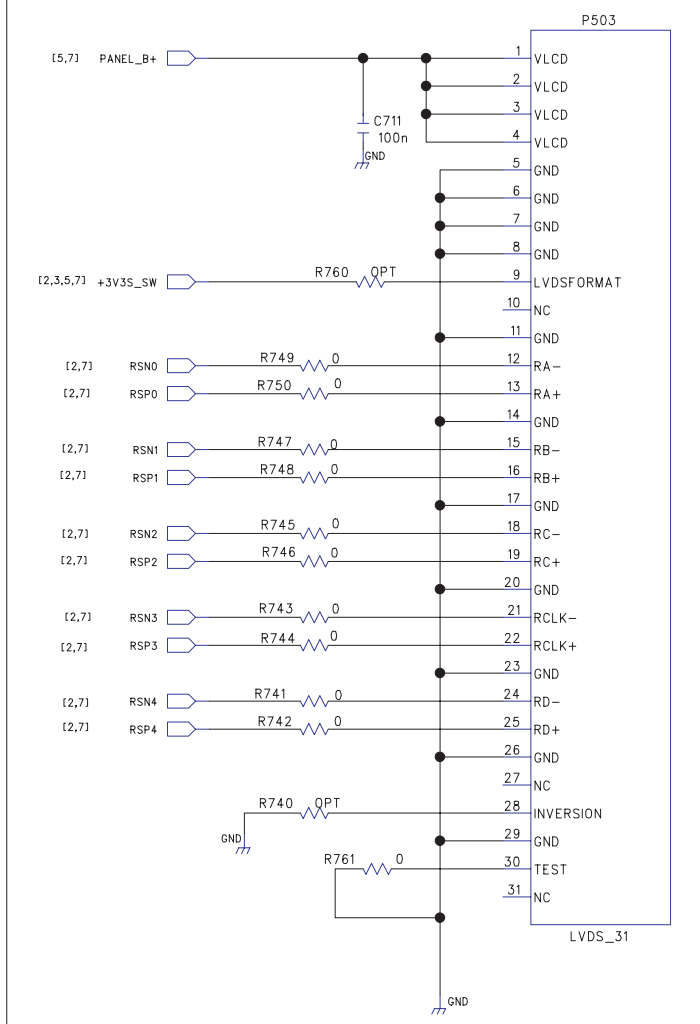


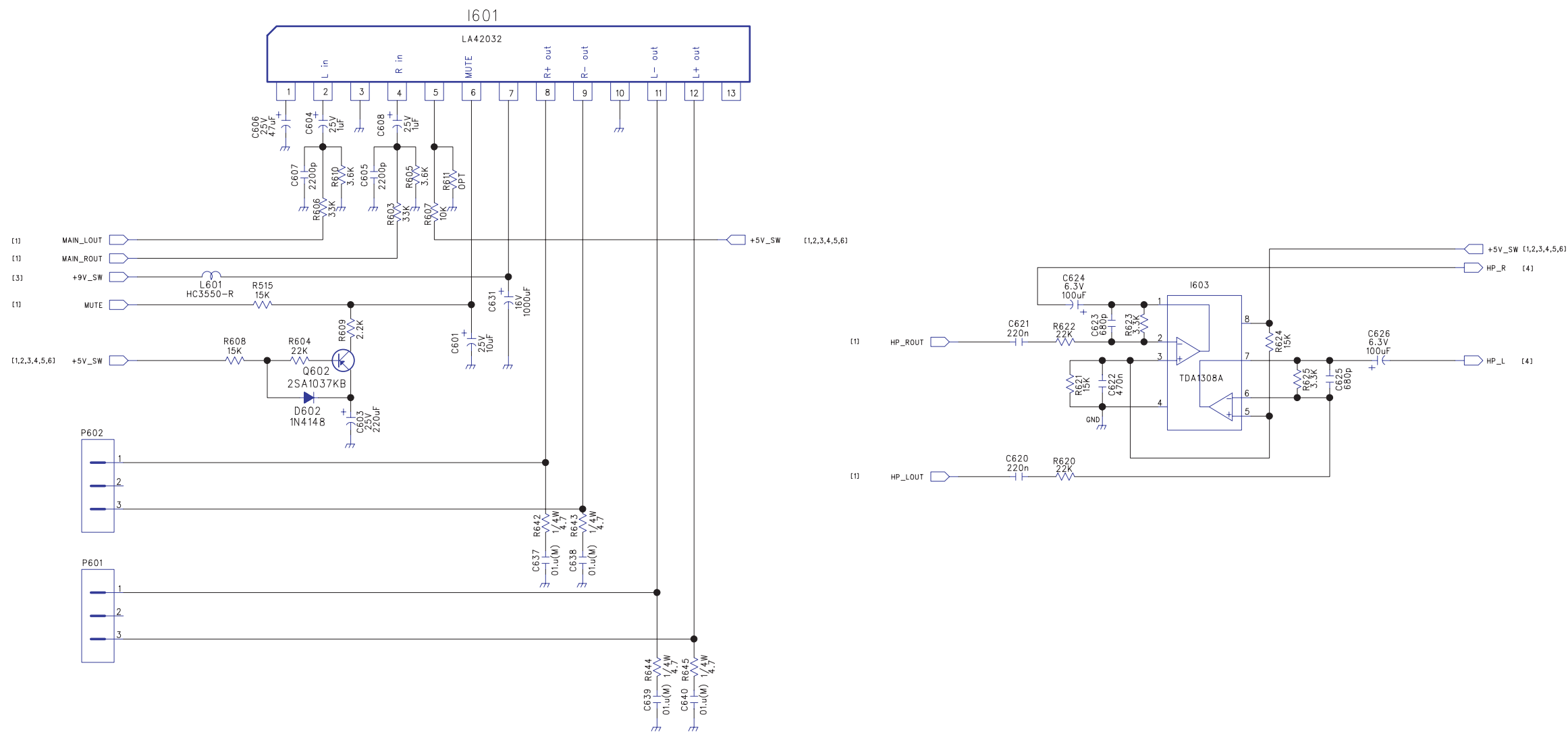
Schematic Diagram





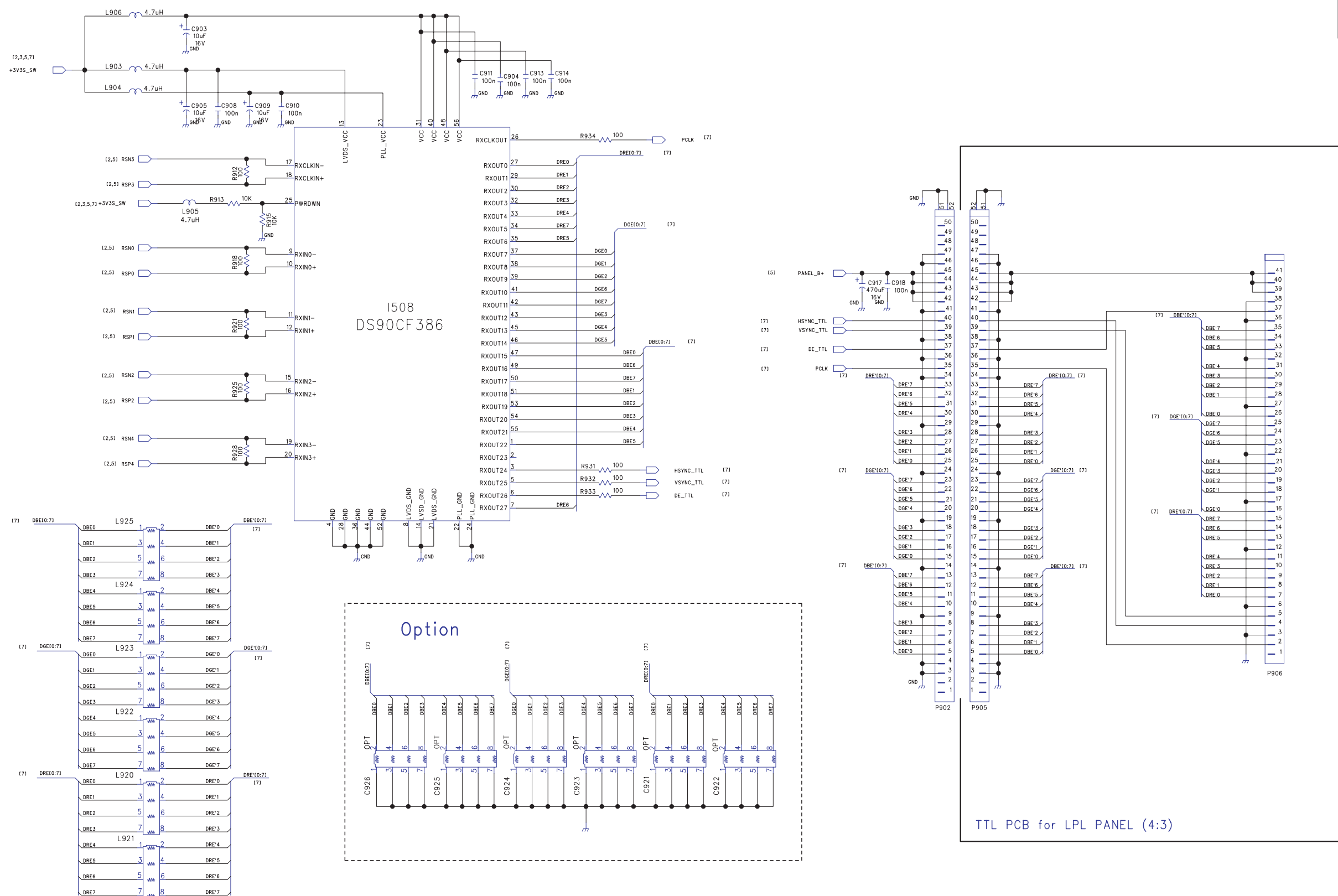
Option for LVDS





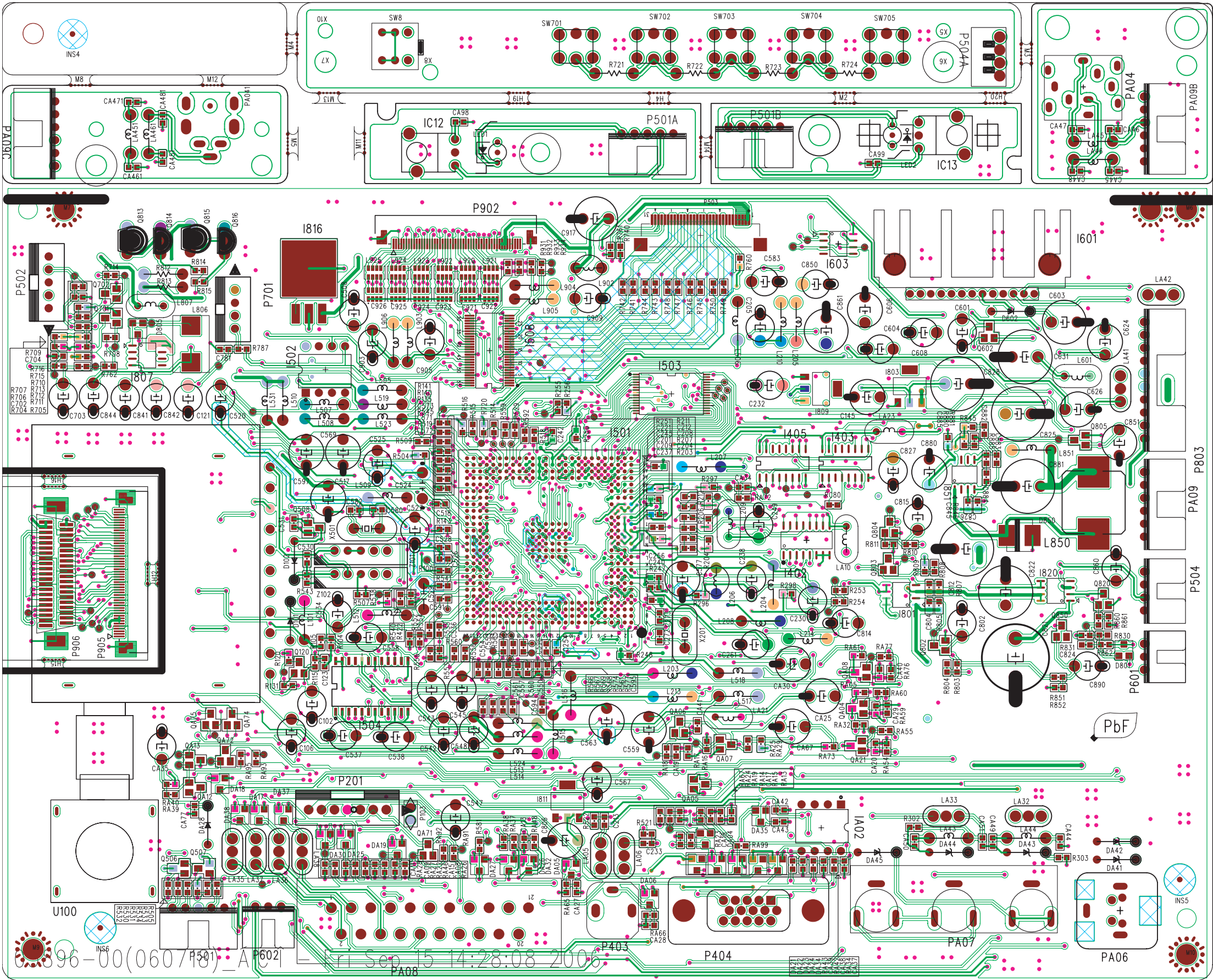
Schematic Diagram

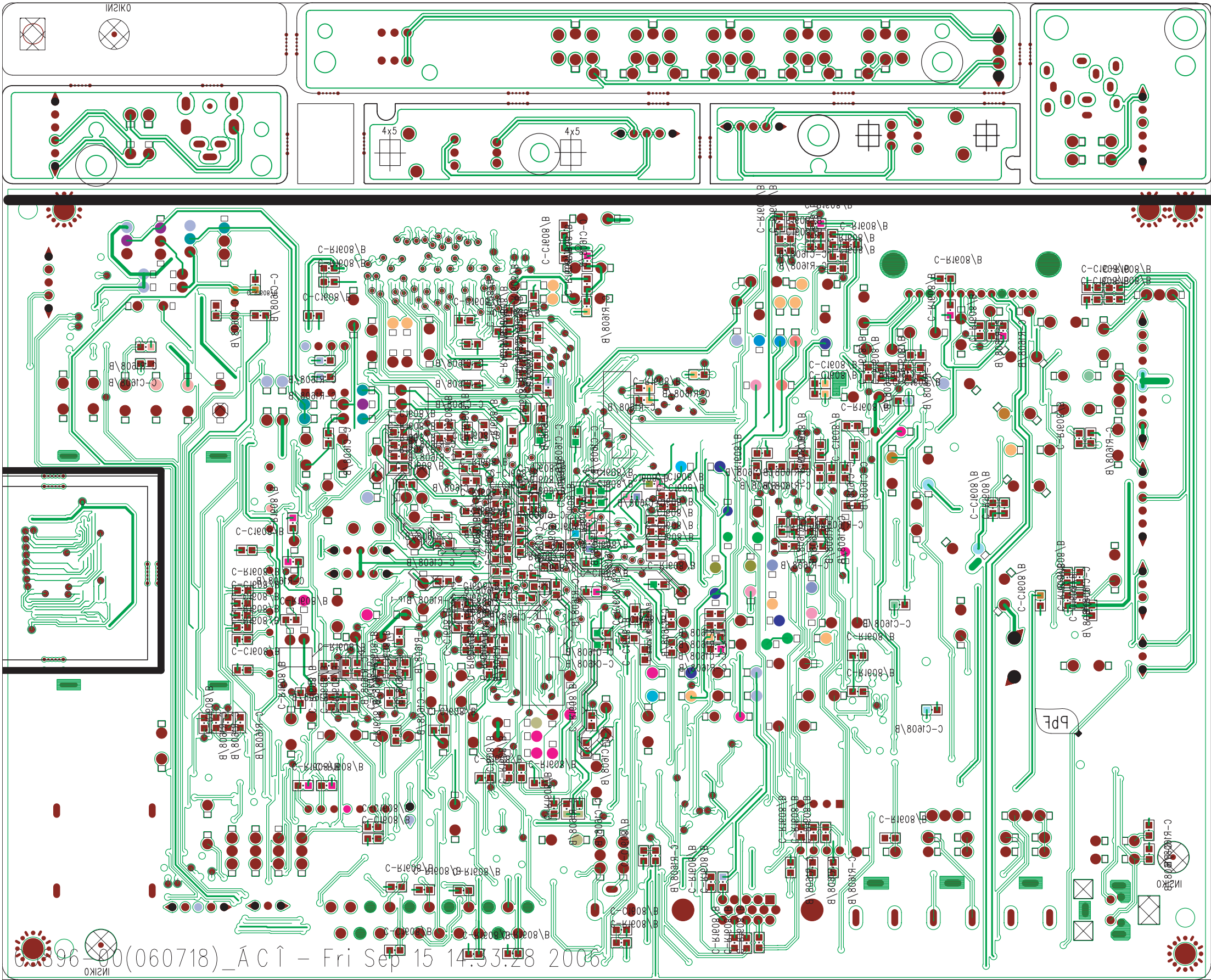
7



6. PCB Data

TOP





7. Trouble Shooting

* Facts you must know at trouble diagnosis or repairing

- (1) The trouble diagnosis and repairing of set means Module .
In other words, find out which PCB modules are not working and replace them with normal PCB modules.
- (2) This TROUBLE SHOOTING list only contains representative and simple PCB trouble diagnosis and Module Exchange method. Therefore, if you find Sets which are difficult to diagnose or to repair, contact Daewoo Electronics.
- (3) Basic TROUBLE SHOOTING procedure :

