S/M NO. : DSL140TEF0

Service Manual
20" LCD

CHASSIS : SL-140T

Model : DLT-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.

DAEWOO ELECTRONICS

Jul. 2007

Contents

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.

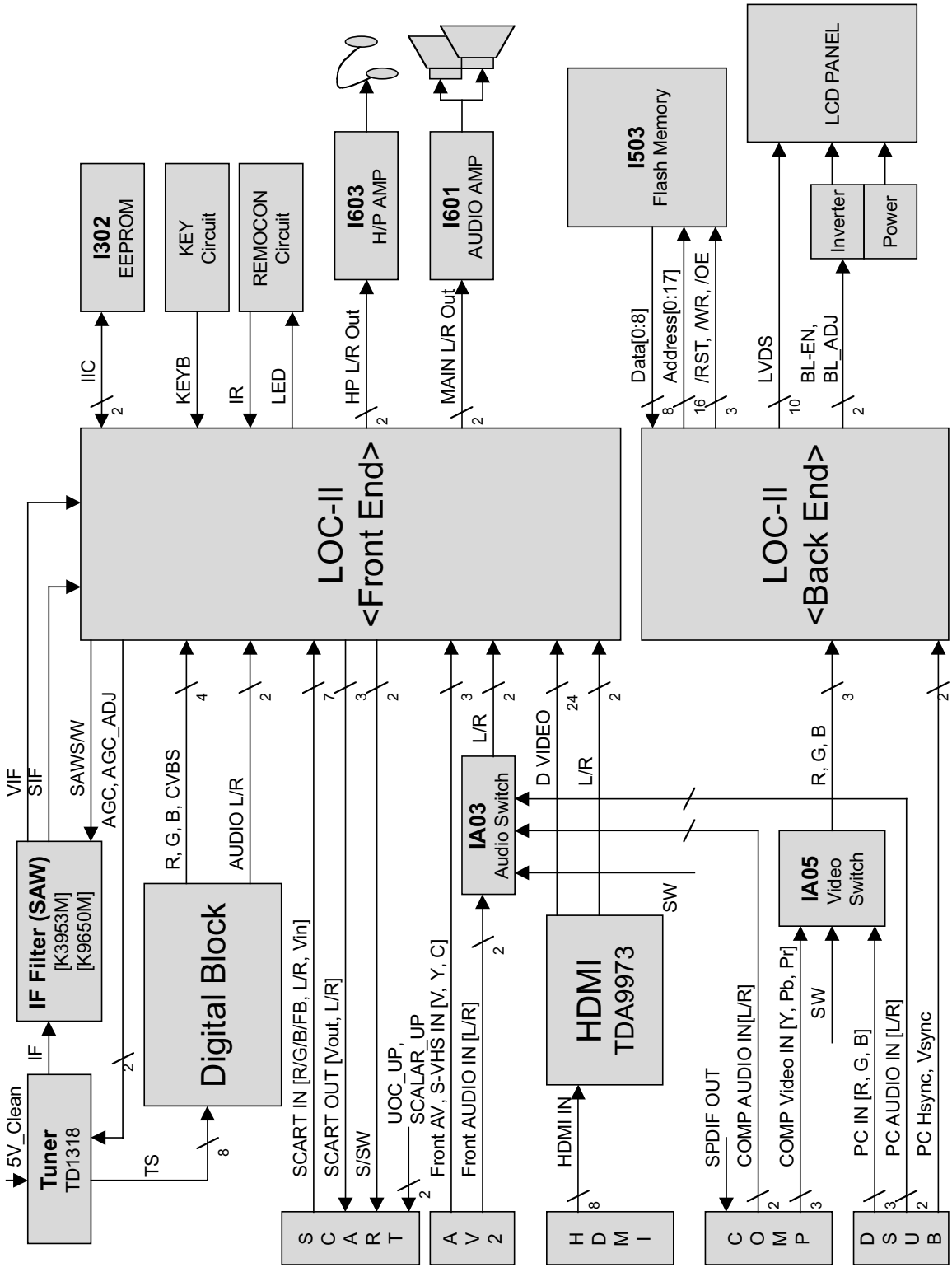
(6) Connect/disconnect the connectors slowly with care especially FFC (film) cables and FPC cables. Do not connect or disconnect connectors instantaneously with force, and handle them carefully for reassembling.

(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.

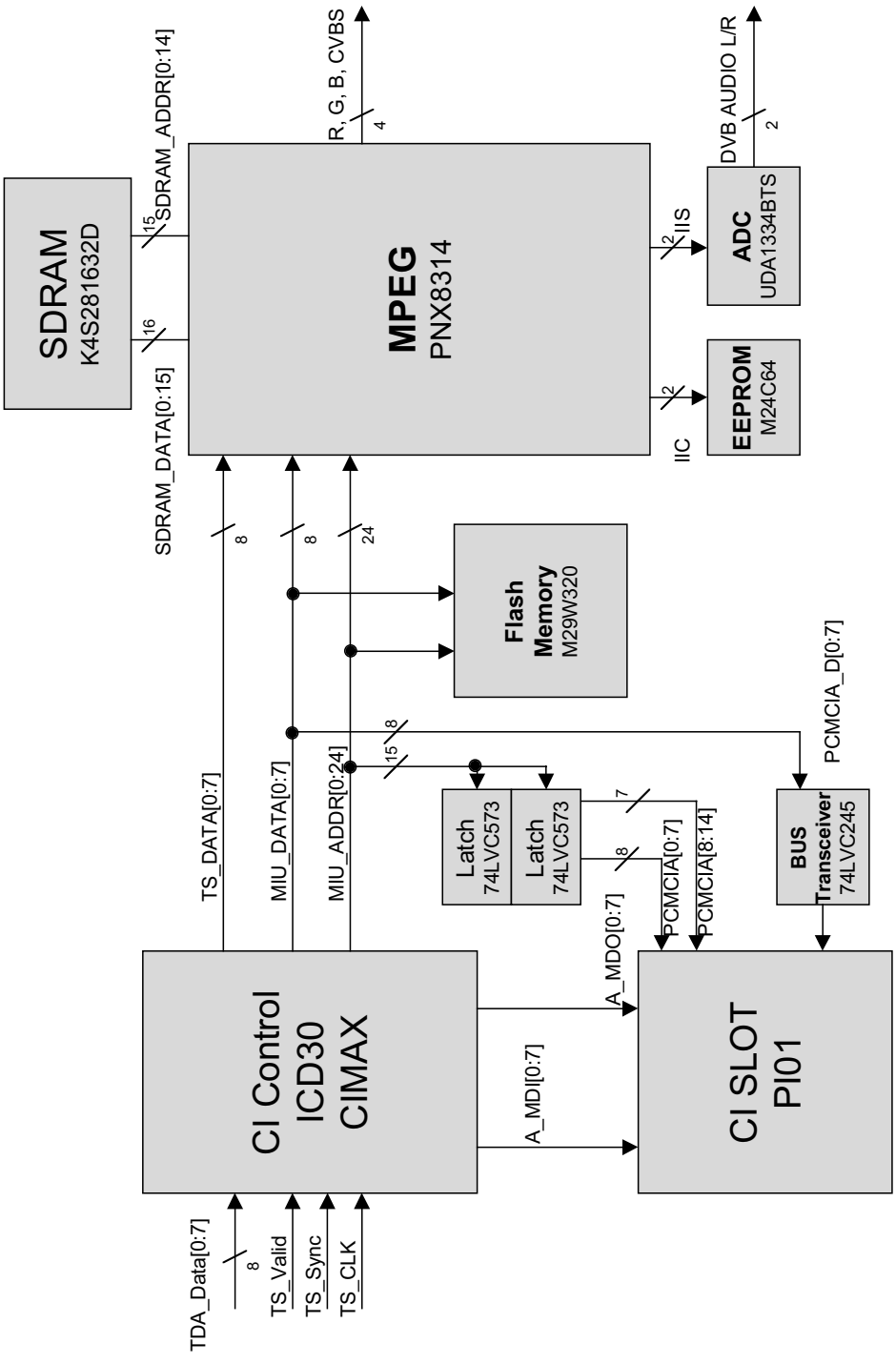
2. Product Specification

MODEL		DLT-20W2
	CHASSIS NO	SL-140T
	Country	Europe
	Remote controller	R-55H11
LCD PANEL		
	LCD Type	T200XW02-V0
	Screen Size	20.1"
	Aspect Ratio	16 : 9
	Resolution	1366x768(WXGA)
	Pixel Pitch	0.32475x0.32475
	Brightness	450cd/m²
	Contrast Ratio	600 : 1
	Viewing Angle(U/D/R/L)	80/80/80/80
	Response Time	8ms
TV SYSTEM		
	Color System	PAL/SECAM
	Color System	PAL B/G, I/I, L-SECAM, L'-SECAM
	Tuning Method	FVS
	Tuner	UV1316/AIH-4(Phillips)
	Reception Channel	VHF :
		BAND I : CH2~CH4
		BAND II : CH5~CH12
		CABLE BAND : S1'~S3', S1~S20
		UHF
		HYPER BAND : S21~S41
		BAND IV, V : CH21~CH69
	IF & SubCarier	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 :
		5.5MHz/5.85MHz(NICAM)/5.74MHz(2-Carrier)
		Color-subcarrier :
		4.43MHz(PAL), 4.25MHz/4.40625MHz(SECAM)
	Audio System	Mono/Stereo/Dual
	Channel Memory	99Channel, Auto Preset
Input		
	TV Input	75 Ohm external input terminals(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	Y, Pb, Pr, L/R
	PC Input	D-SUB
	PC Audio Input	L/R
	HDMI	HDMI Jack x 1
Ouput		
	Video/Audio	Scart Jack x 1
	Headphone	3.5mm Mini Stereo Jack x 1
Other Features		
	Comb Filter	2D
	CTI	O
	LTI	O
	OSD	18 Languages
	TELETEXT	100 Page Memory TOP/FLOF
	Audio Output	4W(2W + 2W)
	Speaker	3W 8Ω
	Aspect ratio control	O
	Auto power off	O
	Wake up	O
	Sleep timer	O
	Wall mount hole	VESA compatible
Power Consumption		
	Consumption	53W
	Stand-by	Under 1W
	Power Source	AC 100~240V, 50/60Hz
Dimension(W x H x D)mm		
	Set dimension(with STAND)	509(W) x 420.5(H) X 239(D)mm
	Tilt(Front/Back)	10 / 10
	Weight	10kg
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)