Check Trouble Symptoms → Detach Back Cover → Trouble Diagnosis → Replace broken PCB module → Heat-run (for at least 30 minutes, input Test pattern full white) → Adjust white balance → Function Check → Repair Complete.
- (4) Required equipments for trouble diagnosis
 - Digital Multi-meter (measure Dc voltage, measure Diode Voltage, Short-Open test)
 - Screwdriver (or electric screwdriver), plastic adjusting tool
- (5) Before assemble/disassemble PCBs, check to see if AC Switch is OFF.
- (6) After Back cover is closed, redo Heat-run for at least one hour by inputting Full white pattern.

Symptoms of LIPS, power, inverter, panel Trouble

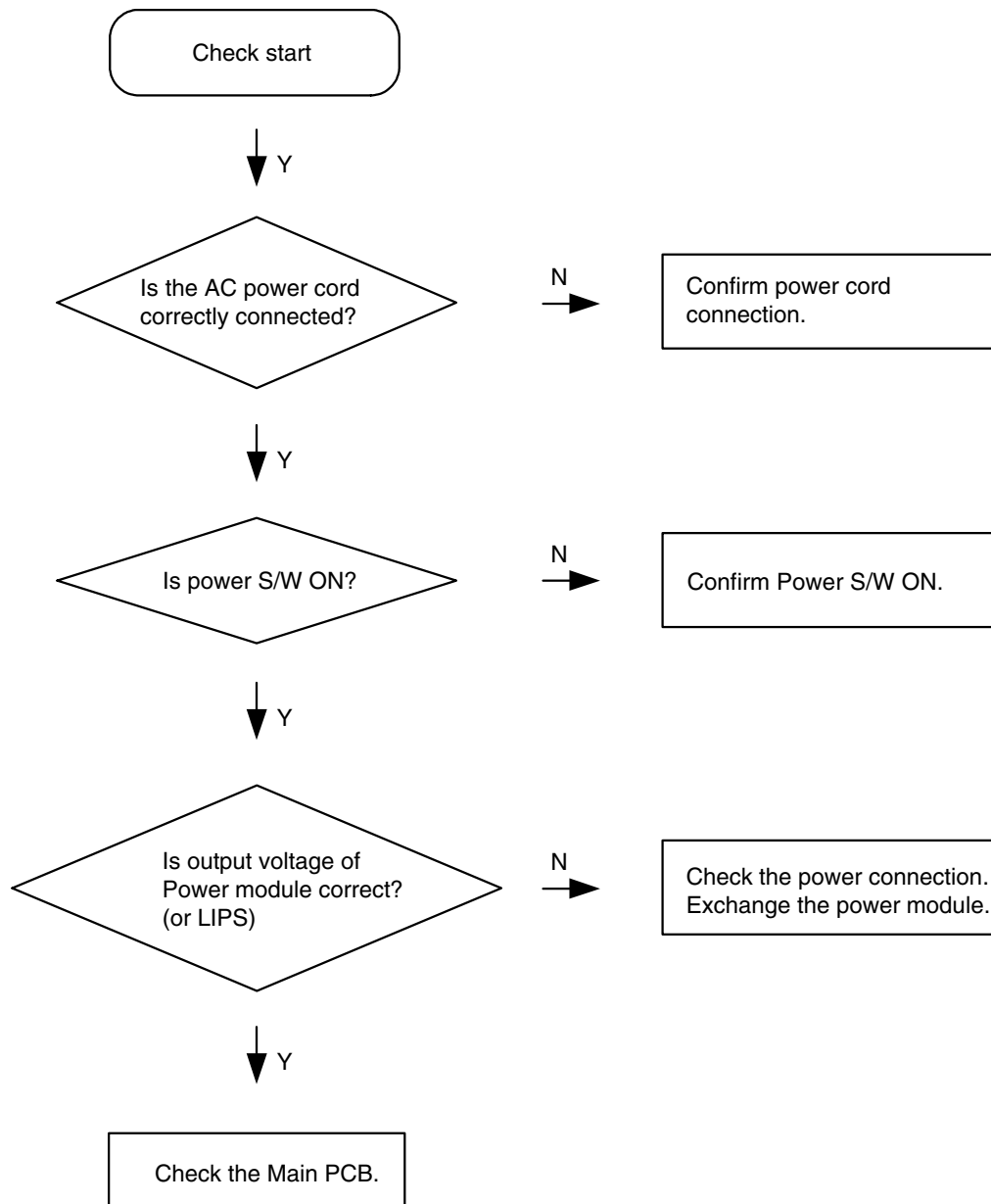
- <Symptom.1> Not even weak discharge (luminescence) shows on screen.
- <Symptom.2> Discharge (luminescence) on screen is unstable
- <Symptom.3> Set is producing unusual noise

Symptoms of VIDEO or JACK PCB Trouble

- <Symptom.1> Only weak discharge (luminescence) shows on screen, but No Data is on screen
- <Symptom.2> Screen DATA is abnormal
- <Symptom.3> Particular input signal (Video, etc.) does not operate
- <Symptom.4> No SOUND
- <Symptom.5> Remote Control or KEY does not operate

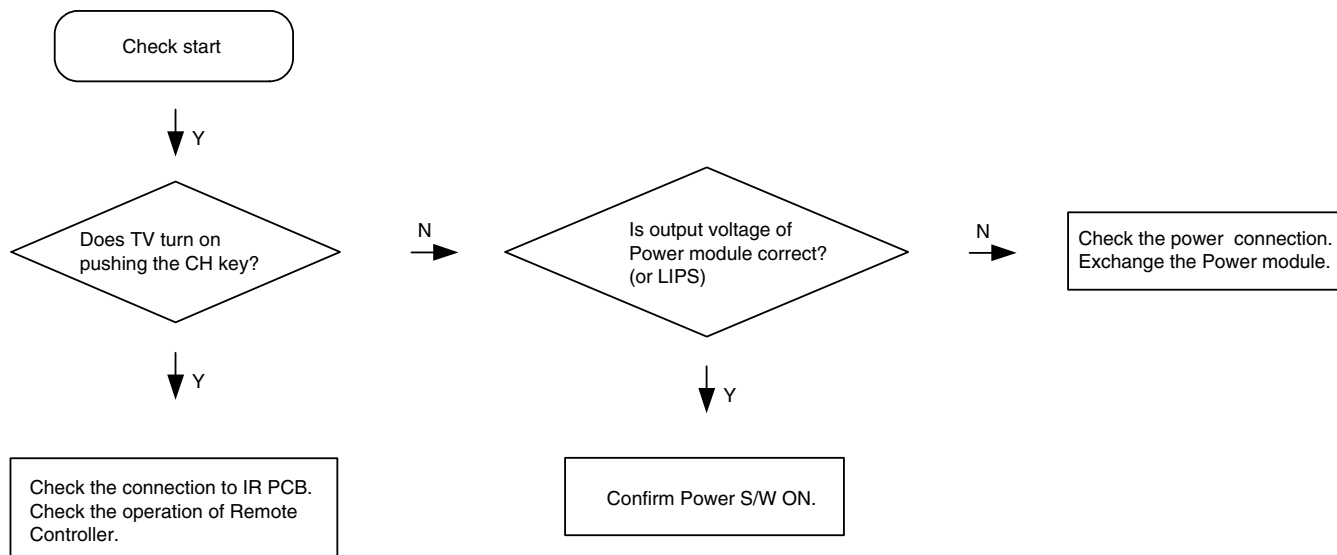
Trouble Shooting

7-1. When LED doesn't lit.

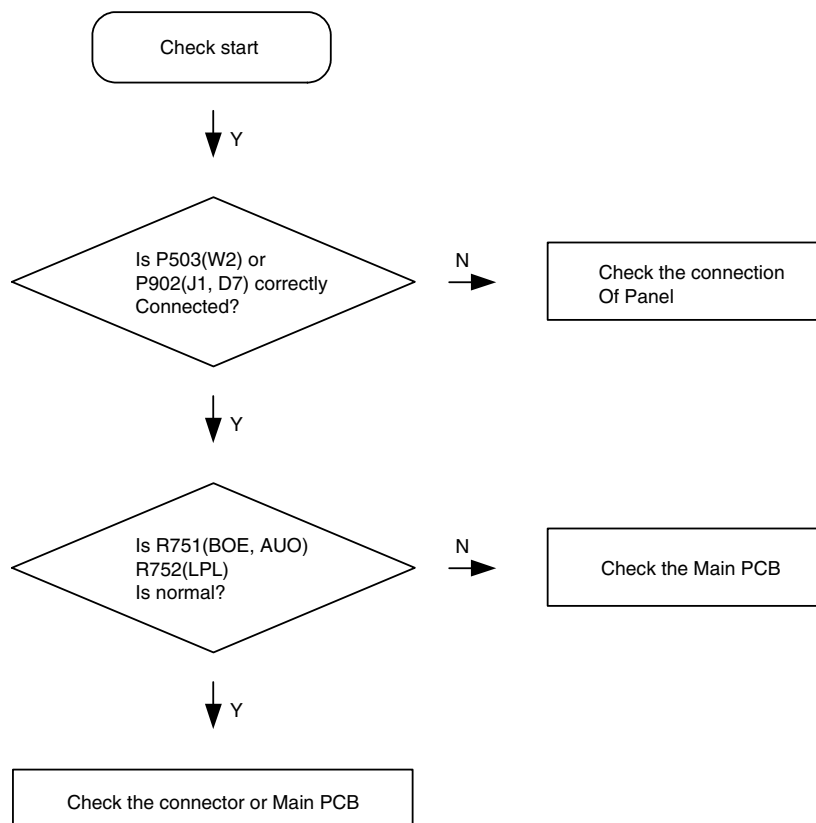


Trouble Shooting

7-2. When TV doesn't turn on in red LED.

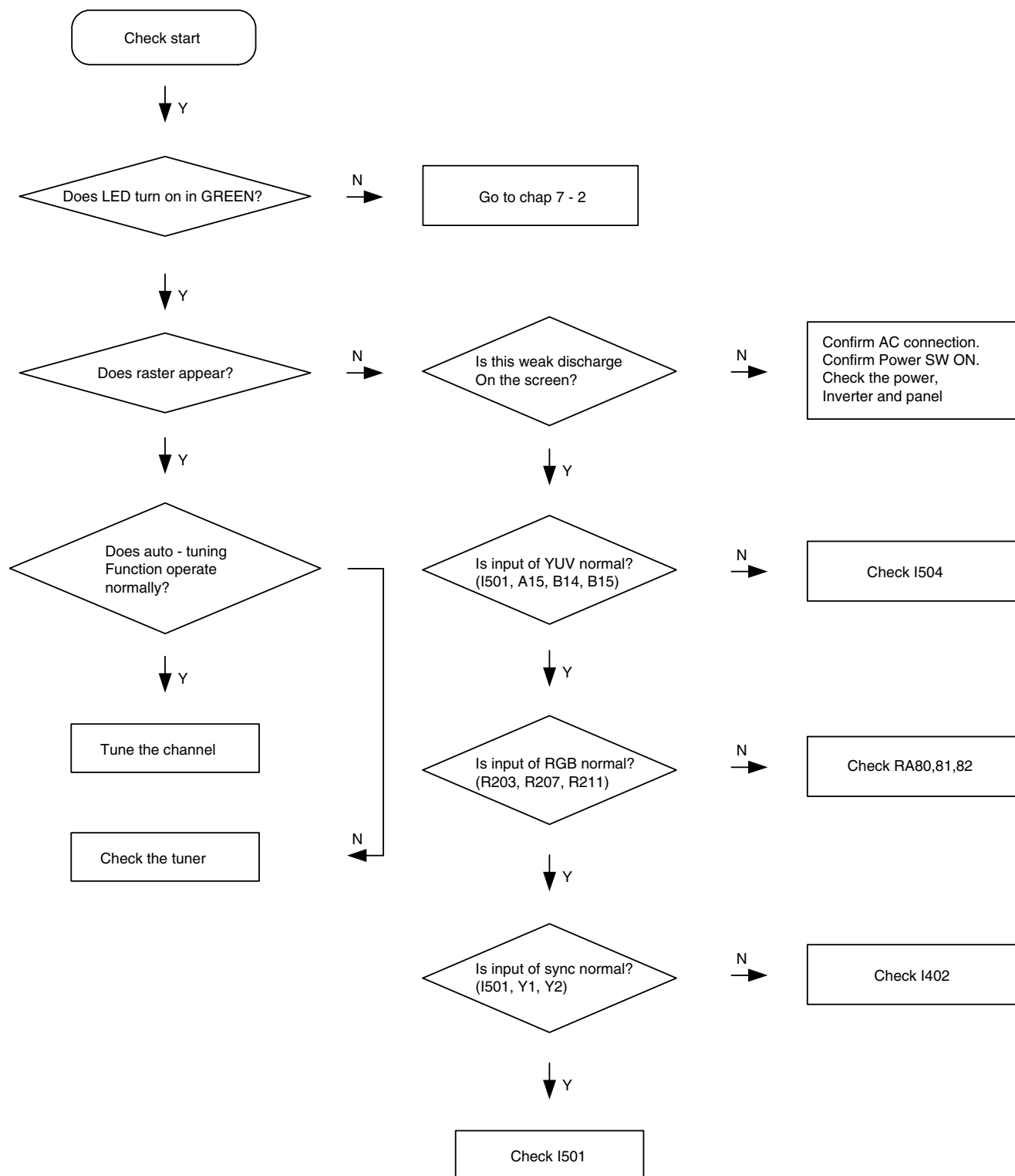


7-3. When "white screen".



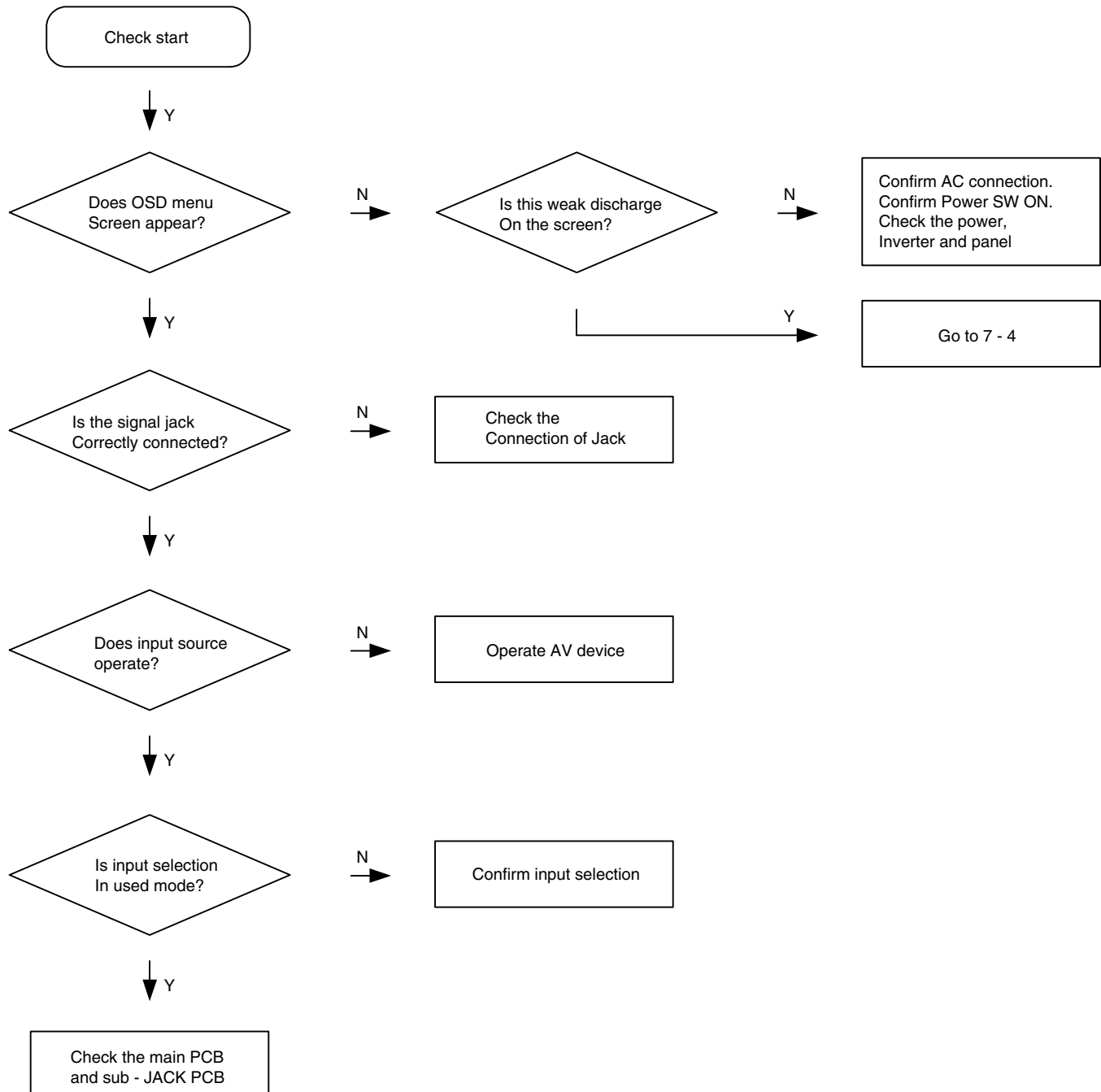
Trouble Shooting

7-4. When “No picture” in TV mode.



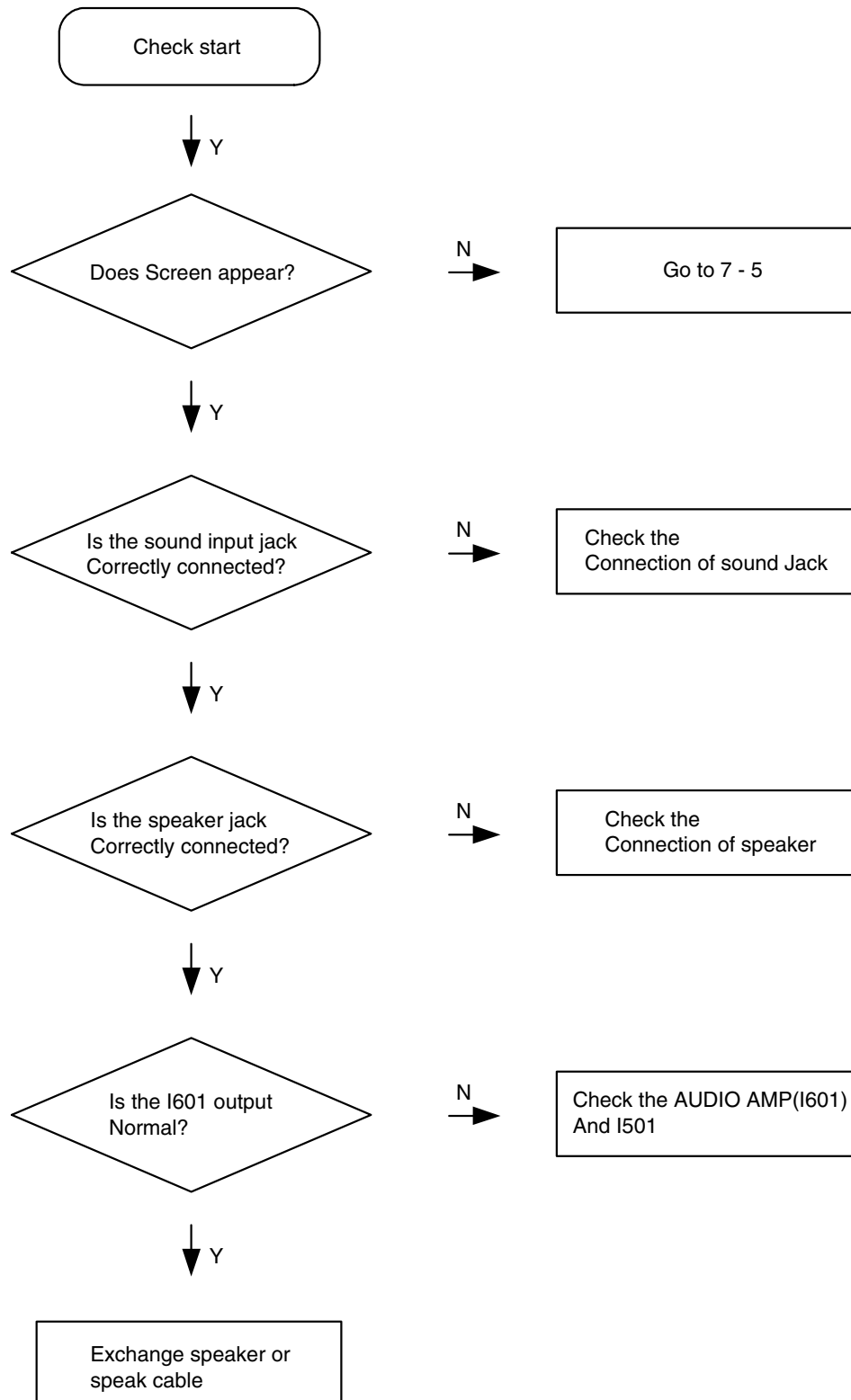
Trouble Shooting

7-5. When “No picture” in External input mode.



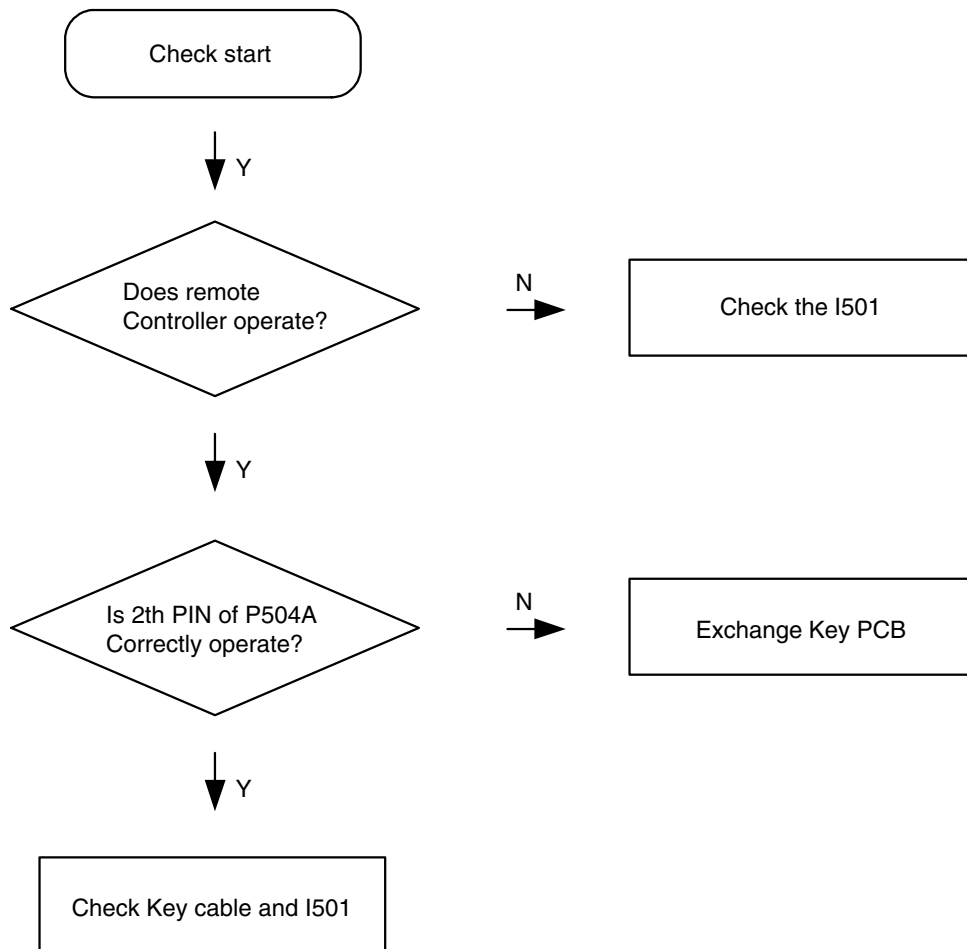
Trouble Shooting

7-6. When No Sound in External input mode.



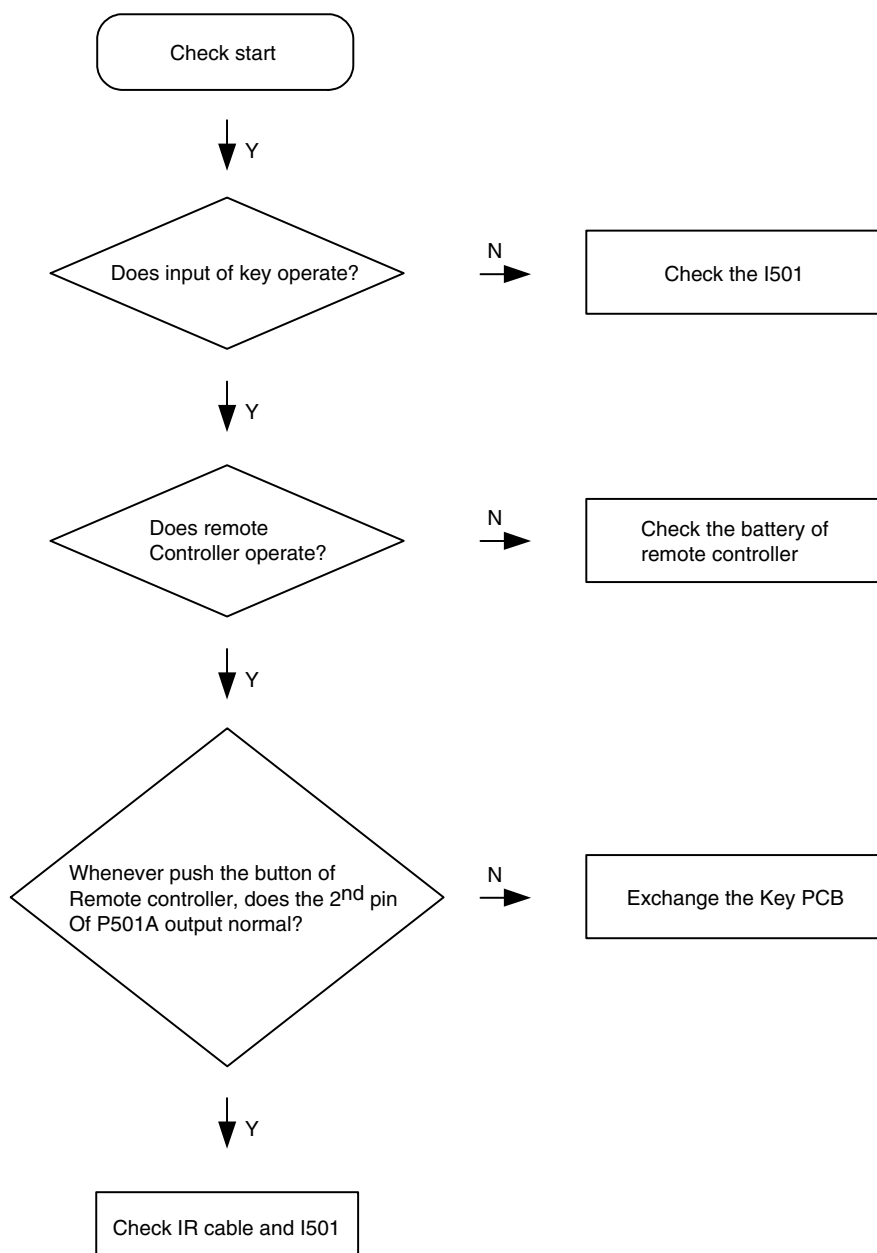
Trouble Shooting

7-7. When Key does not operate.

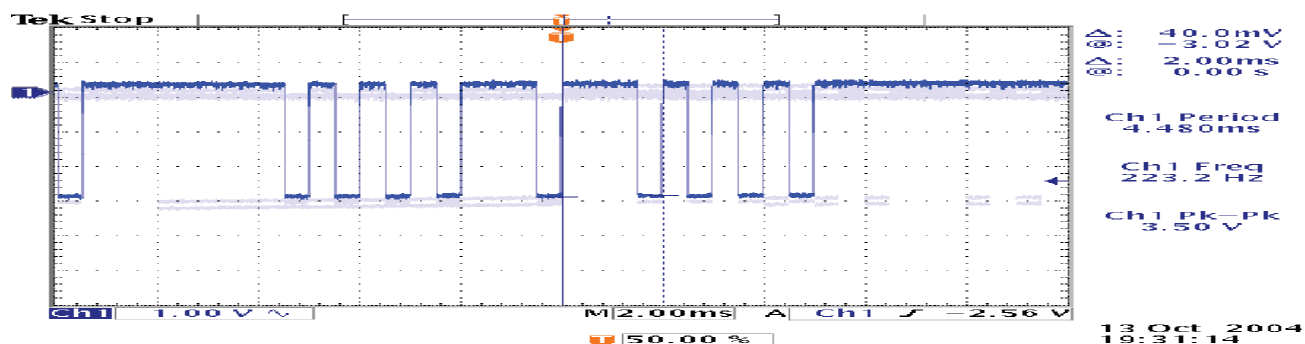


Trouble Shooting

7-8. When Remote Controller does not operate.



Output of 2nd pin of P501A (IR) : PCB for Remote Control EX) Push “PR DOWN” button.