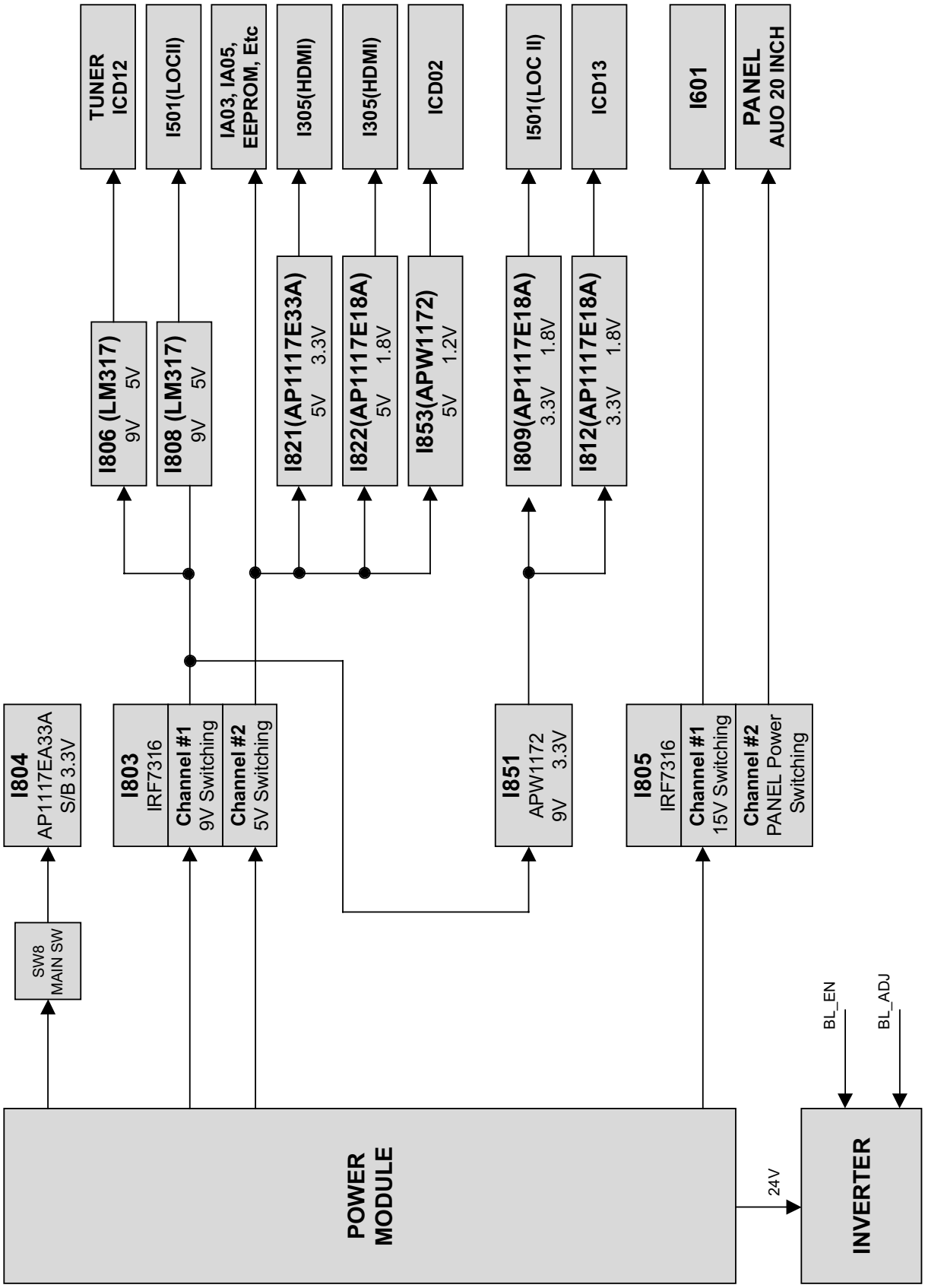
3. Block Diagram



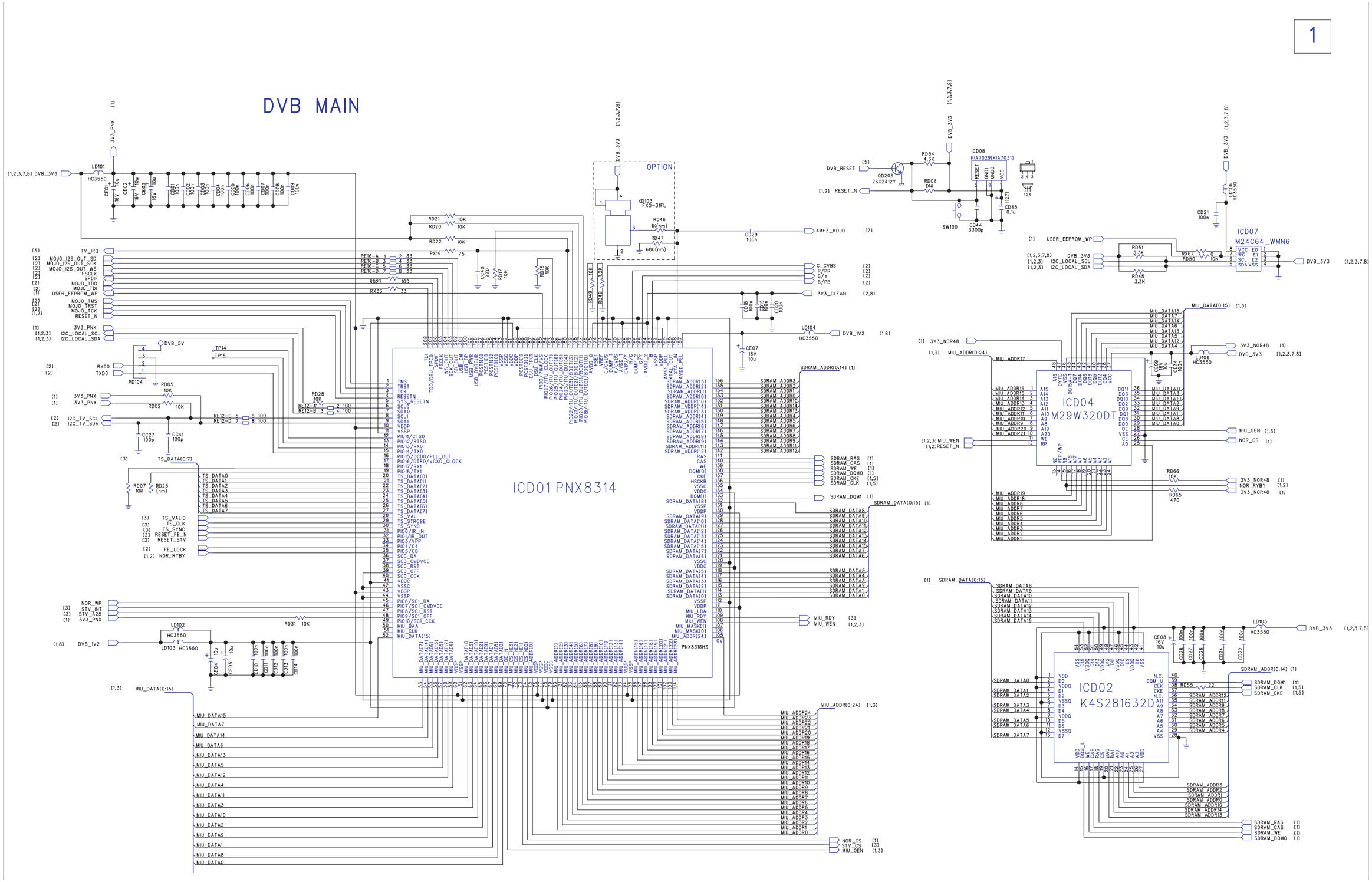
Block Diagram

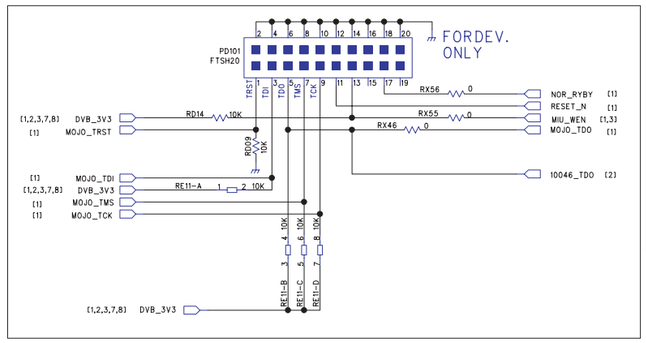


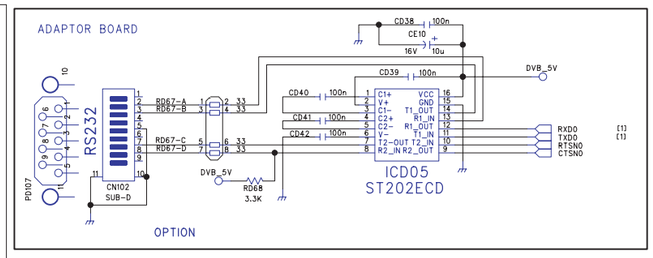
Block Diagram



4. Schematic Diagram

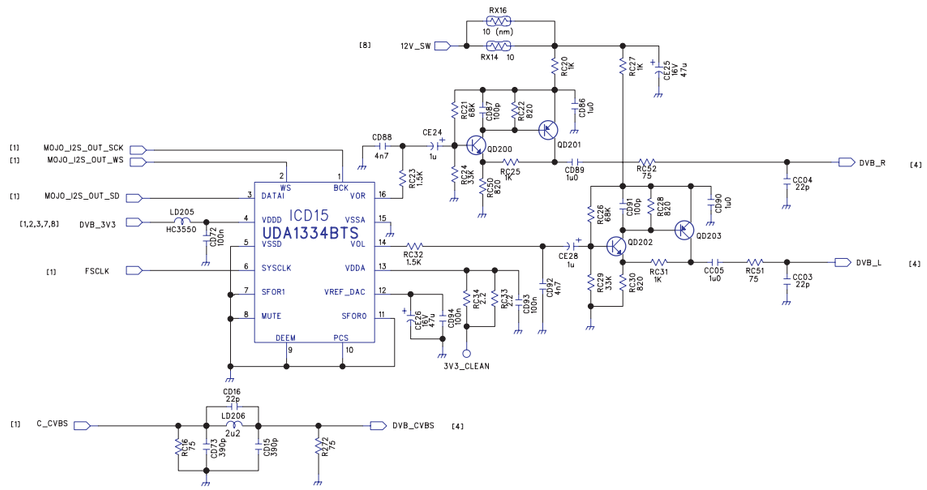


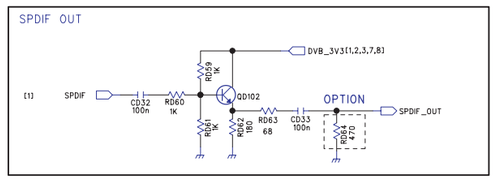




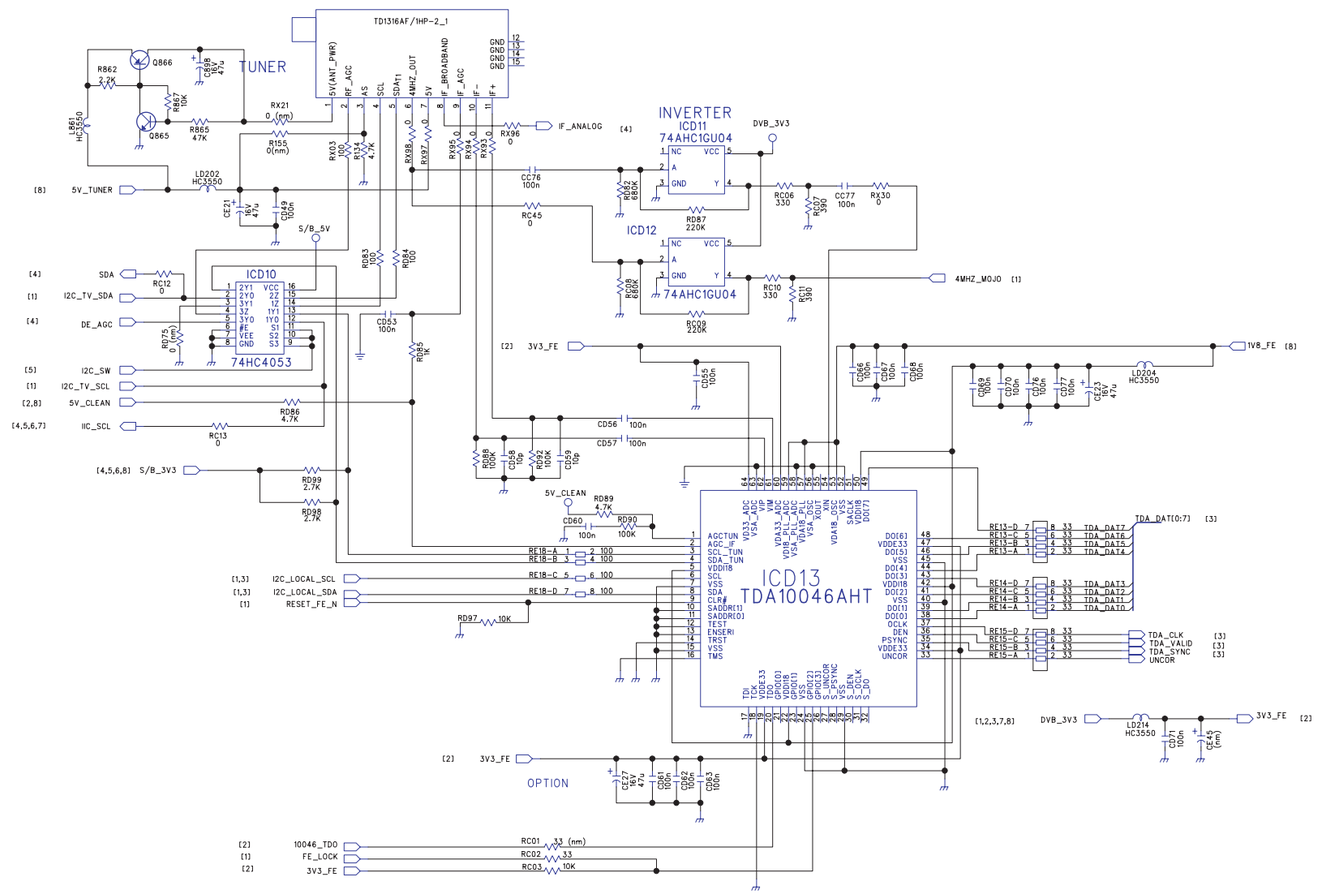
2

ANALOG BACK END

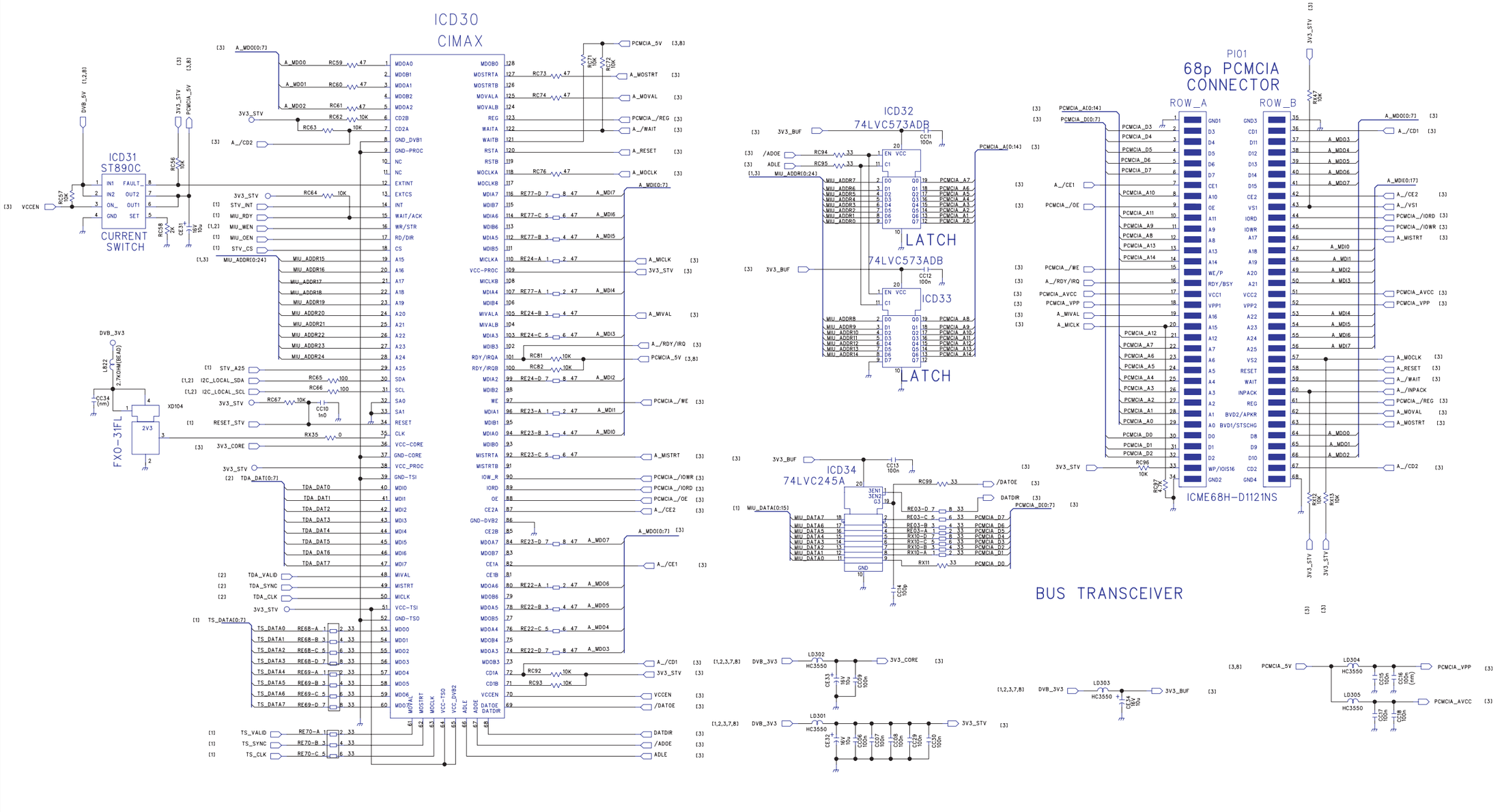




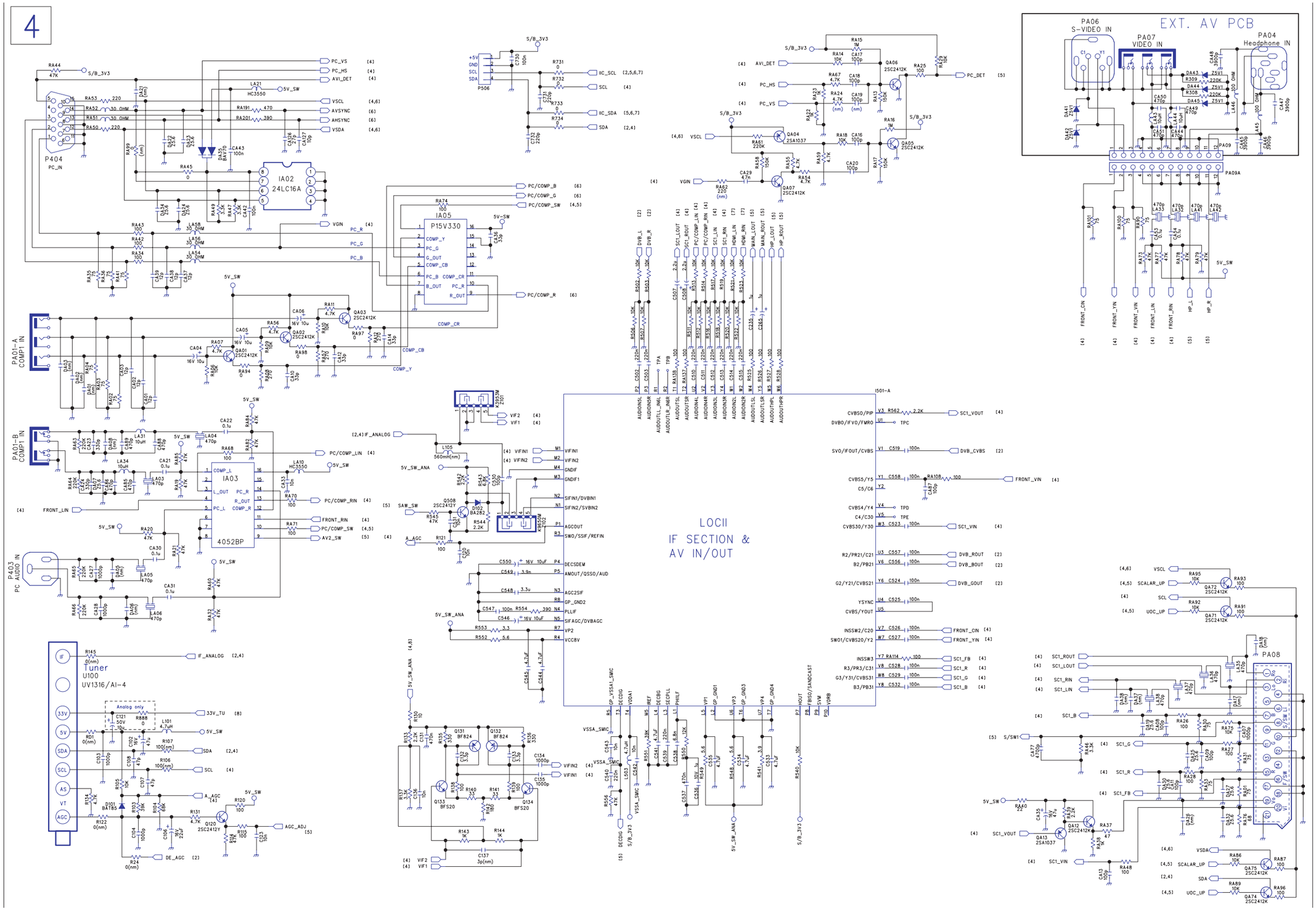
FRONT END

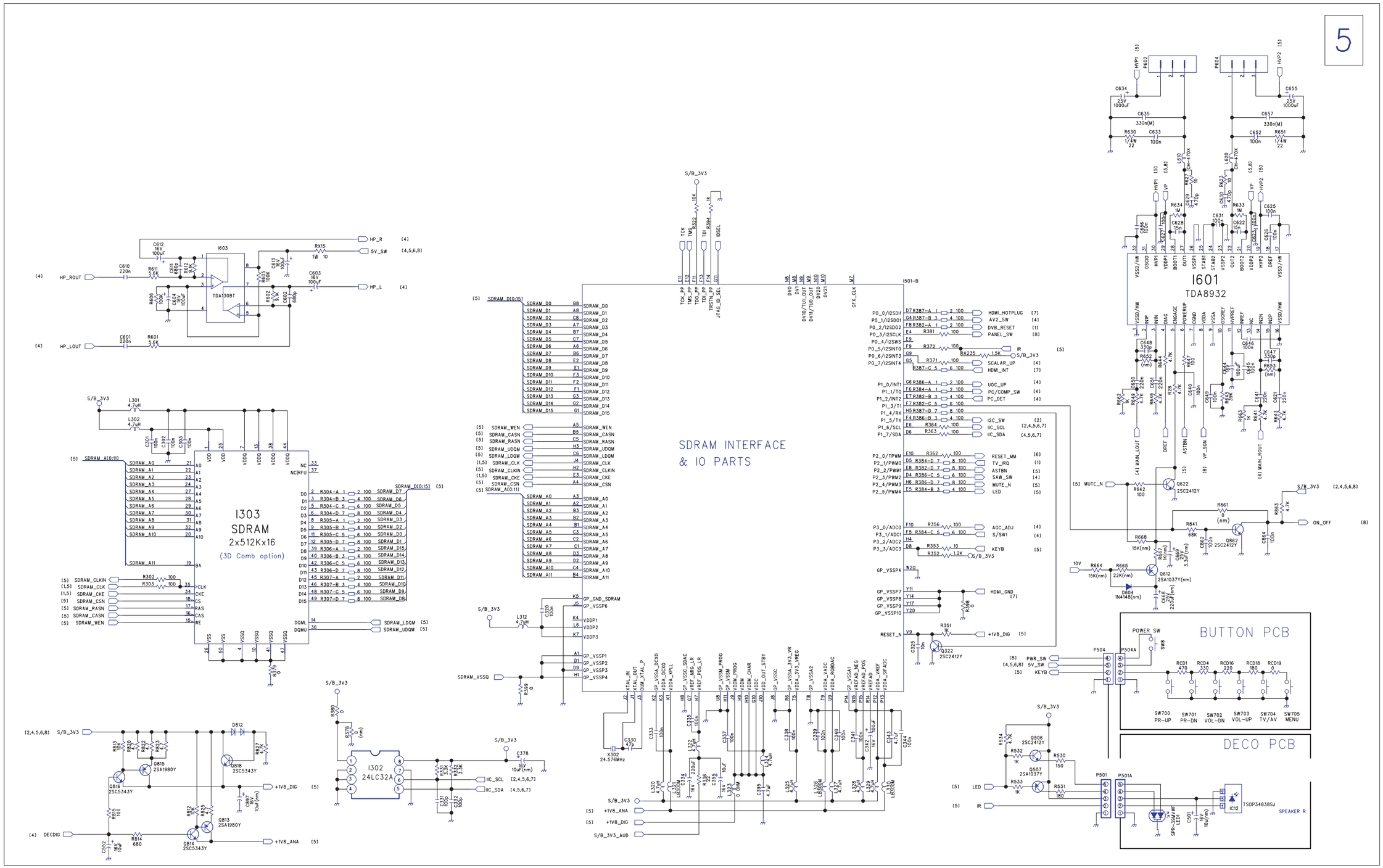


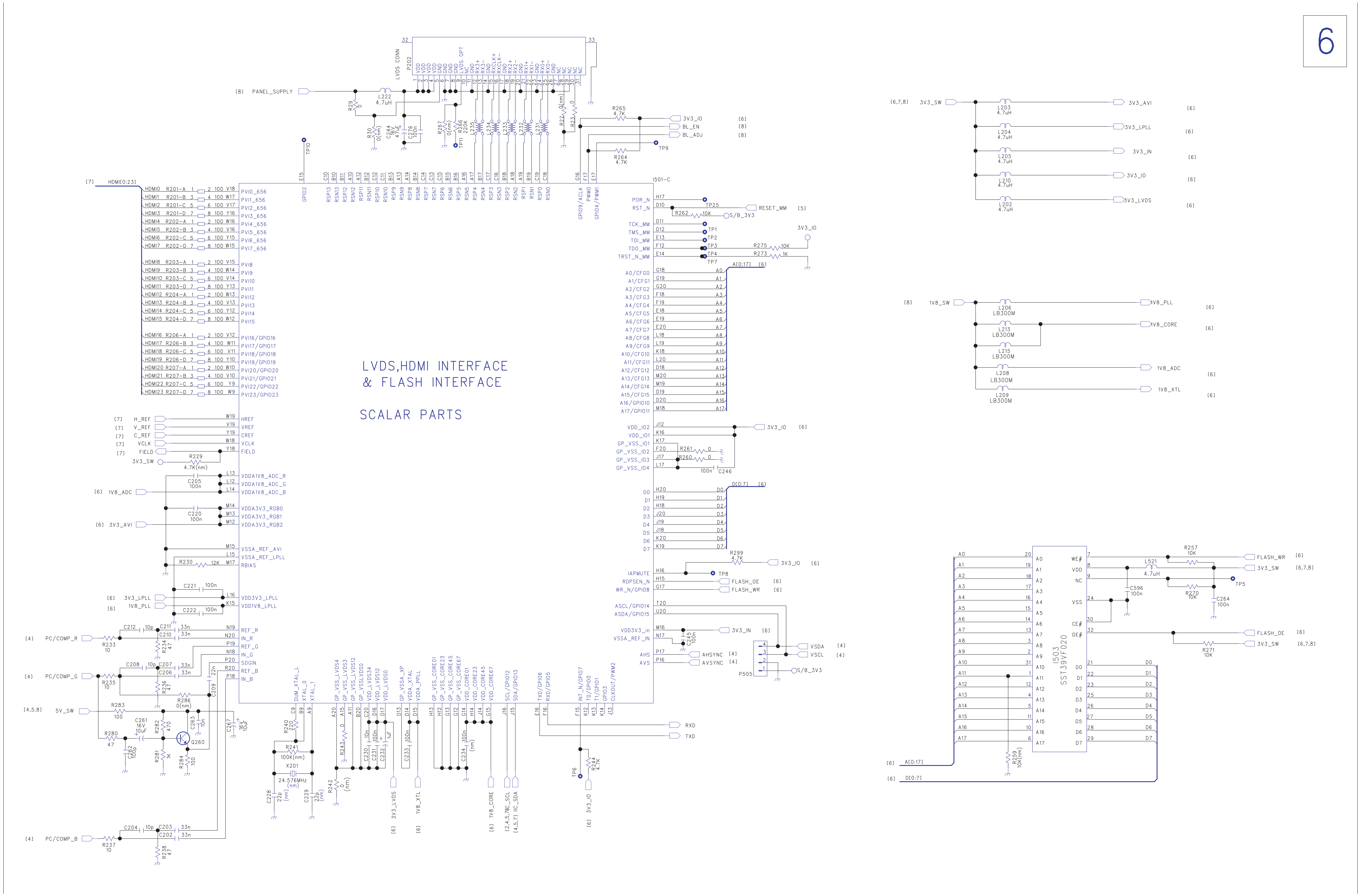
COMMON INTERFACE

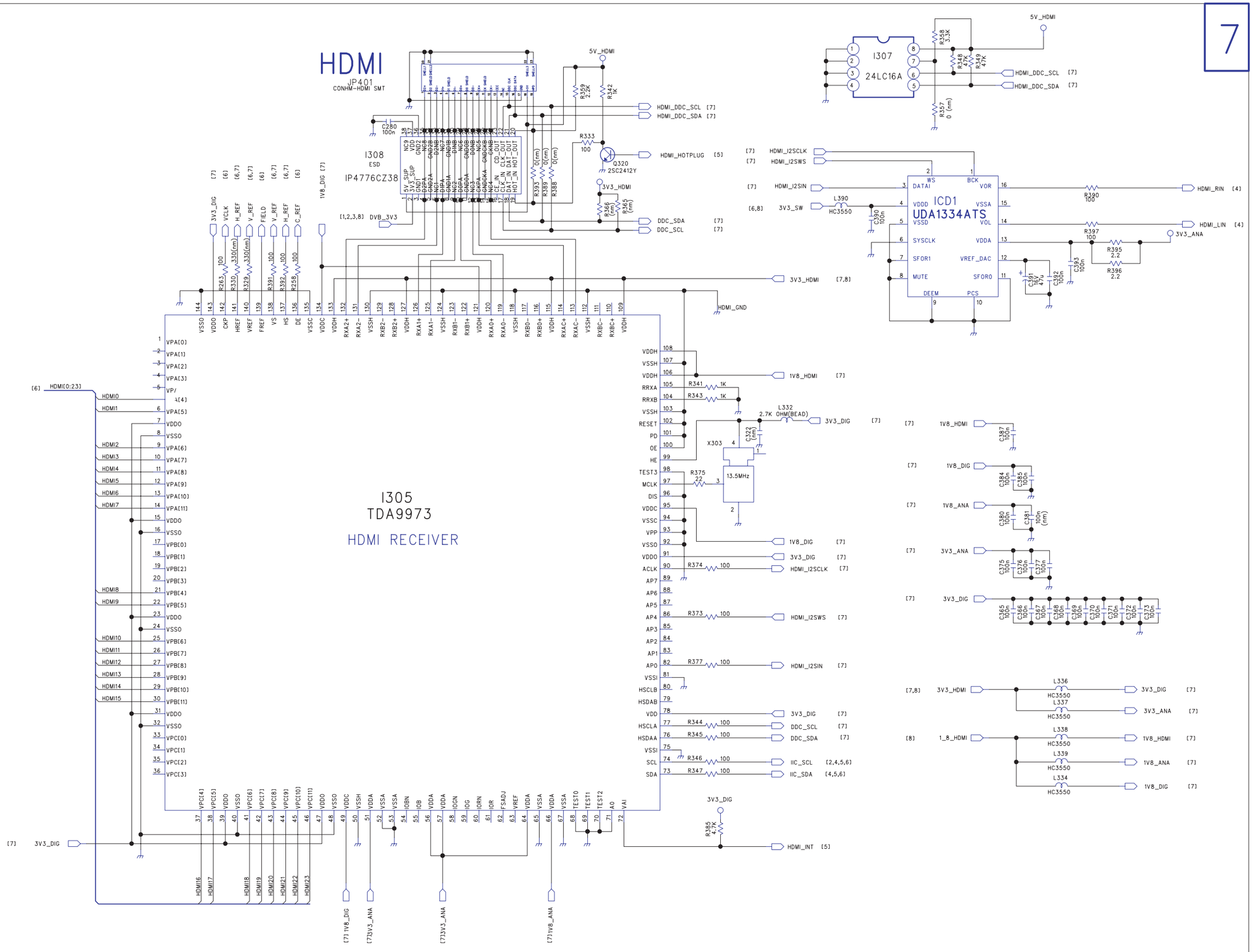


Schematic Diagram

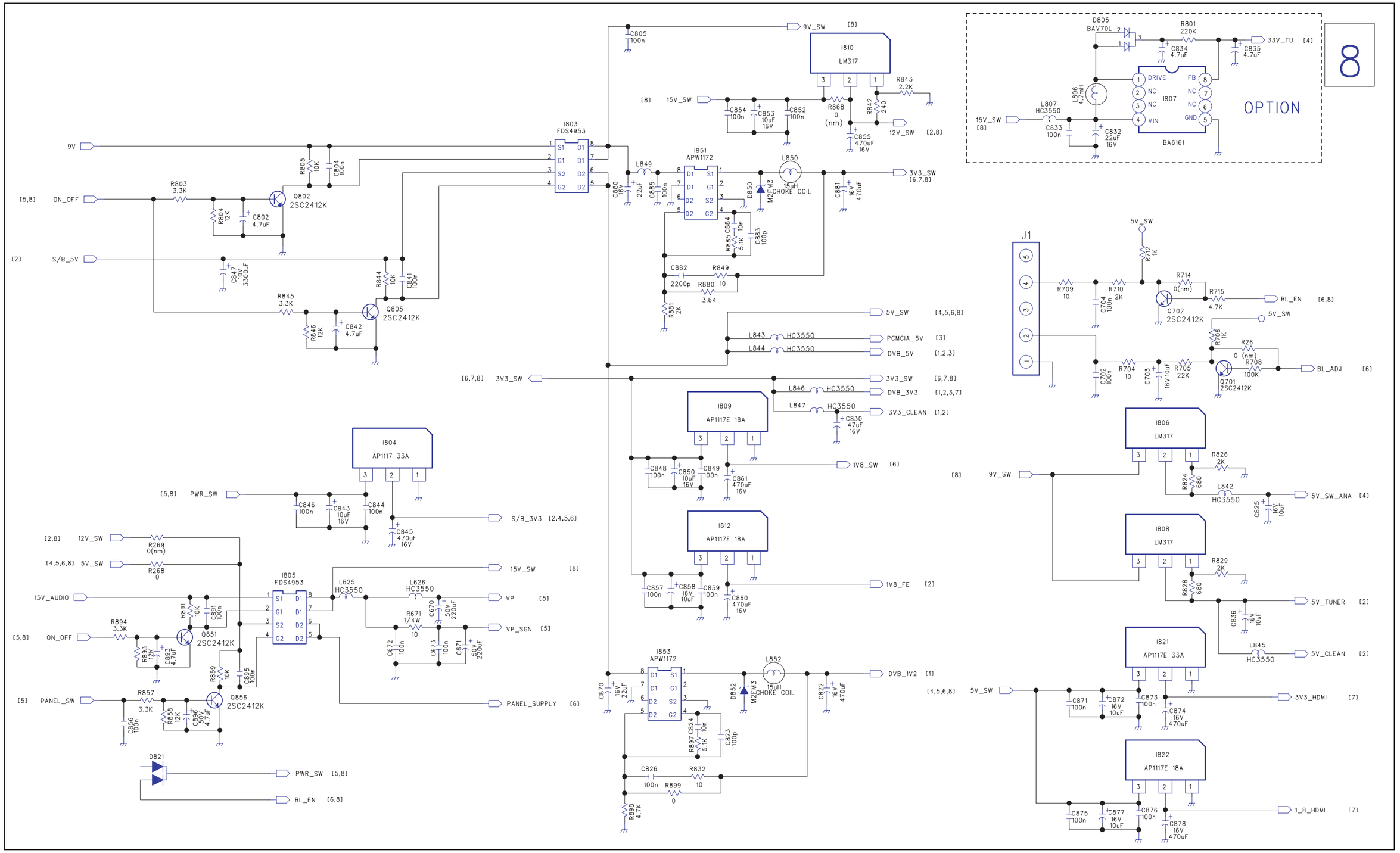



5
I603
TDA1308T
I303
SDRAM
2x512Kx16
(3D Comb option)
I302
24LC32A
SDRAM INTERFACE
& IO PARTS
I501-B
I601
TDA8932
BUTTON PCB
DECO PCB
SPEAKER R
TSOP34838SJ
Q622
2SC2412Y
Q612
2SA1037Y(nm)
Q322
2SC2412Y
Q506
2SC2412Y
Q507
2SA1037Y
Q813
2SA1980Y
Q814
2SC5343Y
Q815
2SA1980Y
Q816
2SC5343Y
D818
2SC5343Y
D604
1N4148(nm)
HP_R
HP_L
HP_ROUT
HP_LOUT
5V_SW
S/B_3V3
+1V8_DIG
+1V8_ANA
+1V8_AUD
DECDIG
SDRAM_VSSQ
SDRAM_LDQM
SDRAM_UDQM
SDRAM_WEN
SDRAM_CASN
SDRAM_RASN
SDRAM_CSN
SDRAM_CKE
SDRAM_CLK
SDRAM_CLKIN
SDRAM_D[0:15]
SDRAM_A[0:11]
IR
KEYB