8. Service part list

8-1. Service part list

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
ZZ100	48B5849C10	TRANSMITTER REMOCON	R-49C10 (AAA)	
ZZ110	PTACPWG121	ACCESSORY AS	DLP-20J1AHS	
00010	4850Q00910	BATTERY	R03/NN	
M821	4858213803	BAG INSTRUCTION	L.D.P.E TO.05X250X400(+20)	
M861	48586110R1	MANUAL INSTRUCTION	RUSSIAN	
ZZ120	PTBCSHG145	COVER BACK AS	DLP-20J1BHS	
M211	4852176301	COVER BACK	HIPS BK	
M321	4853296300	BRKT VESA	SECC T0.8	
M321A	7178300851	SCREW TAPPTITE	TT2 WAS 3X8 MFZN 3CR	
M751	4857541301	COVER JACK	HIPS BK	
ZZ130	PTPKCPG145	PACKING AS	DLP-20J1BHS	
M801	4858071100	BOX CARTON	DW-3	
M811	485819CM00	PAD	EPS	
M821	4858215701	BAG P.E	PE FOAM 10.5x1050x950	
ZZ140	PTCACAG177	CABINET AS	DLP-20J1LHS	
M1F1	4851F02200	STAND AS	DLP-20J1J3	
M1F1A	7172401652	SCREW TAPPTITE	TT2 TRS 4X16 MFZN BK 3CR	
M201A	7172401452	SCREW TAPPTITE	TT2 TRS 4X14 MFZN BK 3CR	
M201B	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M201C	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M201D	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M211A	7172401452	SCREW TAPPTITE	TT2 TRS 4X14 MFZN BK 3CR	
M361	4853635301	TERMINAL COVER	HIPS BK	
M361A	7178301052	SCREW TAPPTITE	TT2 WAS 3X10 MFZN BK 3CR	
M381	4853829303	FRAME MAIN PCB	SECC T0.8 LPL	
M381A	7008301451	SCREW MACHINE	WAS 3X14 MFZN 3CR	
M381B	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M381C	4956800200	CLAMP WIRE	WS-A-2-19	
M541	4855421300	SPEC PLATE	150ART P/E FILM (C/TV)	
P902A	4859006560	CABLE FFC	0.50P-50N-110L-T5	
PWC1	48599NS001	CORD POWER AS	CENT-AM KKP-419C-YH396-43V-2.0M	
V901	485LD03205	LCD PANEL	LC201V02-SDA3	
V902	485AS00780	POWER LIPS	IPB-6015N01DP	
ZZ200	PTFMJG145	MASK FRONT AS	DLP-20J1BHS	
M201	4852093411	MASK FRONT	HIPS GY	
M201E	4857743900	CUSION PANEL	PVC 300 X 10 T=1.0	
M551	4855556500	DECO SENSOR	GPSS MILKY	
M551A	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M561	48556192SD	MARK BRAND	SILVER DIA-CUTTING	
ZZ210	PTSPPWG121	SPEAKER AS	DLP-20J1AHS	
SP01	4858318310	SPEAKER	SP-5090F01C	
SP01A	4850703S51	CONNECTOR	YH025-03+35098+ULW=300	
SP02	4858318310	SPEAKER	SP-5090F01C	
SP02A	4850703S51	CONNECTOR	YH025-03+35098+ULW=300	
ZZ290	PTMPMSG177	PCB MAIN MANUAL AS	DLP-20J1LHS	
10	2193110001	SOLDER WIRE	SN-3.0AG(NP303T) φ3.0	
20	2193110002	SOLDER WIRE	SN-3.0AG-0.5CU(DHB-RMA3) φ1.6	
30	2291050619	FLUX SOLDER	SV-PBF-05(0.824)	
40	2291050314	FLUX SOLVENT	IM-1000	
A001A	2TW08010YE	TAPE PAPER	T0.08XW10X50M YELLOW	
I502	124LC32A-P	IC EEPROM	24LC32A-I/P 32K 8 PIN DIP STICK	
I601	PTB2SW7724	HEAT SINK ASS'Y	1LA42032E- + 7174300851	
00001	1LA42032E-	IC AUDIO AMP	LA42032-E	
0000A	4857027724	HEAT SINK	AL EX	
0000B	7174300851	SCREW TAPPTITE	TT2 RND 3X8 MFZN 3CR	
IC12	1TS0P34838	IC PREAMP	TS0P34838SJ	
LED1	DSR39MWW-	LED	SPR-39MWW (DUAL)	
M231	4852333001	PANEL CTRL	HIPS BK	
M481	4854872011	BUTTON POWER	HIPS GY	
M491	4854964011	BUTTON CH	HIPS GY	
M491A	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
P103	4859295520	CONN WAFER	4602-02MV2-60-1 PLUG 2P ST	
P103A	4859295620	CONN WAFER	4605-2FV2-1 JUMPER 2P 2.54	
P501	4859236220	CONN WAFER	YAW025-05	
P501A	4859236220	CONN WAFER	YAW025-05	
P502A	4850705N39	CONNECTOR	YH025-05+YH025-05+ULW=100	
P504	4859236120	CONN WAFER	YAW025-04	
P504A	4850704S79	CONNECTOR	YH025-04+YH250-04+ULW=700	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
P601	4859236020	CONN WAFER	YAW025-03	
P602	4859236020	CONN WAFER	YAW025-03	
P803	4859236720	CONN WAFER	YAW025-10	
P803A	4850710S32	CONNECTOR	YH025-10+YH025-10+ULW=500	
PA041	4859102130	JACK EARPHONE	YSC-1537	
PA06	4859105340	JACK S-VHS	DSW-10 (STRAIGHT)	
PA07	4859112850	JACK PIN	DPSS-0173 3PIN STR	
PA08	4859112950	JACK SCART	DSSM-0378 STR	
PA09	4859236320	CONN WAFER	YAW025-06	
PA09A	4850706S46	CONNECTOR	YH025-06+YH025-06+ULW=250	
PA09C	4859236320	CONN WAFER	YAW025-06	
PA501	4850705S26	CONNECTOR	YH025-05+YH025-05+ULW=350	
SW8	5540101009	SW PUSH	PS-22E06	
TU2	4850A23840	ANT SHIELD BOX	PAXBFO1DA (PAL)	
U100	4859728430	TUNER VARACTOR	UV1316/A I H-4	
X201	5XJ24R576E	CRYSTAL QUARTZ	HC-49/S 24.576MHZ 30PPM	
X501	5XJ24R576E	CRYSTAL QUARTZ	HC-49/S 24.576MHZ 30PPM	
Z101	5PK3953M--	FILTER SAW	K3953M	
Z102	5PK9650M--	FILTER SAW	K9650M	
ZZ200	PTMPJ2G177	PCB MAIN CHIP MOUNT BAS	DLP-20J1LHS	
C103	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C104	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C107	HCQK470JBA	C CHIP CERA	50V CH 47PF J 1608	
C108	HCQK470JBA	C CHIP CERA	50V CH 47PF J 1608	
C202	HCBK333KBA	C CHIP CERA	50V X7R 0.033MF K 1608	
C203	HCBK333KBA	C CHIP CERA	50V X7R 0.033MF K 1608	
C206	HCBK333KBA	C CHIP CERA	50V X7R 0.033MF K 1608	
C207	HCBK333KBA	C CHIP CERA	50V X7R 0.033MF K 1608	
C210	HCBK333KBA	C CHIP CERA	50V X7R 0.033MF K 1608	
C211	HCBK333KBA	C CHIP CERA	50V X7R 0.033MF K 1608	
C224	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C226	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C227	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C231	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C236	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C239	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C243	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C244	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C246	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C247	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C251	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C257	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C258	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C259	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C260	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C264	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C276	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	
C277	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	
C505	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C507	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C509	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C511	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C512	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C513	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C514	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C515	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C516	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C519	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C522	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C523	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C532	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C539	HCBK392KBA	C CHIP CERA	50V X7R 3900PF K 1608	
C540	HCBK473KBA	C CHIP CERA	50V X7R 0.047MF K 1608	
C541	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C544	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C546	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C549	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C551	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	

Service part list

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C552	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C555	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C556	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C562	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C564	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C565	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C566	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C568	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C570	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C574	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C575	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C576	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C578	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C579	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C581	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C589	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C590	HCQK220JBA	C CHIP CERA	50V CH 22PF J 1608	
C592	HCQK220JBA	C CHIP CERA	50V CH 22PF J 1608	
C593	HCQK220JBA	C CHIP CERA	50V CH 22PF J 1608	
C598	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C599	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C605	HCBK222KBA	C CHIP CERA	50V X7R 2200PF K 1608	
C607	HCBK222KBA	C CHIP CERA	50V X7R 2200PF K 1608	
C620	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C621	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C622	HCFF474ZBA	C CHIP CERA	Y5V 16V 0.47MF Z 1608	
C623	HCQK681JBA	C CHIP CERA	50V CH 680PF J 1608	
C625	HCQK681JBA	C CHIP CERA	50V CH 680PF J 1608	
C637	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C638	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C639	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C640	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C701	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C805	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C807	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C818	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C820	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C829	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C843	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C848	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C849	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C862	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C865	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C891	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C904	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C908	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C910	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C911	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C913	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C914	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C918	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA07	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CA16	HCQK271JBA	C CHIP CERA	50V CH 270PF J 1608	
CA26	HCQK271JBA	C CHIP CERA	50V CH 270PF J 1608	
CA31	HCQK271JBA	C CHIP CERA	50V CH 270PF J 1608	
CA32	HCQK270JBA	C CHIP CERA	50V CH 27PF J 1608	
CA33	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
R103	HRFT393JBA	R CHIP	1/10 39K OHM J 1608	
R106	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R107	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R114	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R134	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R208	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R249	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R257	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R258	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R270	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R271	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R290	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R291	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R421	HRFT105JBA	R CHIP	1/10 1M OHM J 1608	
R501	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R502	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R503	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R510	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R511	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R517	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R537	HRFT183JBA	R CHIP	1/10 18K OHM J 1608	
R542	HRFT682JBA	R CHIP	1/10 6.8K OHM J 1608	
R544	HRFT222JBA	R CHIP	1/10 2.2K OHM J 1608	
R546	HRFT681JBA	R CHIP	1/10 680 OHM J 1608	
R547	HRFT104JBA	R CHIP	1/10 100K OHM J 1608	
R548	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R549	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R550	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R551	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R557	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R558	HRFT152JBA	R CHIP	1/10 1.5K OHM J 1608	
R562	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R563	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R564	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R570	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R571	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R572	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R573	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R575	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R576	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R578	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R579	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R580	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R582	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R583	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R584	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R585	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R586	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R587	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R588	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R589	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R590	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R599	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R603	HRFT333JBA	R CHIP	1/10 33K OHM J 1608	
R604	HRFT223JBA	R CHIP	1/10 22K OHM J 1608	
R605	HRFT362JBA	R CHIP	1/10 3.6K OHM J 1608	
R606	HRFT333JBA	R CHIP	1/10 33K OHM J 1608	
R607	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R608	HRFT153JBA	R CHIP	1/10 15K OHM J 1608	
R609	HRFT222JBA	R CHIP	1/10 2.2K OHM J 1608	
R610	HRFT362JBA	R CHIP	1/10 3.6K OHM J 1608	
R620	HRFT223JBA	R CHIP	1/10 22K OHM J 1608	
R621	HRFT153JBA	R CHIP	1/10 15K OHM J 1608	
R622	HRFT223JBA	R CHIP	1/10 22K OHM J 1608	
R623	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R624	HRFT153JBA	R CHIP	1/10 15K OHM J 1608	
R625	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R642	HRFT479JBA	R CHIP	1/10 4.7 OHM J 1608	
R643	HRFT479JBA	R CHIP	1/10 4.7 OHM J 1608	
R644	HRFT479JBA	R CHIP	1/10 4.7 OHM J 1608	
R645	HRFT479JBA	R CHIP	1/10 4.7 OHM J 1608	
R752	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R784	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R785	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R786	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R788	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R801	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R820	HRFT431JBA	R CHIP	1/10 430 OHM J 1608	
R821	HRFT242JBA	R CHIP	1/10 2.4K OHM J 1608	

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LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R843	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R844	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R853	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R863	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R889	HRFT222JBA	R CHIP	1/10 2.2K OHM J 1608	
R890	HRFT241JBA	R CHIP	1/10 240 OHM J 1608	
R912	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R913	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R915	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R918	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R921	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R925	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R928	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA01	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA20	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA21	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA30	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA31	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA33	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA58	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA62	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA68	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA69	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA70	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA71	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA78	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA79	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA80	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA81	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA82	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA86	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA87	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA89	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA96	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RC81	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RC82	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
ZZ200	PTMPJ0G177	PCB MAIN (RHU) AS	DLP-20J1LHS	
C631	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP	
C622	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP	
C825	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP	
C826	CEXF1E471V	C ELECTRO	25V 470MF 10X12.5	
C828	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP	
ZZ200	PTMPJBG177	PCB MAIN M-10 AS	DLP-20J1LHS	
P201	485923202S	CONN WAFER	YW025-07 (STICK)	
P502	485923182S	CONN WAFER	YW025-05 (STICK)	
P701	485923172S	CONN WAFER	YW025-04 (STICK)	
ZZ200	PTMPJRG177	PCB MAIN RADIAL AS	DLP-20J1LHS	
C102	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP	
C106	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)	
C121	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP	
C205	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)	
C230	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)	
C232	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)	
C238	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)	
C249	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)	
C261	CEXF1C220A	C ELECTRO	16V RSM 22MF (5X7)	
C508	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP	
C517	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C520	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C524	CMXM2A682J	C MYLAR	100V 6800PF J (TP)	
C525	CEXF1H109A	C ELECTRO	50V RSM 1MF (4X7) TP	
C527	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C529	CMXL1J334J	C MYLAR	63V MEU 0.33MF J (TP)	
C534	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP	
C537	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP	
C538	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP	
C542	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C543	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C545	CEXF1H229A	C ELECTRO	50V RSM 2.2MF (4X7) TP	
C547	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C548	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C558	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C559	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C563	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C567	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C569	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C577	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C583	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP	
C597	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C601	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP	
C603	CEXF1C221V	C ELECTRO	16V RSS 220MF (8X11.5) TP	
C604	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C606	CEXF1E470V	C ELECTRO	RSS 25V 47MF 5X11 P5.0 TA	
C608	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C624	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C626	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C703	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C802	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7	
C806	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C814	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C815	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7	
C827	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C841	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7	
C842	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7	
C844	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP	
C850	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C851	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP	
C860	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7	
C861	CEXE1C471E	C ELECTRO	16V RM 470MF (8X11.5) TP	
C880	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
C881	CEXE1C471E	C ELECTRO	16V RM 470MF (8X11.5) TP	
C890	CEXF1H479A	C ELECTRO	50V RSM 4.7MF 4X7	
C903	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C905	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C909	CEXF1C100A	C ELECTRO	16V RSM 10MF 5X7	
C917	CEXE1C471E	C ELECTRO	16V RM 470MF (8X11.5) TP	
CA25	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
CA30	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
CA35	CEXF1C470A	C ELECTRO	16V RSM 47MF (5X7) TP	
CA67	CEXF1C101A	C ELECTRO	16V RSM 100MF 6X7 TP	
L206	5CPX479K--	COIL PEAKING	4.7UH K (RADIAL)	
L209	58C0000116	COIL BEAD	HC-3550R	
L601	58C0000116	COIL BEAD	HC-3550R	
L807	58C0000116	COIL BEAD	HC-3550R	
L902	5CPX479K--	COIL PEAKING	4.7UH K (RADIAL)	
LA10	58C0000116	COIL BEAD	HC-3550R	
LA32	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
LA33	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
LA35	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
LA36	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
LA37	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
LA38	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
LA41	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
LA42	5PXF1B471M	FILTER EMI	CFI 06 B 1H 470PF	
Q813	T2SA1980Y-	TR	2SA1980(N/Y)	
Q814	T2SC5343Y-	TR	2SC5343(N/Y)	
Q815	T2SA1980Y-	TR	2SA1980(N/Y)	
Q816	T2SC5343Y-	TR	2SC5343(N/Y)	
SW701	5S50101Z90	SW TACT	THVV502GDA	
SW702	5S50101Z90	SW TACT	THVV502GDA	
SW703	5S50101Z90	SW TACT	THVV502GDA	
SW704	5S50101Z90	SW TACT	THVV502GDA	
SW705	5S50101Z90	SW TACT	THVV502GDA	
ZZ200	PTMPJAG177	PCB MAIN AXIAL AS	DLP-20J1LHS	
A001	4859805896	PCB MAIN	234X189 K4V	
D101	D1N4148--	DIODE	1N4148 (TAPPING)	