PWR_SW
LED
RESET_N
MUTE_N
ON_OFF
HDMI_GND
HDMI_HOTPLUG
AV2_SW
DVB_RESET
PANEL_SW
SCALAR_UP
HDMI_INT
I2C_SW
I2C_SCL
I2C_SDA
UOC_UP
PC/COMP_SW
PC_DET
RESET_MM
TV_IRQ
ASTBN
SAW_SW
MUTE_N
LED
AGC_ADJ
S/SW1
KEYB
+1V8_DIG
MAIN_LOUT
MAIN_ROUT
VP_SGN
DREF
ASTBN
HVP1
HVP2
VP
POWER SW
SW6
SW700 PR-UP
SW701 PR-DN
SW702 VOL-DN
SW703 VOL-UP
SW704 TV/AV
SW705 MENU
P504
P504A
P501
P501A


6
LVDS,HDMI INTERFACE
& FLASH INTERFACE
SCALAR PARTS
LVDS CONN
P202
I501-C
I503
SST39VF020
PANEL_SUPPLY
HDMI[0:23]
3V3_IO
BL_EN
BL_ADJ
RESET_MM
S/B_3V3
H_REF
V_REF
C_REF
VCLK
FIELD
3V3_SW
1V8_ADC
3V3_AVI
3V3_LPLL
1V8_PLL
PC/COMP_R
PC/COMP_G
PC/COMP_B
5V_SW
3V3_LVDS
1V8_XTL
1V8_CORE
IIC_SCL
IIC_SDA
RXD
TXD
FLASH_OE
FLASH_WR
3V3_IN
AHSYNC
AVSYNC
VSDA
VSCL
P505
A[0:17]
D[0:7]
3V3_IN
1V8_SW
24.576MHz
X201
Q260

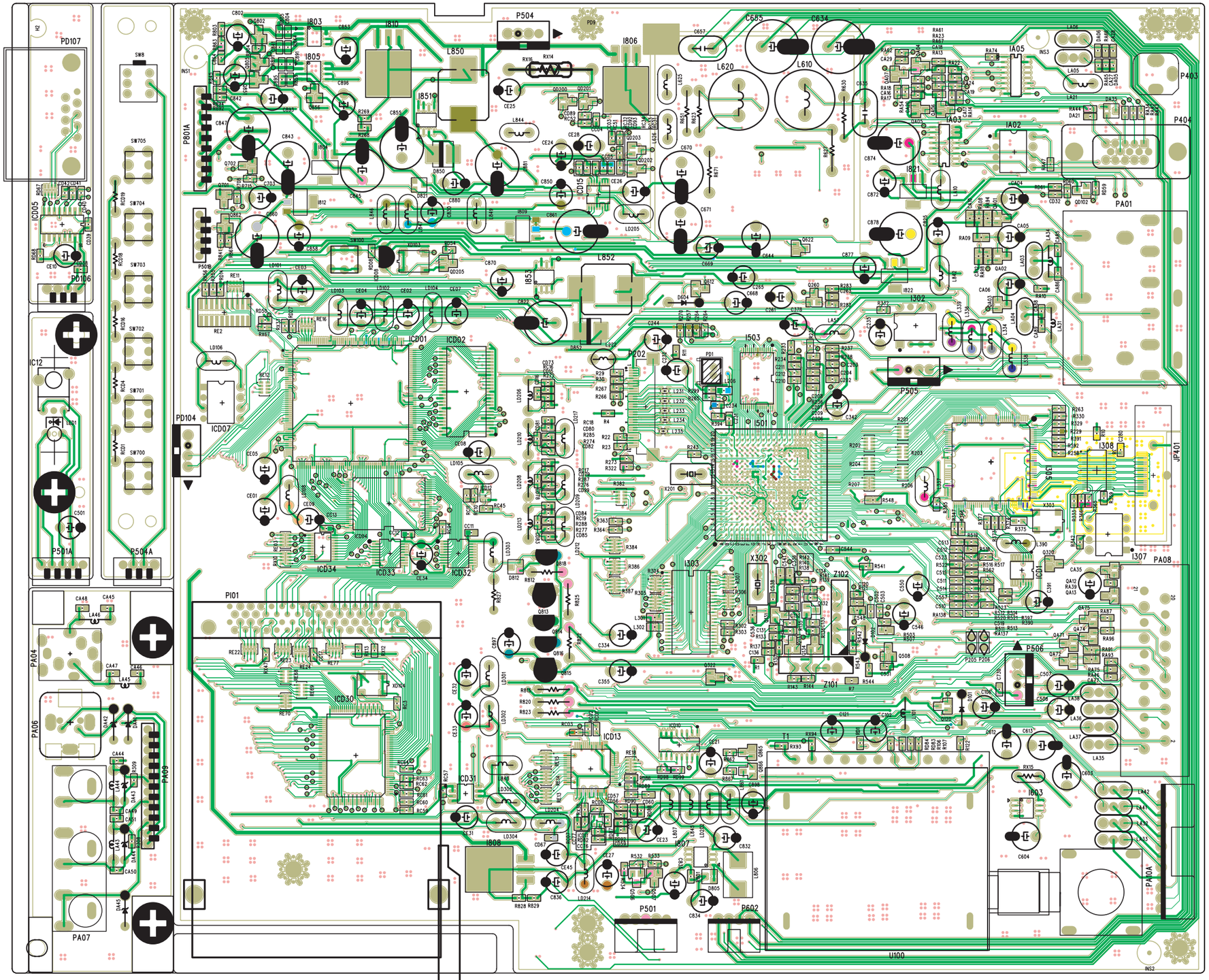

HDMI
JP401
CONHM-HDMI SMT
I308
ESD
IP4776CZ38
I307
24LC16A
I305
TDA9973
HDMI RECEIVER
ICD1
UDA1334ATS
5V_HDMI
3V3_HDMI
1V8_DIG
DVB_3V3
HDMI_GND
HDMI_HOTPLUG
HDMI_DDC_SCL
HDMI_DDC_SDA
DDC_SDA
DDC_SCL
HDMI_I2SCLK
HDMI_I2SWS
HDMI_I2SIN
3V3_SW
HDMI_RIN
HDMI_LIN
3V3_ANA
1V8_HDMI
1V8_ANA
3V3_DIG
HDMI_INT
IIC_SCL
IIC_SDA
HDMI[0:23]
13.5MHz
X303
L390
HC3550
L332
2.7K OHM(BEAD)
L336
L337
L338
L339
L334