Service part list

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
D102	DBA282---	DIODE	BA282	
D602	D1N4148---	DIODE	1N4148 (TAPPING)	
DA28	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
DA41	DUZ5R1B---	DIODE ZENER	UZ-5.1B	
DA42	DUZ5R1B---	DIODE ZENER	UZ-5.1B	
DA43	DUZ5R1B---	DIODE ZENER	UZ-5.1B	
DA44	DUZ5R1B---	DIODE ZENER	UZ-5.1B	
DA45	DUZ5R1B---	DIODE ZENER	UZ-5.1B	
L101	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L203	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L204	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L205	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L207	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L208	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L210	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L213	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L214	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L505	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L506	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L507	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L508	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L509	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L510	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L512	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L513	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L514	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L515	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L516	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L517	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L518	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L519	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L523	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L531	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L851	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L903	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L904	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L905	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
L906	5CPZ479K02	COIL PEAKING	4.7UH K (AXIAL 3.5MM)	
LA43	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
LA44	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
LA451	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
LA461	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
R721	RD-AZ181J-	R CARBON FILM	1/6 180 OHM J	
R722	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J	
R723	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J	
R724	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R812	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R813	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
ZZ200	PTMPJ1G177	PCB MAIN CHIP MOUNT AAS	DLP-20J1LHS	
10	2193220010	SOLDER CREAM(PB-FREE)	LST309-M(SN+3.0AG(0.5CU)	
C123	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C201	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C204	HCQK150JBA	C CHIP CERA	50V CH 15PF J 1608	
C208	HCQK150JBA	C CHIP CERA	50V CH 15PF J 1608	
C209	HCBK223KBA	C CHIP CERA	50V X7R 0.022MF K 1608	
C212	HCQK150JBA	C CHIP CERA	50V CH 15PF J 1608	
C221	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C237	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C240	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C242	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C245	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C254	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C256	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C272	HCQK220JBA	C CHIP CERA	50V CH 22PF J 1608	
C273	HCQK220JBA	C CHIP CERA	50V CH 22PF J 1608	
C518	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C526	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C528	HCBK223KBA	C CHIP CERA	50V X7R 0.022MF K 1608	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C530	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
C531	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C535	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C536	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C550	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C553	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C554	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C557	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C560	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C561	HCBH224KBA	C CHIP CERA	25V X7R 0.22MF K 1608	
C571	HCQK470JBA	C CHIP CERA	50V CH 47PF J 1608	
C572	HCQK470JBA	C CHIP CERA	50V CH 47PF J 1608	
C573	HCQK470JBA	C CHIP CERA	50V CH 47PF J 1608	
C591	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C594	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C595	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C596	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C702	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C704	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C804	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C812	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C824	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C845	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C882	HCBK222KBA	C CHIP CERA	50V X7R 2200PF K 1608	
C883	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
C884	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C885	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA08	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CA09	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CA11	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CA13	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CA20	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA29	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA34	HCQK270JBA	C CHIP CERA	50V CH 27PF J 1608	
CA40	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA44	HCBK471KBA	C CHIP CERA	50V X7R 470PF K 1608	
CA451	HCBK392KBA	C CHIP CERA	50V X7R 3900PF K 1608	
CA461	HCBK392KBA	C CHIP CERA	50V X7R 3900PF K 1608	
CA471	HCBK392KBA	C CHIP CERA	50V X7R 3900PF K 1608	
CA481	HCBK392KBA	C CHIP CERA	50V X7R 3900PF K 1608	
CA49	HCBK471KBA	C CHIP CERA	50V X7R 470PF K 1608	
CA50	HCBK471KBA	C CHIP CERA	50V X7R 470PF K 1608	
CA51	HCBK471KBA	C CHIP CERA	50V X7R 470PF K 1608	
CA77	HCBK472KBA	C CHIP CERA	50V X7R 4700PF K 1608	
D801	DBAV70---B	DIODE CHIP	BAV70	
D805	DBAV70---B	DIODE CHIP	BAV70	
D850	DM2FM3---C	DIODE CHIP SCHOTTKY	M2FM3 M2F TYPE	
DA17	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA18	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA19	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA25	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA26	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA27	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA30	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA32	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA37	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
DA38	DZ02W5R6VA	DIODE CHIP ZENER	Z02W5.6V	
I402	1CD74HC52D	IC CHIP LOGIC	CD74HC4052M SOIC 16 REEL	
I501	1TDA155F81	IC CHIP MICOM	TDA15521E/N1/F81	
I503	139VF0207Q	IC CHIP FLASH MEMORY	SST39VF020-70	
I504	1TDA9178TE	IC CHIP PICTURE IMPROVEMENT	TDA9178TE	
I508	1DTC34LF86	IC CHIP RECEIVER	DTC34LF86A	
I603	1TDA1308TC	IC CHIP HEADPHONE DRIVER	TDA1308T	
I801	TFDS4953-C	FET CHIP	FDS4953 SO-8 -30V -5A REEL	
I803	1AP117E33C	IC CHIP REGULATOR	AP1117E33A 3.3V SOT-223	
I807	1BA6161F-C	IC CHIP SW REG	BA6161F 30-35V 100KHZ SOP8 REEL	
I809	1AP117E18C	IC CHIP REGULATOR	AP1117E18A 1.8V SOT-223	
I811	1AP117EA-C	IC CHIP REGULATOR	AP1117EA ADJ SOT-223	

Service part list

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
I816	1LM317BD2E	IC CHIP REGULATOR	LM317BD2T ADJ 1.2V 37V 1.5A D2PAK	
I820	TFDS4953-C	FET CHIP	FDS4953 SO-8 -30V -5A REEL	
I851	1APW1172-D	IC CHIP DC-DC CONVERTER	APW1172	
L806	HLC472M01D	L CHIP COIL	4.7MH M SLF7045	
L850	HLC100K01E	L CHIP COIL	10UH K 120120	
L920	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
L921	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
L922	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
L923	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
L924	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
L925	HFRMZA600A	F CHIP BEAD ARRAY	60 OHM MZA 3216Y	
P902	4859297320	CONN WAFER	05002HR-50A01(G)	
P905	4859297320	CONN WAFER	05002HR-50A01(G)	
P906	4859200970	CONN WAFER SMD	DF9B-41S-1V SMD	
Q120	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q506	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q507	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
Q508	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q602	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
Q701	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q702	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q802	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q803	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q804	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q805	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q820	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
Q850	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA04	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA08	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA12	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA13	T2SA1037KB	TR CHIP	2SA1037AKT146-R	
QA21	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA71	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA72	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA74	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
QA75	T2SC2412KB	TR CHIP	2SC2412K-T146-BR	
R100	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R104	HRFT683JBA	R CHIP	1/10 68K OHM J 1608	
R105	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R115	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R120	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R131	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R135	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R140	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R141	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R143	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R203	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R204	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R206	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R207	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R211	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R212	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
R247	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R248	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R250	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R251	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R253	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R254	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R255	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R296	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R297	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R298	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R302	HRFT224JBA	R CHIP	1/10 220K OHM J 1608	
R303	HRFT224JBA	R CHIP	1/10 220K OHM J 1608	
R422	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R504	HRFT152JBA	R CHIP	1/10 1.5K OHM J 1608	
R505	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R507	HRFT000-BA	R CHIP	1/10 0 OHM 1608	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R509	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R514	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R515	HRFT153JBA	R CHIP	1/10 15K OHM J 1608	
R516	HRFT153JBA	R CHIP	1/10 15K OHM J 1608	
R518	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R519	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R521	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R522	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R529	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R530	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R531	HRFT181JBA	R CHIP	1/10 180 OHM J 1608	
R532	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R533	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R534	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R538	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R540	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R541	HRFT393JBA	R CHIP	1/10 39K OHM J 1608	
R543	HRFT222JBA	R CHIP	1/10 2.2K OHM J 1608	
R545	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R552	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R553	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R554	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R555	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R556	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R559	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R560	HRFT222JBA	R CHIP	1/10 2.2K OHM J 1608	
R561	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R565	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R566	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R567	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R568	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R569	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R574	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R577	HRFT273JBA	R CHIP	1/10 27K OHM J 1608	
R581	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R592	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R704	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R705	HRFT223JBA	R CHIP	1/10 22K OHM J 1608	
R706	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R708	HRFT104JBA	R CHIP	1/10 100K OHM J 1608	
R709	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R710	HRFT202JBA	R CHIP	1/10 2K OHM J 1608	
R712	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R715	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R716	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R720	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R787	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R803	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R804	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R805	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R807	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R808	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R809	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R810	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R811	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R814	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R815	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R830	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R831	HRFT393JBA	R CHIP	1/10 39K OHM J 1608	
R845	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R846	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R851	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R852	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R860	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R861	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R880	HRFT362JBA	R CHIP	1/10 3.6K OHM J 1608	
R881	HRFT202JBA	R CHIP	1/10 2K OHM J 1608	
R885	HRFT512JBA	R CHIP	1/10 5.1K OHM J 1608	

Service part list

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R931	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R932	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R933	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R934	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA05	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RA22	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA26	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA27	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA28	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA32	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA37	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
RA38	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
RA39	HRFT222JBA	R CHIP	1/10 2.2K OHM J 1608	
RA40	HRFT220JBA	R CHIP	1/10 22 OHM J 1608	
RA46	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
RA48	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA54	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA55	HRFT131JBA	R CHIP	1/10 130 OHM J 1608	
RA59	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA60	HRFT131JBA	R CHIP	1/10 130 OHM J 1608	
RA61	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RA72	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA73	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RA76	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA77	HRFT131JBA	R CHIP	1/10 130 OHM J 1608	
RA91	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA92	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA93	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA95	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC80	HRFT000-BA	R CHIP	1/10 0 OHM 1608	

Service part list

8-2. Difference List of SL-130P

loc	parts_name	20J1BHS	20J1LHS	20D7BHBS	20D7LHBS	20W2AHBS	parts_desc
D101	DIODE	D1N4148---	D1N4148---	DBAT85----	DBAT85----	DBAT85----	MAIN AXIAL AS
LA451	COIL PEAKING	5CPZ100K02	5CPZ100K02	5CPZ100K02	5CPZ100K02	X	MAIN AXIAL AS
LA461	COIL PEAKING	5CPZ100K02	5CPZ100K02	5CPZ100K02	5CPZ100K02	X	MAIN AXIAL AS
LA45	COIL PEAKING	X	X	X	X	5CPZ100K02	MAIN AXIAL AS
LA46	COIL PEAKING	X	X	X	X	5CPZ100K02	MAIN AXIAL AS
C903	C ELECTRO	CEXF1C100A	CEXF1C100A	CEXF1C100A	CEXF1C100A	X	MAIN RADIAL AS
C905	C ELECTRO	CEXF1C100A	CEXF1C100A	CEXF1C100A	CEXF1C100A	X	MAIN RADIAL AS
C909	C ELECTRO	CEXF1C100A	CEXF1C100A	CEXF1C100A	CEXF1C100A	X	MAIN RADIAL AS
C917	C ELECTRO	CEXE1C471E	CEXE1C471E	CEXE1C471E	CEXE1C471E	X	MAIN RADIAL AS
CA451	C CHIP CERA	HCBK392KBA	HCBK392KBA	HCBK392KBA	HCBK392KBA	X	PCB CHIP A
CA461	C CHIP CERA	HCBK392KBA	HCBK392KBA	HCBK392KBA	HCBK392KBA	X	PCB CHIP A
CA471	C CHIP CERA	HCBK392KBA	HCBK392KBA	HCBK392KBA	HCBK392KBA	X	PCB CHIP A
CA481	C CHIP CERA	HCBK392KBA	HCBK392KBA	HCBK392KBA	HCBK392KBA	X	PCB CHIP A
CA45	C CHIP CERA	X	X	X	X	HCBK392KBA	PCB CHIP A
CA46	C CHIP CERA	X	X	X	X	HCBK392KBA	PCB CHIP A
CA47	C CHIP CERA	X	X	X	X	HCBK392KBA	PCB CHIP A
CA48	C CHIP CERA	X	X	X	X	HCBK392KBA	PCB CHIP A
P902	CONN WAFER	4859297320	4859297320	4859297320	4859297320	X	PCB CHIP A
P503	CONN WAFER	X	X	X	X	4859293820	PCB CHIP A
P905	CONN WAFER	X	4859297320	X	4859297320	X	PCB CHIP A
P906	CONN WAFER SMD	X	4859200970	X	4859200970	X	PCB CHIP A
I508	IC CHIP RECEIVER	1DTC34LF86	1DTC34LF86	1DTC34LF86	1DTC34LF86	X	PCB CHIP A
I816	IC CHIP REGULATOR	X	1LM317BD2E	X	1LM317BD2E	X	PCB CHIP A
L920	F CHIP BEAD ARRAY	HFRMZA600A	HFRMZA600A	HFRMZA600A	HFRMZA600A	X	PCB CHIP A
L921	F CHIP BEAD ARRAY	HFRMZA600A	HFRMZA600A	HFRMZA600A	HFRMZA600A	X	PCB CHIP A
L922	F CHIP BEAD ARRAY	HFRMZA600A	HFRMZA600A	HFRMZA600A	HFRMZA600A	X	PCB CHIP A
L923	F CHIP BEAD ARRAY	HFRMZA600A	HFRMZA600A	HFRMZA600A	HFRMZA600A	X	PCB CHIP A
L924	F CHIP BEAD ARRAY	HFRMZA600A	HFRMZA600A	HFRMZA600A	HFRMZA600A	X	PCB CHIP A
L925	F CHIP BEAD ARRAY	HFRMZA600A	HFRMZA600A	HFRMZA600A	HFRMZA600A	X	PCB CHIP A
L903	COIL PEAKING	5CPZ479K02	5CPZ479K02	5CPZ479K02	5CPZ479K02	X	PCB CHIP A
L904	COIL PEAKING	5CPZ479K02	5CPZ479K02	5CPZ479K02	5CPZ479K02	X	PCB CHIP A
L905	COIL PEAKING	5CPZ479K02	5CPZ479K02	5CPZ479K02	5CPZ479K02	X	PCB CHIP A
L906	COIL PEAKING	5CPZ479K02	5CPZ479K02	5CPZ479K02	5CPZ479K02	X	PCB CHIP A
C904	C CHIP CERA	HCBK104KBA	HCBK104KBA	HCBK104KBA	HCBK104KBA	X	PCB CHIP B
C908	C CHIP CERA	HCBK104KBA	HCBK104KBA	HCBK104KBA	HCBK104KBA	X	PCB CHIP B
C910	C CHIP CERA	HCBK104KBA	HCBK104KBA	HCBK104KBA	HCBK104KBA	X	PCB CHIP B
C911	C CHIP CERA	HCBK104KBA	HCBK104KBA	HCBK104KBA	HCBK104KBA	X	PCB CHIP B
C913	C CHIP CERA	HCBK104KBA	HCBK104KBA	HCBK104KBA	HCBK104KBA	X	PCB CHIP B
C914	C CHIP CERA	HCBK104KBA	HCBK104KBA	HCBK104KBA	HCBK104KBA	X	PCB CHIP B
C918	C CHIP CERA	HCBK104KBA	HCBK104KBA	HCBK104KBA	HCBK104KBA	X	PCB CHIP B
C711	C CHIP CERA	X	X	X	X	HCBK104KBA	PCB CHIP B
R889	R CHIP	X	HRFT222JBA	X	HRFT222JBA	X	PCB CHIP B
R890	R CHIP	X	HRFT241JBA	X	HRFT241JBA	X	PCB CHIP B
R912	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R913	R CHIP	HRFT103JBA	HRFT103JBA	HRFT103JBA	HRFT103JBA	X	PCB CHIP B
R915	R CHIP	HRFT103JBA	HRFT103JBA	HRFT103JBA	HRFT103JBA	X	PCB CHIP B
R918	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R921	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R925	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R928	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R931	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R932	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R933	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R934	R CHIP	HRFT101JBA	HRFT101JBA	HRFT101JBA	HRFT101JBA	X	PCB CHIP B
R741	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R742	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R743	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R744	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R745	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R746	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R747	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R748	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R749	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R750	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
R751	R CHIP	HRFT000-BA	X	HRFT000-BA	X	HRFT000-BA	PCB CHIP B
R752	R CHIP	X	HRFT000-BA	X	HRFT000-BA	X	PCB CHIP B
R761	R CHIP	X	X	X	X	HRFT000-BA	PCB CHIP B
PA09A	CONNECTOR	4850706S46	4850706S46	4850706S41	4850706S41	4850706S47	MAIN MANUAL
IC13	IC PREAMP	X	X	1TSOP34838	1TSOP34838	1TSOP34838	MAIN MANUAL