Schematic Diagram



6. PCB Data

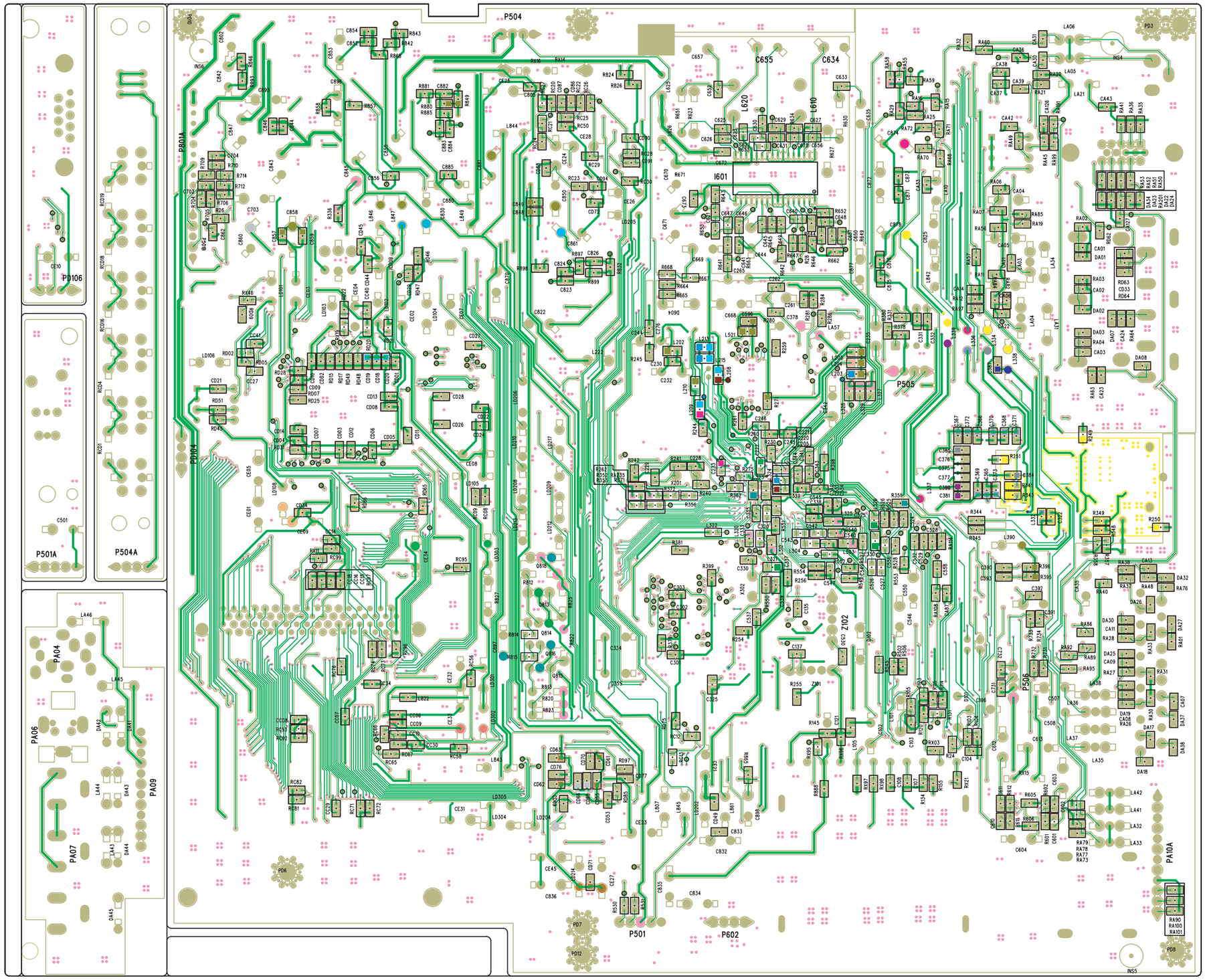
TOP



15493-00(070116)_mod.pc – Mon May 14 23:32:29 2007

PCB Data

BOTTOM



15493-00(070116)_mod.pc - Mon May 14 23:30:08 2007

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 → 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 power, inverter, panel Trouble

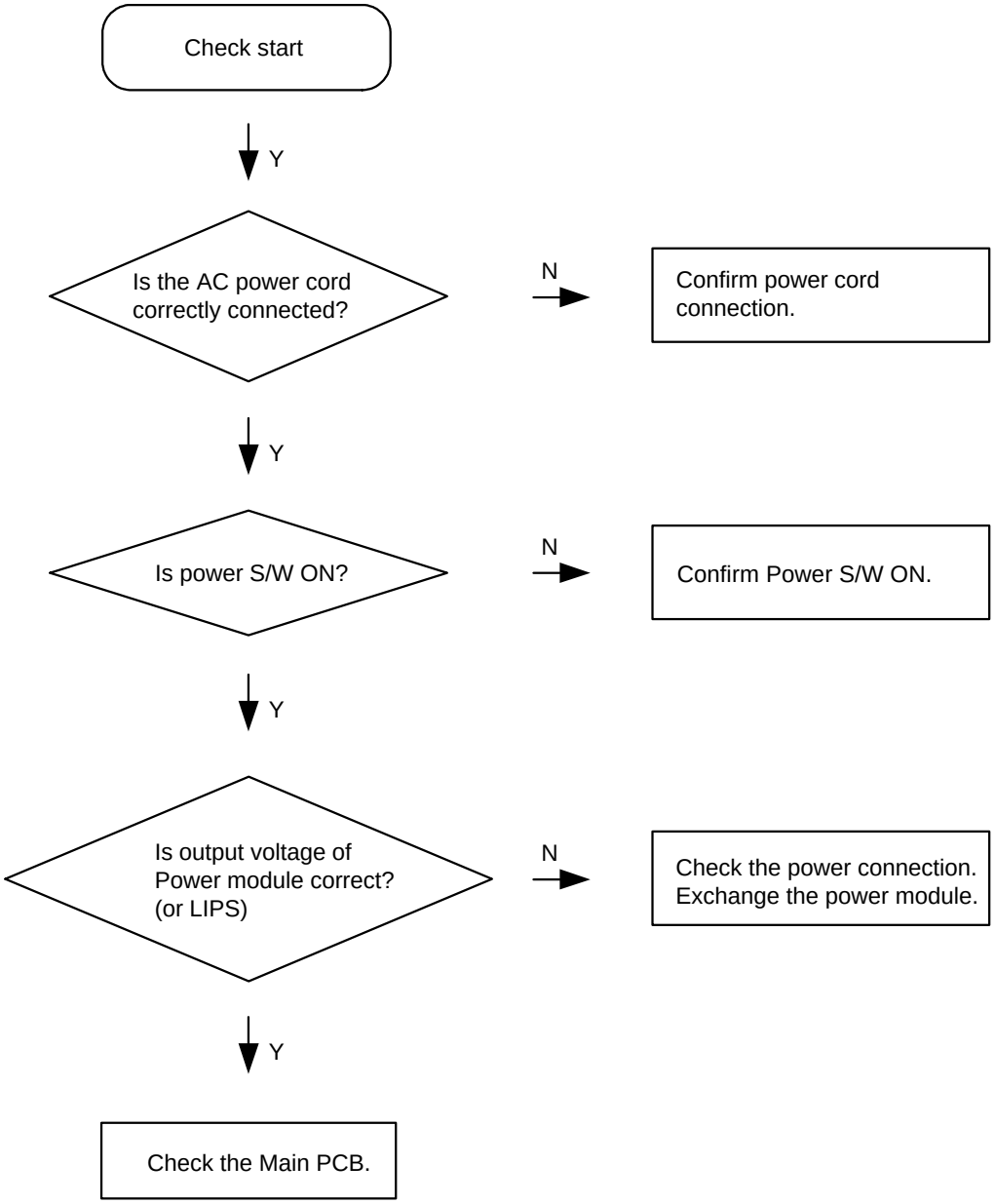
<Symptom.1> Not even weak discharge (luminescence) shows on screen.
<Symptom.2> Discharge (luminescence) on screen is unstable
<Symptom.3> Set is producing unusual noise

Symptoms of VIDEO or JACK PCB Trouble

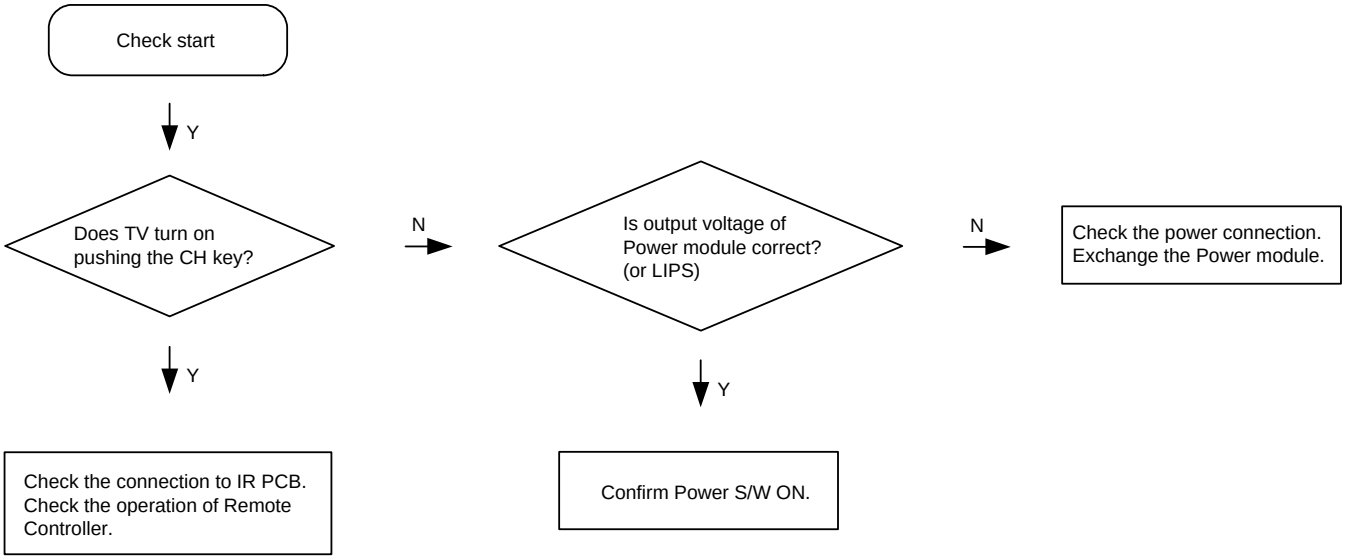
<Symptom.1> Only weak discharge (luminescence) shows on screen, but No Data is on screen
<Symptom.2> Screen DATA is abnormal
<Symptom.3> Particular input signal (Video, etc.) does not operate
<Symptom.4> No SOUND
<Symptom.5> Remote Control or KEY does not operate

Trouble Shooting

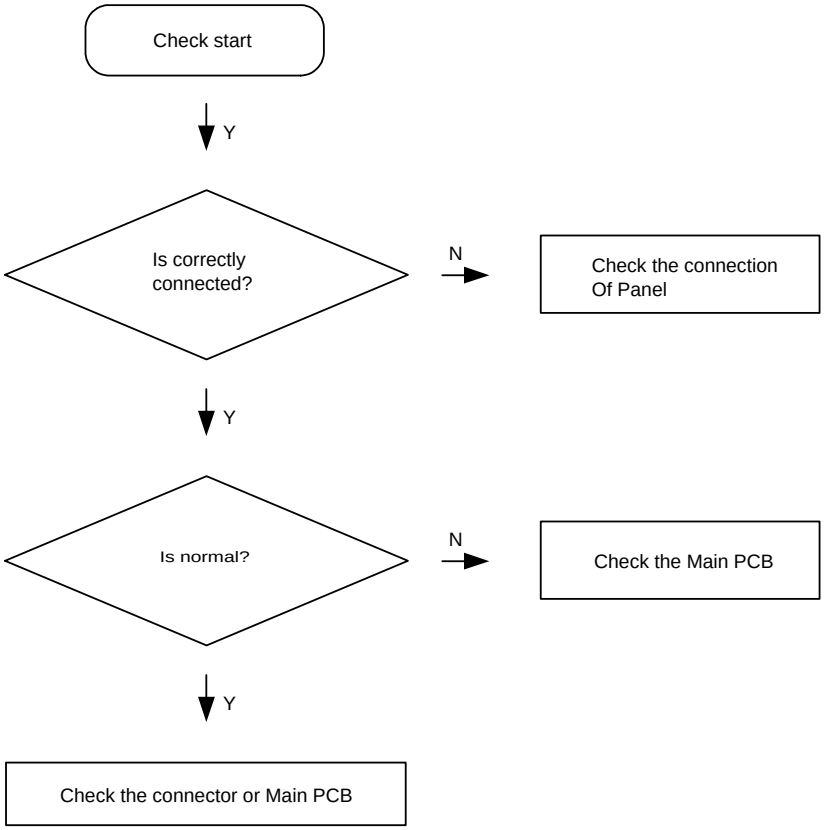
7-1. When LED doesn't lit.