Service part list

loc	parts_name	20J1BHS	20J1LHS	20D7BHBS	20D7LHBS	20W2AHBS	parts_desc
LED2	LED	X	X	DSPR39MVW-	DSPR39MVW-	DSPR39MVW-	MAIN MANUAL
P501B	CONN WAFER	X	X	4859236220	4859236220	4859236220	MAIN MANUAL
IC12	IC PREAMP	1TSOP34838	1TSOP34838	X	X	X	MAIN MANUAL
LED1	LED	DSPR39MVW-	DSPR39MVW-	X	X	X	MAIN MANUAL
P501A	CONN WAFER	4859236220	4859236220	X	X	X	MAIN MANUAL
PA041	JACK EARPHONE	4859102130	4859102130	4859102130	4859102130	X	MAIN MANUAL
PA09C	CONN WAFER	4859236320	4859236320	4859236320	4859236320	X	MAIN MANUAL
PA04	JACK HEADPHONE	X	X	X	X	97P6316100	MAIN MANUAL
PA09B	CONN WAFER	X	X	X	X	4859236320	MAIN MANUAL
P502A	CONNECTOR	4850705N39	4850705N39	4850705N39	4850705N39	4850705N38	MAIN MANUAL
P504A	CONNECTOR	4850704S79	4850704S79	4850704S79	4850704S79	4850704S77	MAIN MANUAL
P803A	CONNECTOR	4850710S32	4850710S32	4850710S32	4850710S32	4850710S33	MAIN MANUAL
PA501	CONNECTOR	4850705S26	4850705S26	4850705S26	4850705S26	4850705S29	MAIN MANUAL
SP01/SP02	SPEAKER	4858318310	4858318310	4858319610	4858319610	4858319610	SPEAKER AS
SP01A	CONNECTOR	4850703S51	4850703S51	4850703S79	4850703S79	4850703S79	SPEAKER AS
SP02A	CONNECTOR	4850703S51	4850703S51	4850703S80	4850703S80	4850703S79	SPEAKER AS
V901	LCD PANEL	485LD12202	485LD03205	485LD12202	485LD03205	485LD13200	CABINET AS
V902	POWER LIPS	485AS00880	485AS00780	485AS00880	485AS00780	4850M11210	CABINET AS
V903	MODULE INVERTER	X	X	X	X	4850M018NV	CABINET AS
P501P	CONNECTOR	X	X	X	X	4850714N08	CABINET AS
P902A	CABLE FFC	4859005960	4859006560	4859005960	4859006560	X	CABINET AS
P503A	CABLE LVDS	X	X	X	X	4859006160	CABINET AS

9. Power

9-1. PB-6024W02(The power module for DLP-20W2)

Input Requirements.

Input Voltage Range	Voltage Range:AC180V to 270V	Normal Voltage:AC 240V
Frequency Range	Frequency Range:47 To 63Hz	Normal Frequency:50 To 60Hz
Input Current	≤ 0.35 Arms at 240 Vac input	
Inrush Current	240V 30A peak	
Earth Leakage Current	3.5mA MAX(250AC)	
Hi-Pot Test	Primary to GND:3000VAC for 1 minute	
Cutoff Current 10mA	3.6KVAC for 3 seconds (mass production)	
Insulation Resistance	Insulation resistance shall be more then 4M Ω at 500Vdc between primary Live Neutral line and secondary.	
Input AC surge	The power supply withstand 300Vrms input for 10 seconds.	
Primary inlet F.G to secondary GND	25A for 3second 80m Ω MAX	

Output Requirements

Board	Output Voltage	Minimum output voltage	Maximum output voltage	Output Current			Condition
				MIN	NOR	MAX	
DEP	+24Vdc	+22.6Vdc	+25.2Vdc	0A	2A	2A	
	+15Vdc	+14.0Vdc	+15.6Vdc	0A	0.3A	0.6A	
	+9Vdc	+7.75Vdc	+9.45Vdc	0A	0.3A	1.3A	
	+5Vdc	+4.75Vdc	+5.25Vdc	130mA	0.5A	0.5A	
	+10V	This is the voltage for a signal. When attaching the product which is by the set, voltage became +8.5Vdc~+11.00Vdc. ※ When the product does not attach from the set, +10V outputs are identical from 'output +24Vdc'					

Power

9-2. IPB-6015N01/02(LIPS for DLP-20J1/D7)

Input Requirements.

Input Voltage Range	Voltage Range:AC180V to 270V	Normal Voltage:AC 240V
Frequency Range	Frequency Range:47 To 63Hz	Normal Frequency:50 To 60Hz
Input Current	≤ 0.35 Arms at 240 Vac input	
Inrush Current	240V 30A peak	
Earth Leakage Current	3.5mA MAX(250AC)	
Hi-Pot Test Cutoff Current 10mA	Primary to GND:3000VAC for 1 minute 3.6KVAC for 3 seconds (mass production)	
Insulation Resistance	Insulation resistance shall be more then 4M Ω at 500Vdc between primary Live Neutral line and secondary.	
Input AC surge	The power supply withstand 300Vrms input for 10 seconds.	
Primary inlet F.G to secondary GND	25A for 3second 80m Ω MAX	

Output Requirements

Board	Output Voltage	Minimum output voltage	Maximum output voltage	Output Current			Condition
				MIN	NOR	MAX	
DEP	+15Vdc	+14.0Vdc	+16.5Vdc	0A	2A	2A	
	+9Vdc	+7.75Vdc	+9.8Vdc	0A	0.5A	1A	
	+5Vdc	+5.00Vdc	+5.5Vdc	130mA	0.5A	1A	
	+10V	This is the voltage for a signal. When attaching the product which is by the set, voltage became +8.5Vdc~+11.00Vdc. ※When the product does not attach from the set, +10V outputs are identical from 'output +15Vdc'					
	LAMP VOLTAGE (LPL 700V)	600Vdc	880Vdc	4.0mA	5.5mA	7.5mA	

10. Inverter

10-1. Feature

- Drive 6 lamps with one module
- Norminal current 6.5mA_{rms} for each lamp
- 21.6~26.4V input voltage operation
- Automatically balancing of lamp current
- Long lamp life with soft start
- Protection against lamp open or failure
- Built-in fuse
- Low EMI and spurious noise

10-2. Recommended operating conditions.

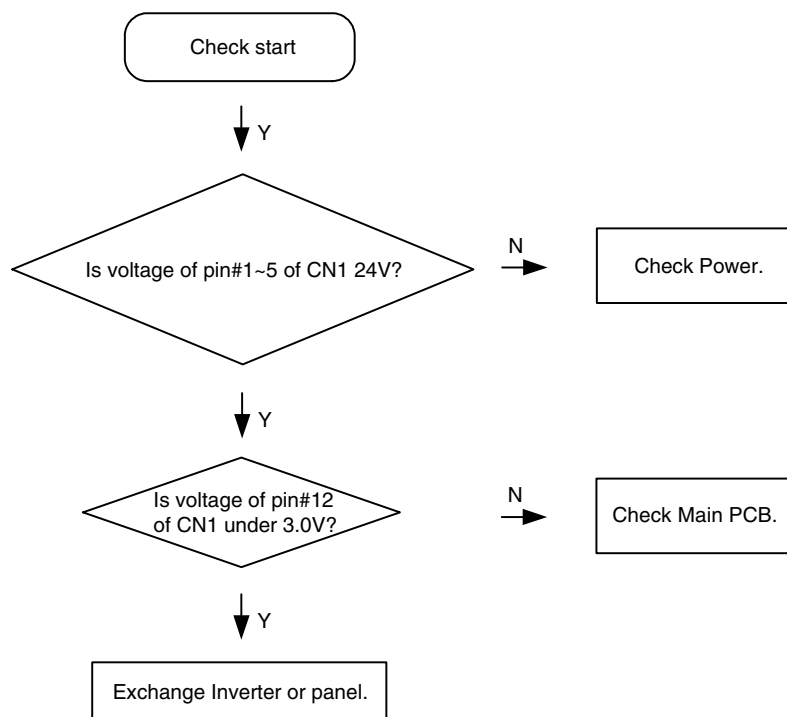
Parameter	Symbol	Recommendation			Units
		Min	R.C.	Max	
Input supply voltage	V _{IN}	21.6	24.0	26.4	V
Full bright lamp current	I _{O(MAX)}	4.0	6.5	7.5	mA _{rms}
Brightness control voltage range	V _{BRT}	0		5.0	V
Lamp on/off control voltage	V _{SLEEP}	3.0	5.0	7.0	V
Lamp operating voltage(reference)	V _O		850		V _{rms}
Operating ambient temperature range	T _A	0		50	°C

10-3. Connector and functional pin description

CN1 connector	: 20022WR-14 (Yeonho or Equivalent)
CN1 - 1~5	V _{IN} (DC Input : 24.0V)
CN1 - 6~10	G _{ND} (Power supply return)
CN1 - 11	V _{BRT} (Bright adjust : 0to 5.0V)
CN1 - 12	V _{SLEEP} (Lamp on : Low, Lamp off : High)
CN1 - 13	External PWM pulse input for bright adjust
CN1 - 14	Lamp status(Lamp on : Low, Lamp off : High)