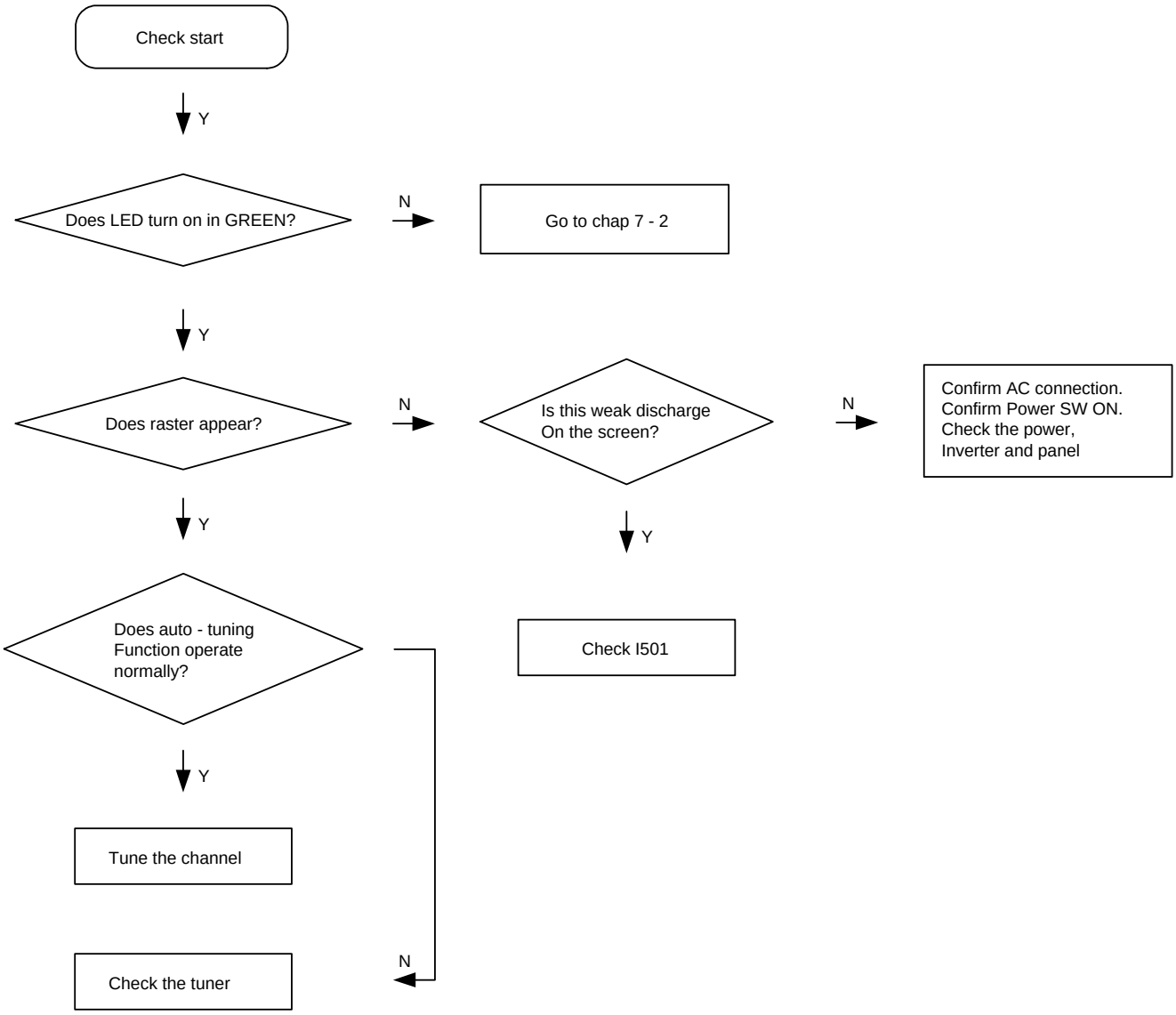
7-2. When TV doesn't turn on in red LED.



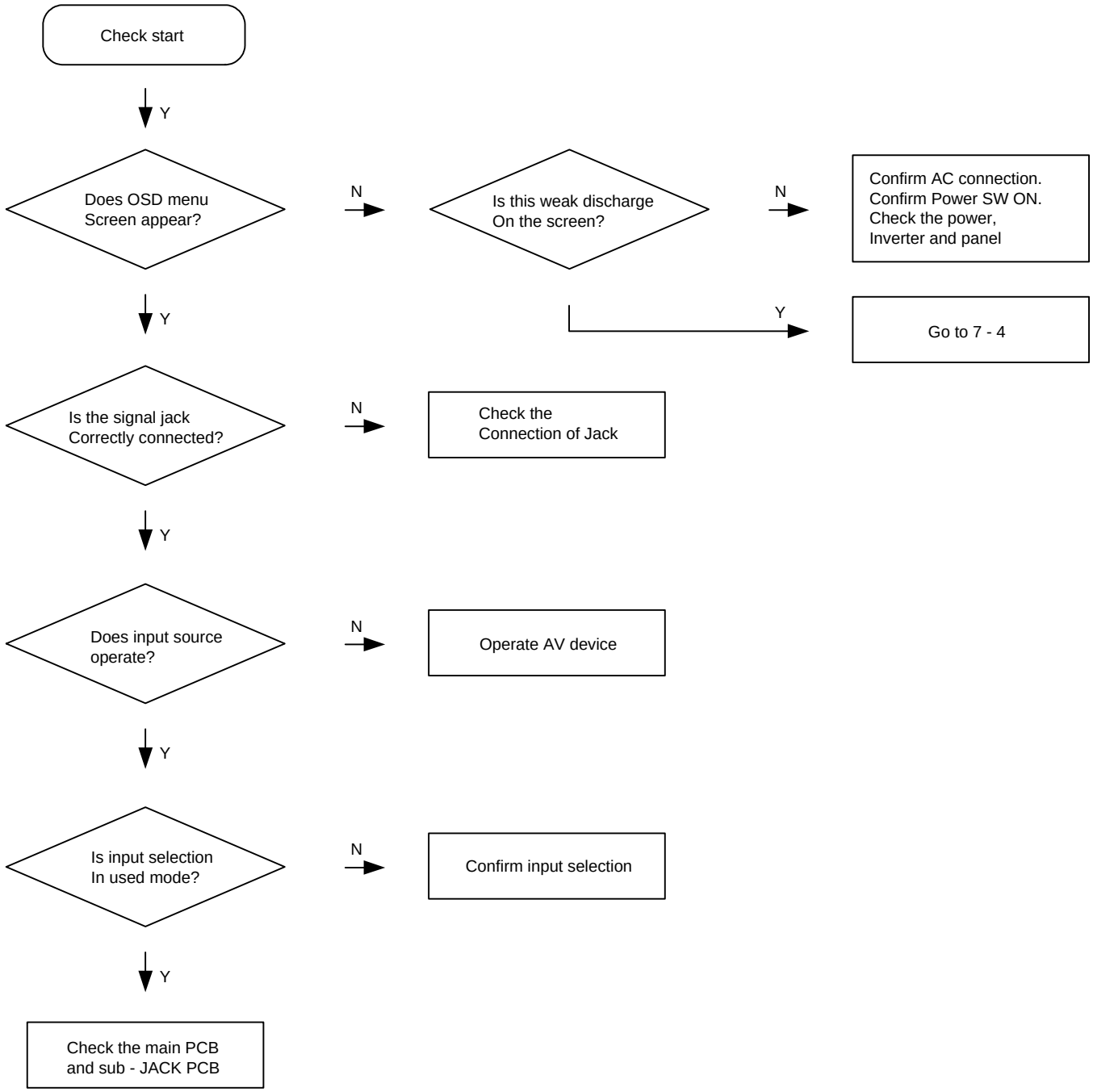
7-3. When "white screen".



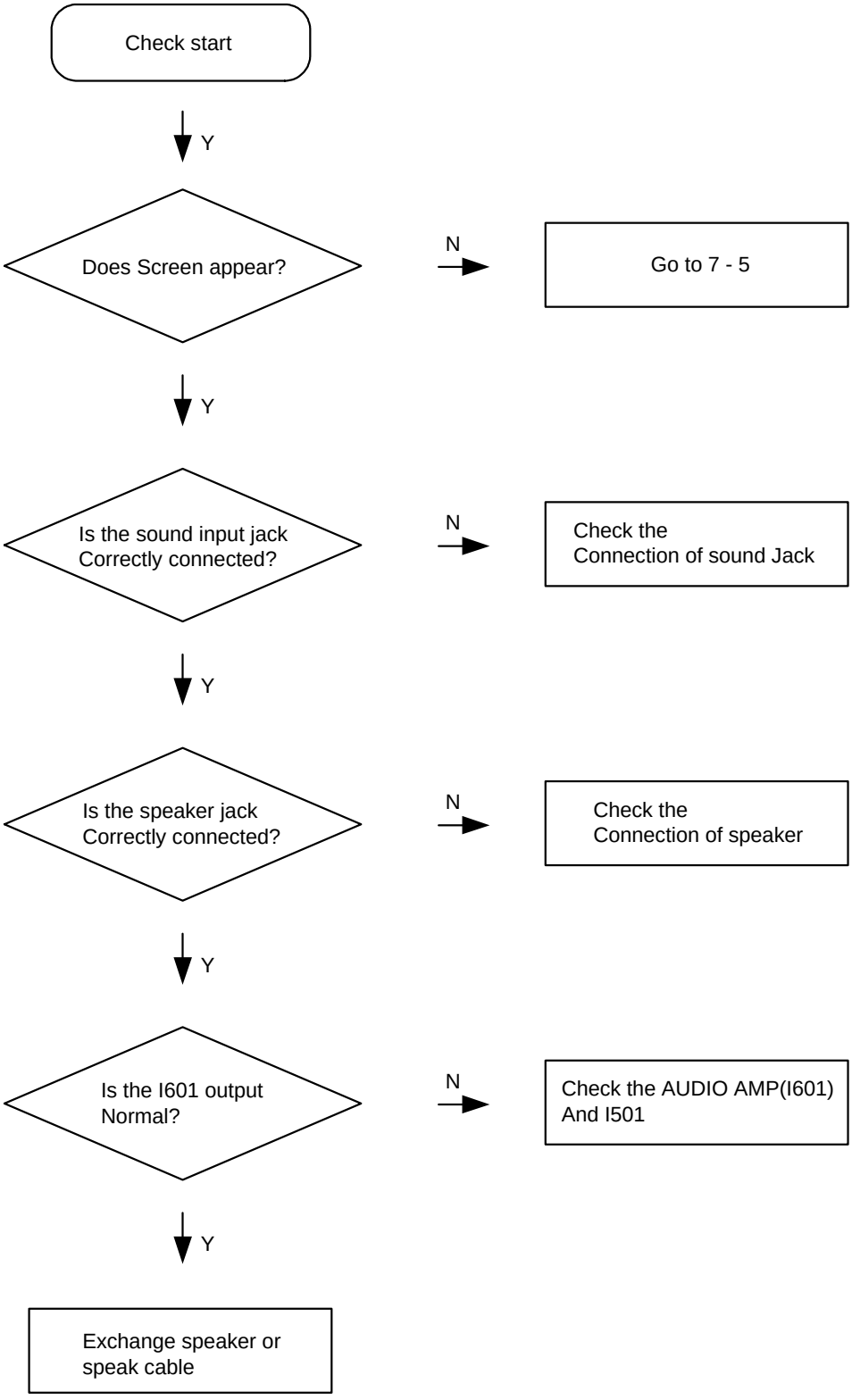
7-4. When “No picture” in TV mode.