10-4. Troubleshooting

*Backlight doesn't turn on

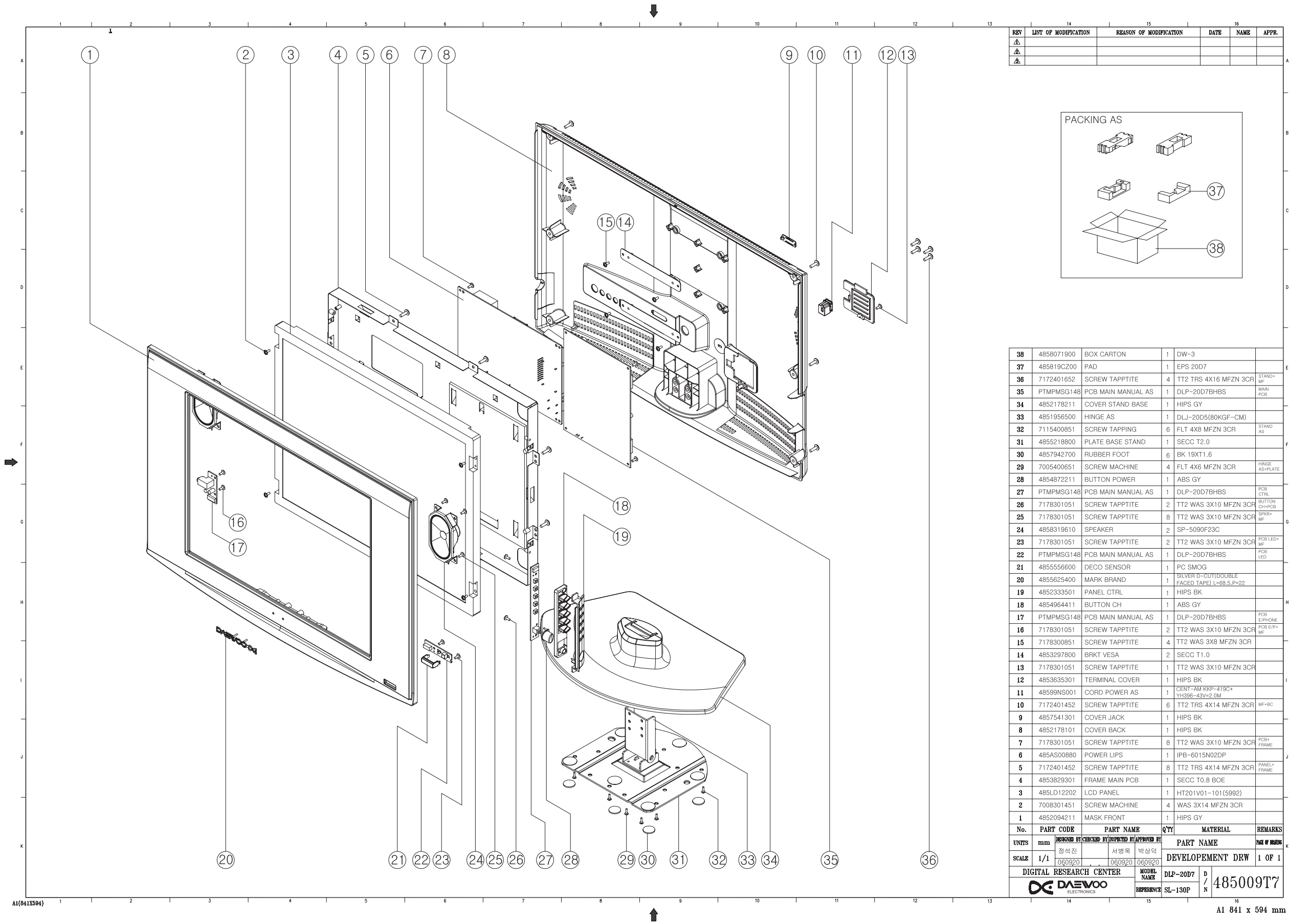


DLP-20J1



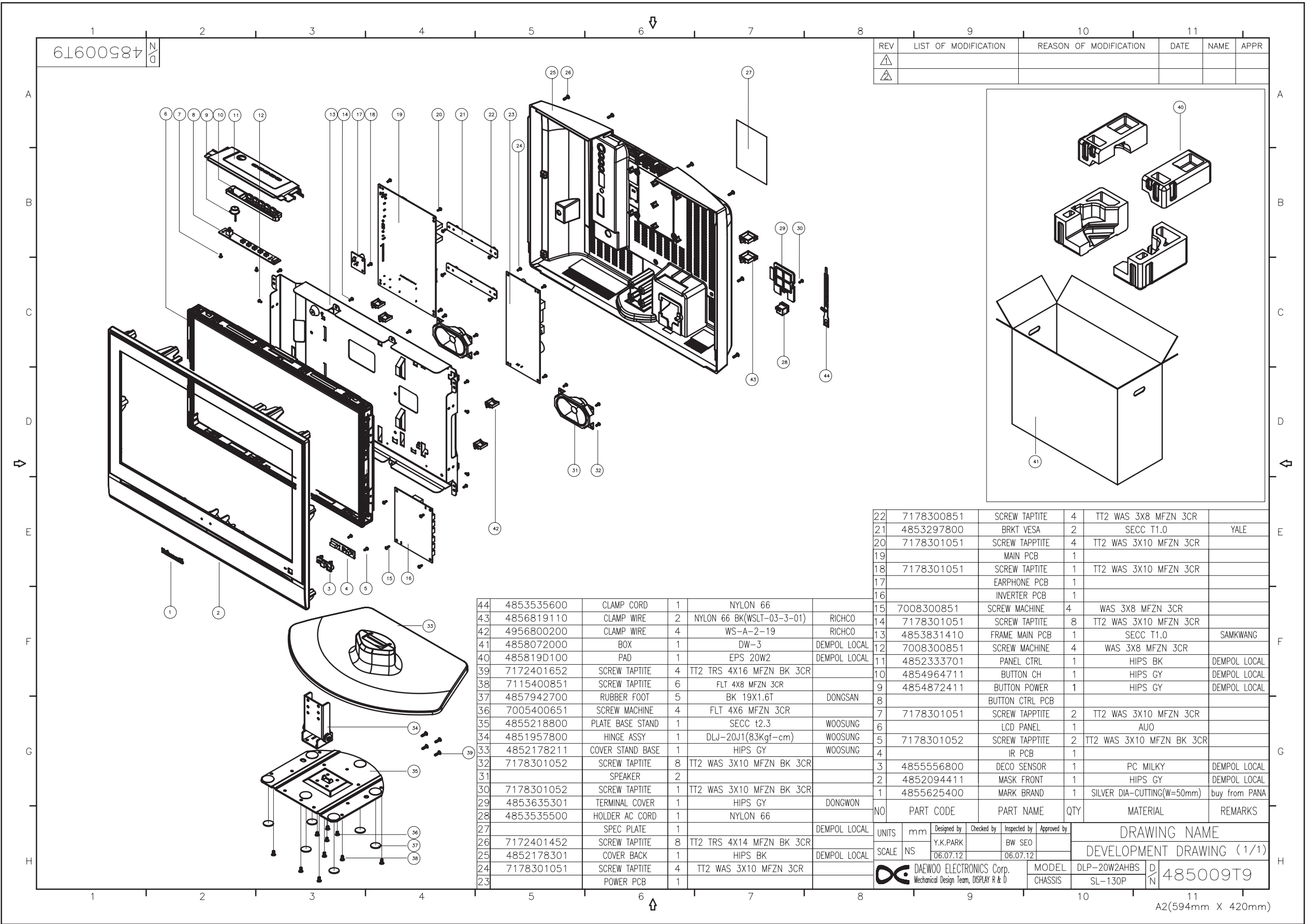
Exploded View

DLP-20D7



Exploded View

DLP-20W2

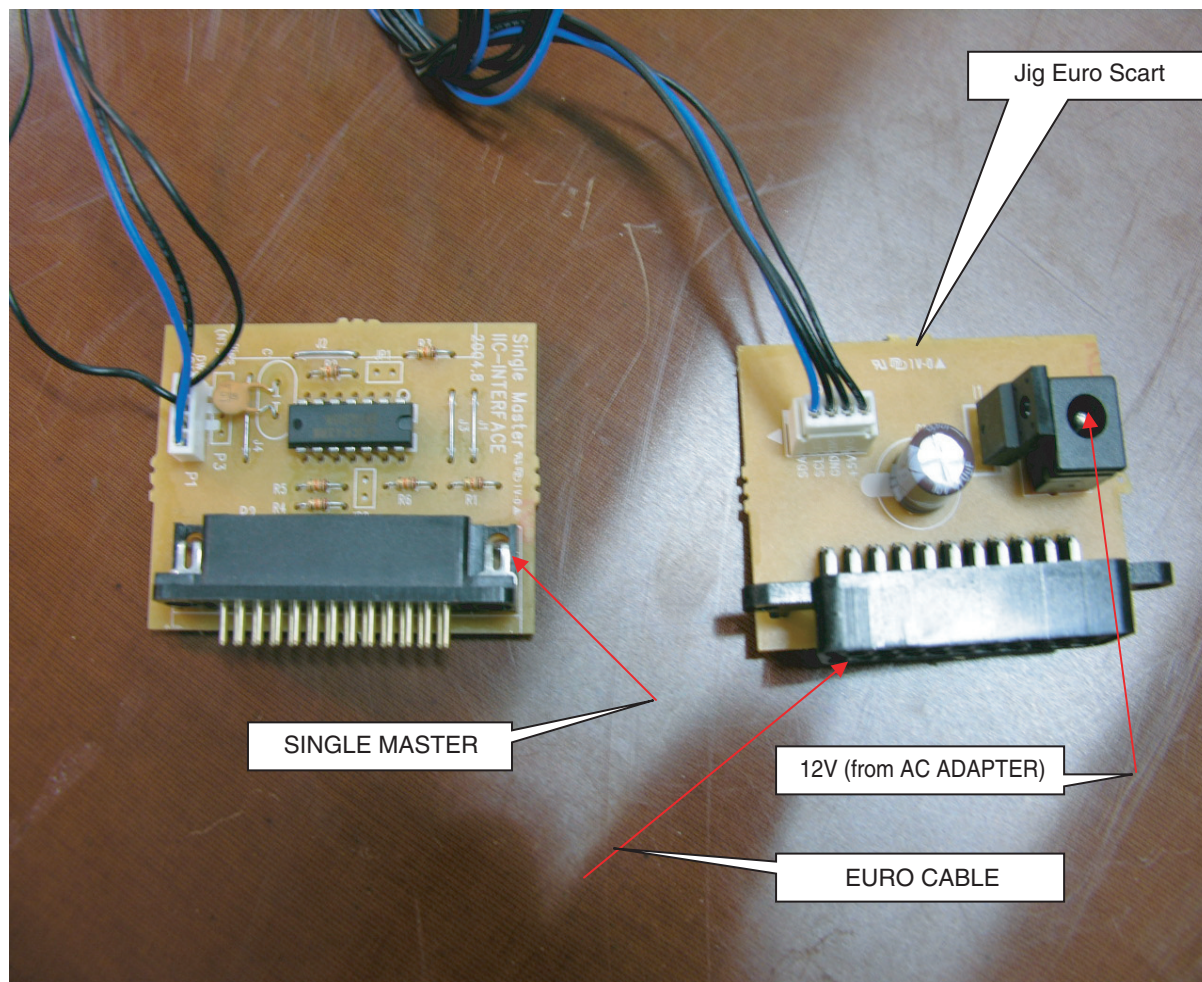


SOFTWARE INSTALL & UPGRADE

SOFTWARE INSTALL & UPGRADE

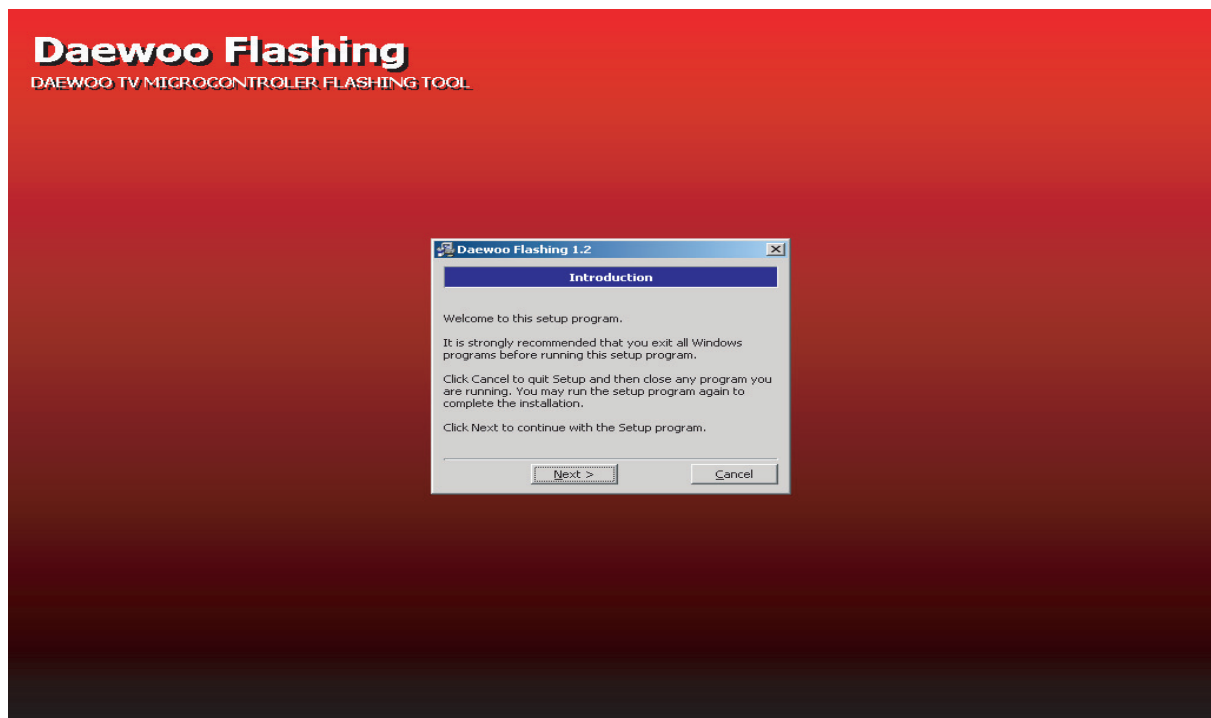
1. Software upgrade requires: Service remocon R-30SVC7, Single master, Jig EURO Scart, Euro cable, AC adapter.

a) Please connect Single Master to PC port LPT1.

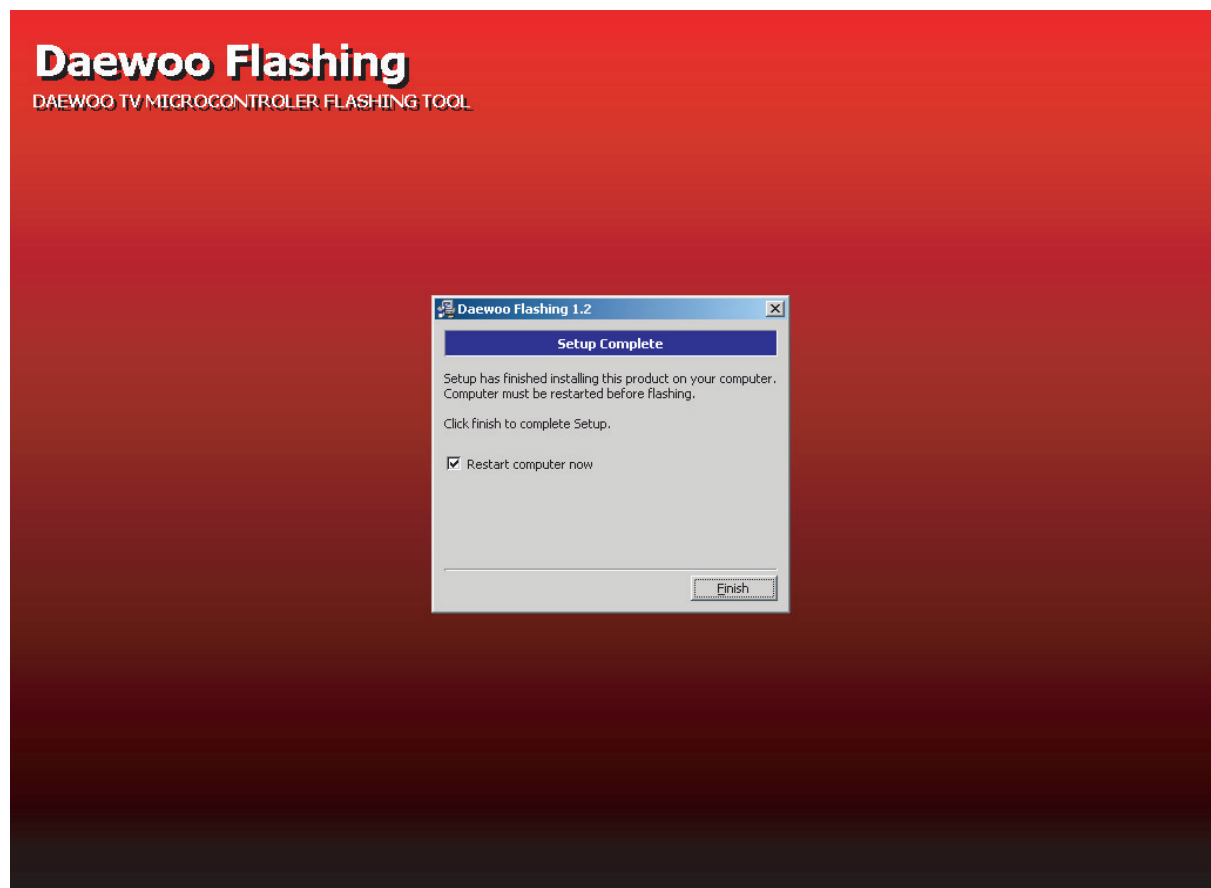


SOFTWARE INSTALL & UPGRADE

2. Please install software Daewoo Flashing (DF1_2Setup.exe).



After install please restart computer.

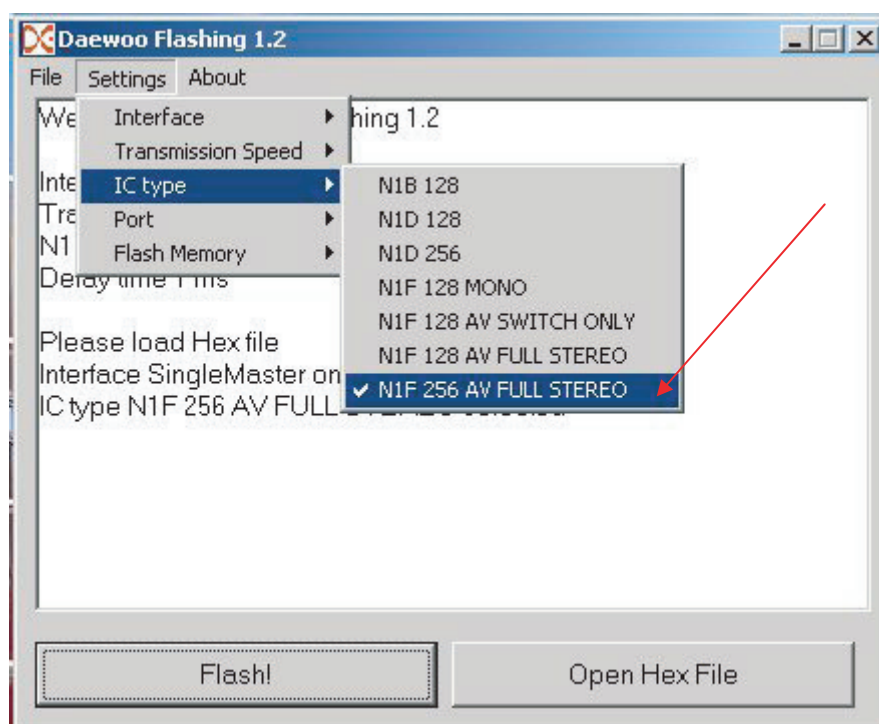


SOFTWARE INSTALL & UPGRADE

3. After install Daewoo Flashing Tool please run “Daewoo Flashing 1.2”

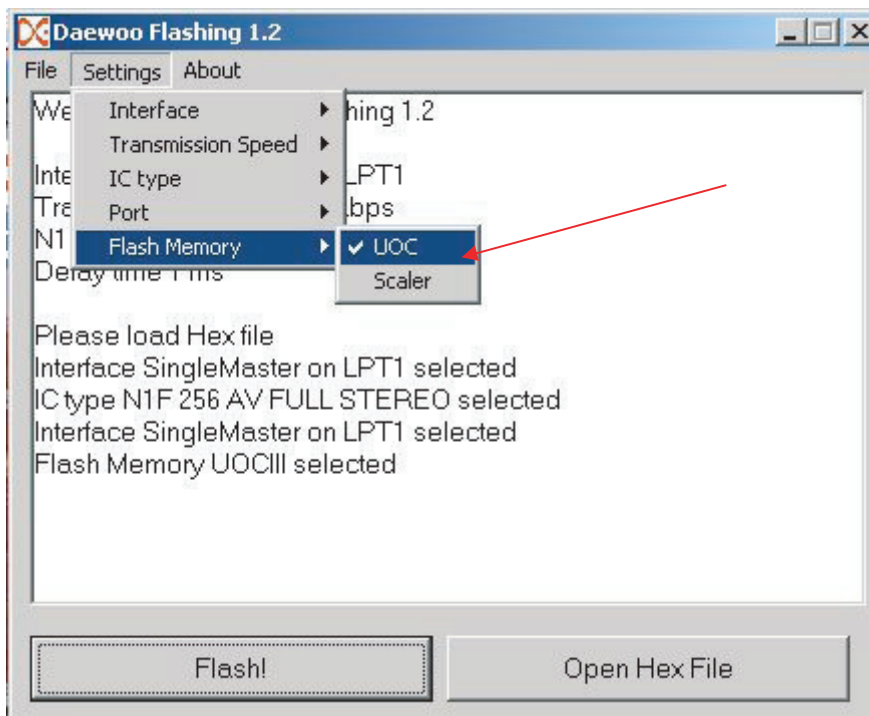


4. Please choose IC type (for LCD TV - N1F 256 AV FULL STEREO).

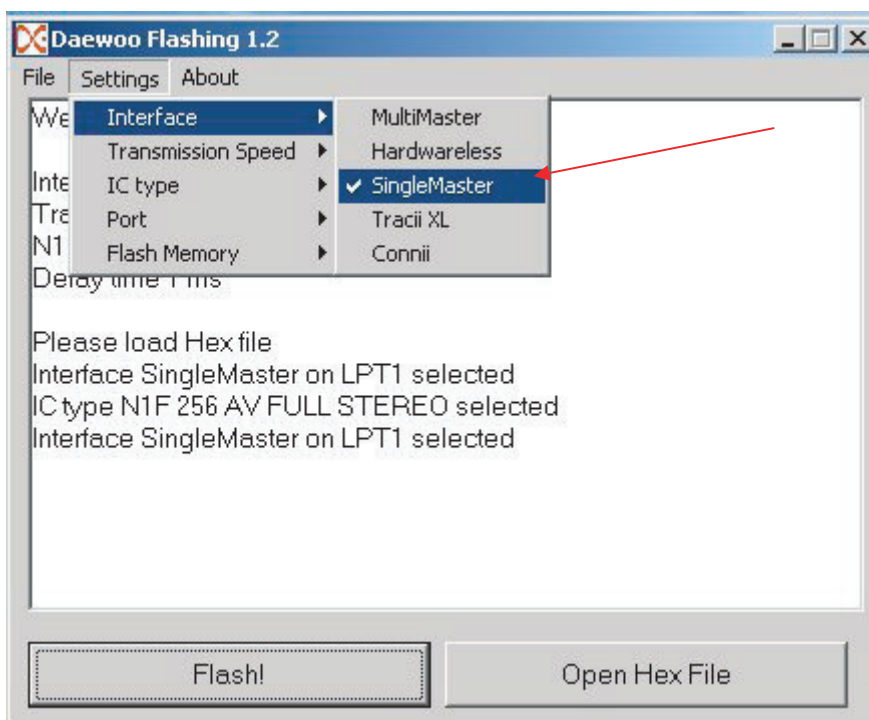


SOFTWARE INSTALL & UPGRADE

5. Please choose Flash Memory (UOC).

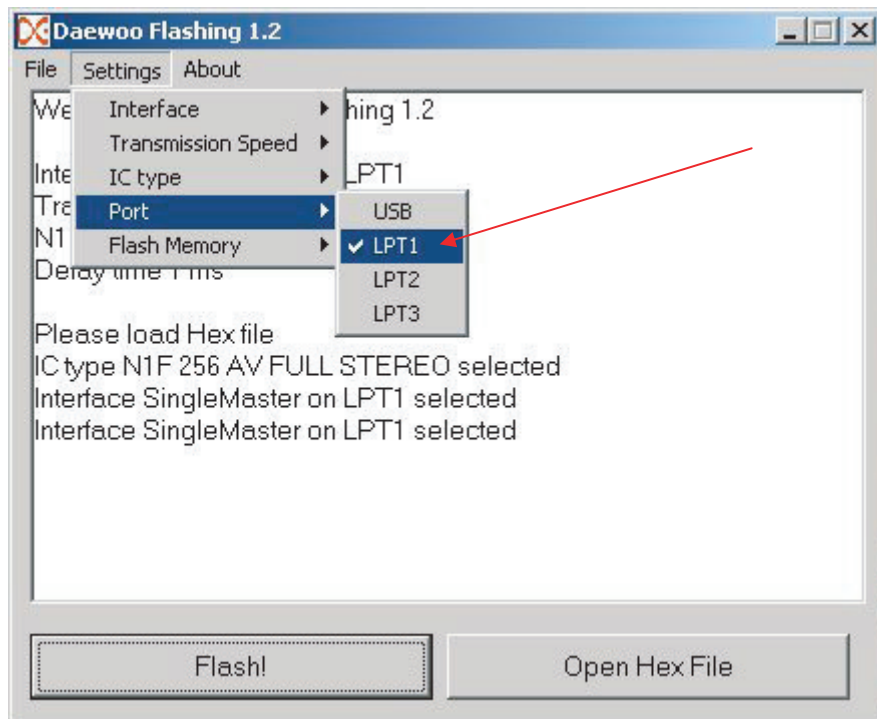


6. Please choose Interface (Single Master).

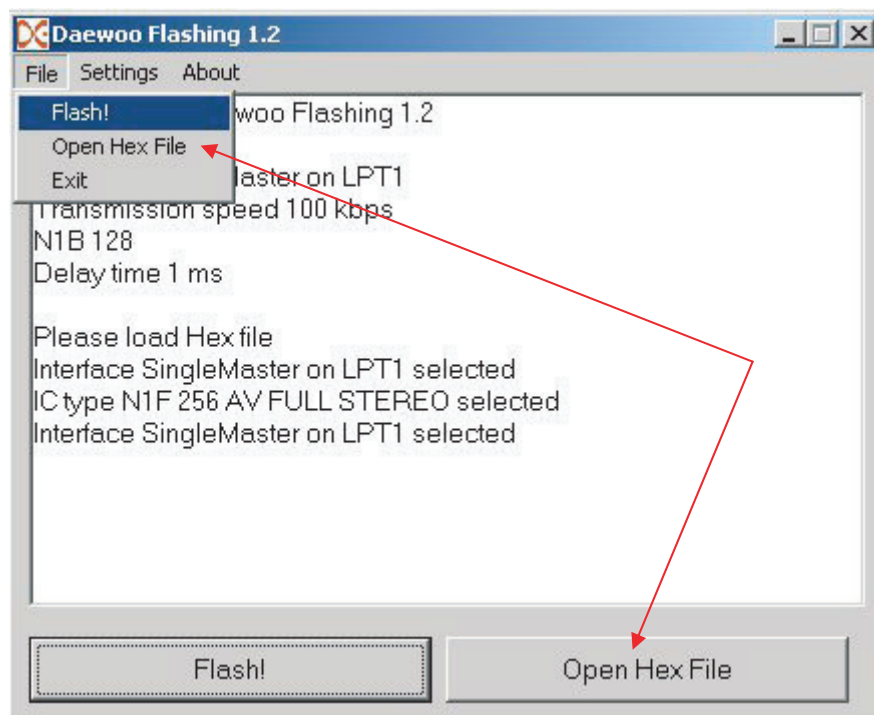


SOFTWARE INSTALL & UPGRADE

7. Please choose port (LPT1)



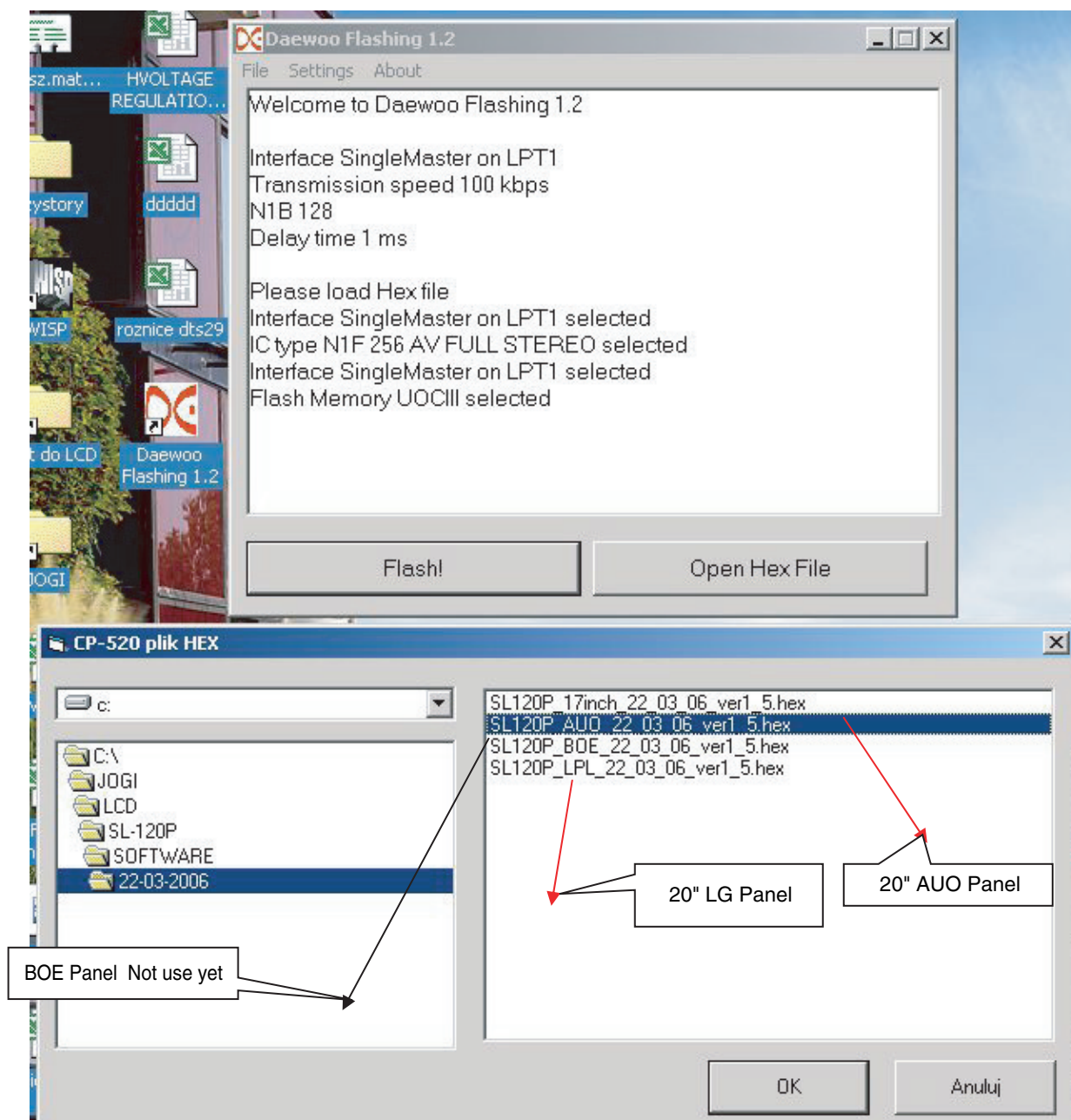
8. Please open HEX FILE



SOFTWARE INSTALL & UPGRADE

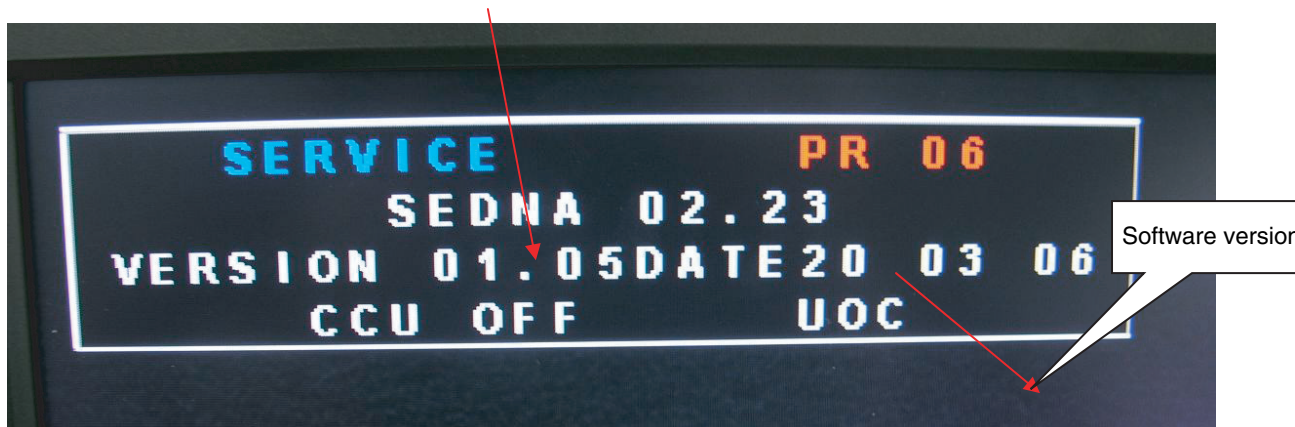
9. Please choose software version

(depending on LCD Panel – for LCD TV 20" panel makers are AUO and LG Philips, for 17" LCD TV we use only one type of panel LG Philips).

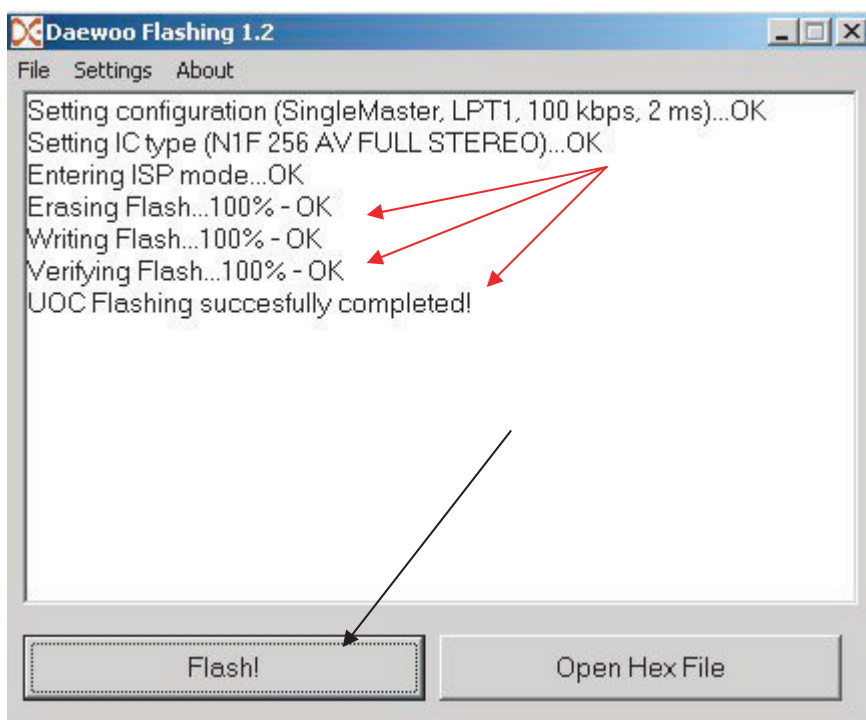


SOFTWARE INSTALL & UPGRADE

10. Please ON LCD TV and press SVC button on Service remote and next press SCREEN button to make UOC OFF.



11. Please connect EURO CABLE to LCD TV and to JIG EURO SCART.
Please supply 12V for JIG EURO SCART.
12. Please press Flash button. Daewoo Flashing automatically upgrade new software.



SOFTWARE INSTALL & UPGRADE

13. After finish please disconnect Euro Cable from LCD TV and OFF /ON LCD TV.
Software will change registers after ON.

*ATTENTION!!!!:Before apply new software please check W/B settings.
New software automatically deletes W/B parameters and applies default values.
Please use Service remocon.*

*Press SVC button and next R DRV, G DRV, B DRV and R BIAS, G BIAS.
Please memorize these values and after upgrade software set again W/B values.*

14. After apply new software please adjust DCXO value.
Please connect RF signal (PAL Nicam Stereo if possible, if not please use PAL Stereo, but in this case DCXO adjustment should be repeat several times - to check if in all trials the values are similar) to LCD TV and press SVC button.
In next step press SEARCH UP button about 2 sec. After this on the OSD should appear "DCXOALIGNEMENT" information.
This means that DCXO alignment starts and when procedure is finished value should appear (correct value should be below 255).



Date 13-04-2006
Daewoo Electronics
ENG DEPT.