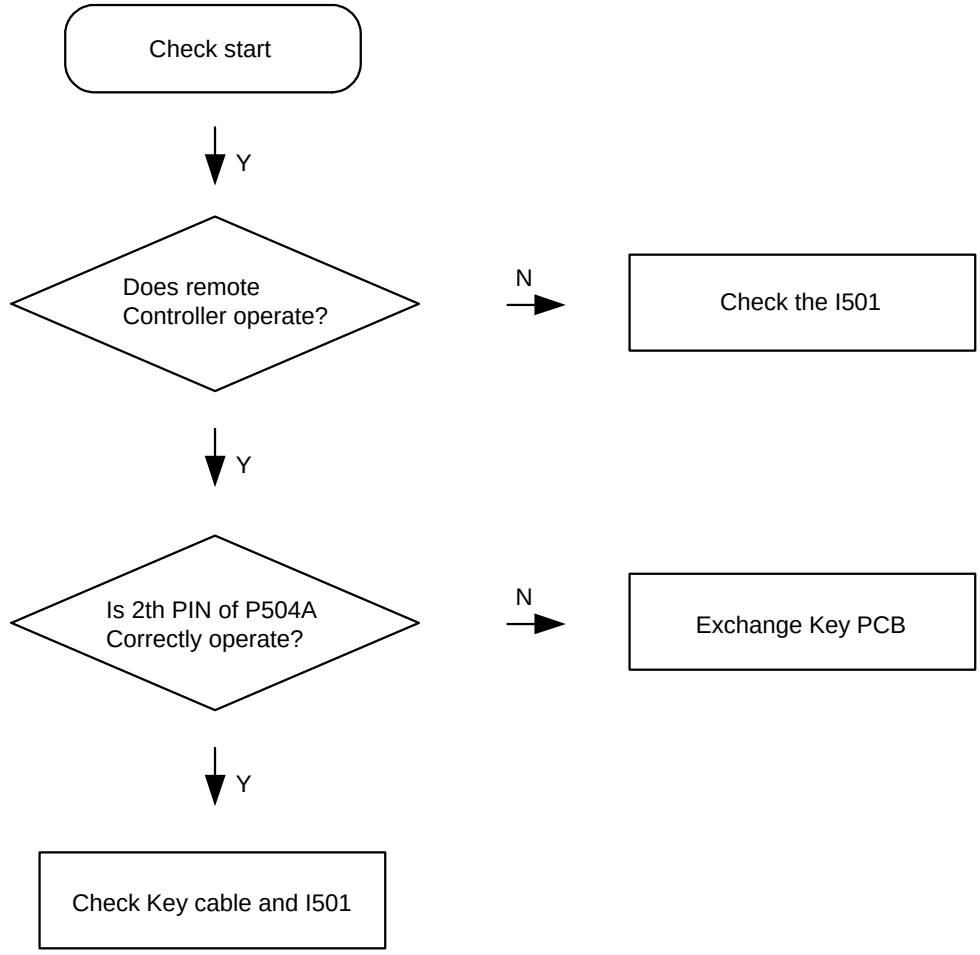
7-5. When “No picture” in External input mode.



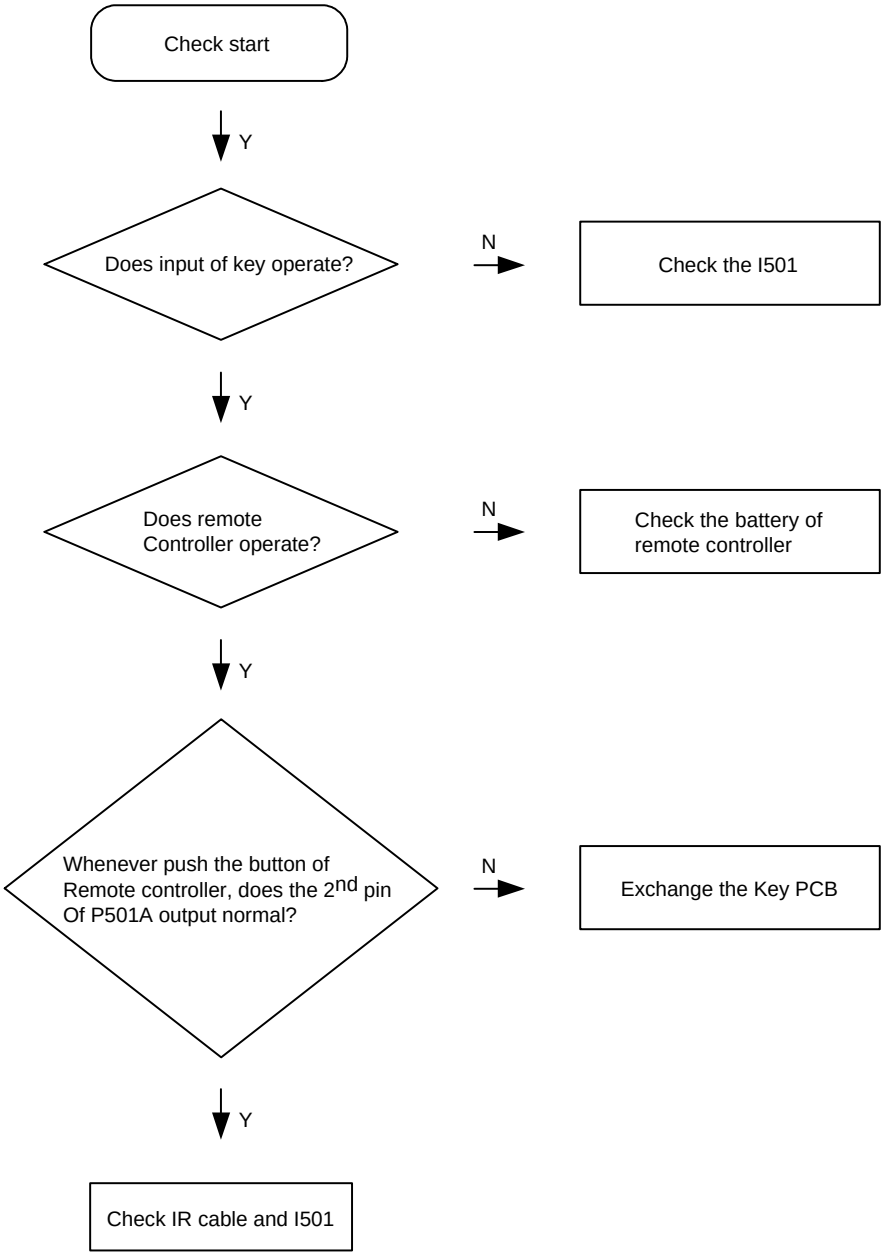
7-6. When No Sound in External input mode.



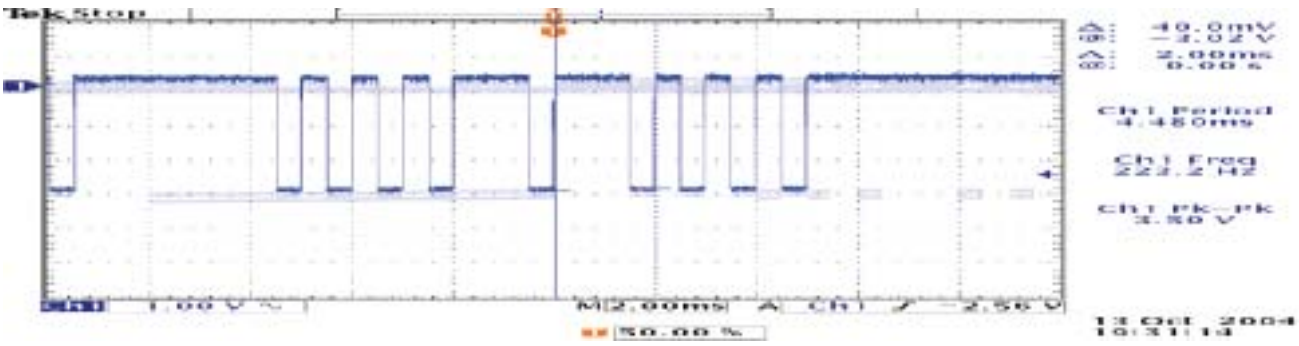
7-7. When Key does not operate.



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
ZZ110	PTACPWG140U	ACCESSORY	DLT-20W2AMBSC	
00010	4850Q00910	BATTERY	AAA R03SUPERGARD/ROCKET	
10001	DMP1001600	WARRANTY CARD	DESUK (NEW)	
M821	4858213801	BAG INSTRUCTION	L. D. P. E. T0. 05X250X400	
ZZ10	48B5655H1101	TRANSMITTER REMOCON	R-55H11 (AAA)	
ZZ120	PTBCSHG140	COVER BACK AS	DLT-20W2AMBSCF	
M211	4852178301	COVER BACK	20W2 HIPS BK	
M211B	4857817630	CLOTH BLACK	FELT T0.7 L=400	
M211C	4857818701	CLOTH BLACK	FELT T0.7 L=250 W=15	
M211D	4855945700	DECO AV	20W2 PS T0.25	
M321	4853297800	BRKT VESA	SECC T1.0	
M321A	7178300851	SCREW TAPPTITE	TT2 WAS 3X8 MFZN 3CR	
M542	4855800022P1	LABEL SERIAL	ART 90 55X34	
ZZ130	PTPKCPG140	PACKING AS	DLT-20W2AMBSCF	
M801	DMP5024600	BOX	DLT-20W2	
M803	2TP06575CL	TAPE OPP	T0.065XW75X500M CLEAR	
M811	485819D100UP	PAD UP	EPS 20W2	
M811A	485819D100DN	PAD DOWN	EPS 20W2	
M822	DMP2504300	BAG P.E.	PE FOAM T0.5X700X650	
ZZ140	PTCACAG140U	CABINET AS	DLT-20W2AMBSCU	
M1F1	4851F01900	STAND AS	DLP-20D7	
M1F1A	7172401652	SCREW TAPPTITE	TT2 TRS 4X16 MFZN BK 3CR	
M201C	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M201D	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M201E	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
M211E	4856819110	CLAMP WIRE	NYLON 66 BK (WSLT-03-3-01)	
M211F	4853535600	HOLDER CORD	NYROLN 66	
M211G	7172401452	SCREW TAPPTITE	TT2 TRS 4X14 MFZN BK 3CR	
M351	4853535500	HOLDER AC CORD	14A5 NYLON66 UL/CSA	
M361	4853635301O1	TERMINAL COVER	HIPS BK	
M361A	7178301052	SCREW TAPPTITE	TT2 WAS 3X10 MFZN BK 3CR	
M381A	7008300851	SCREW MACHINE	WAS 3X8 MFZN 3CR	
M381F	4956800200	CLAMP WIRE	WS-A-2-19	
M381G	2TF01612CL	TAPE FILAMENT	12MMX55ME CLEAR	
P202A	4859006460	CABLE LVDS	FMW1214A-31+FH100001-30+20W2AHB$=300	
P202B	4850K01900	CORE FERRITE	BNF-1730	
PWC1	48599PL001	CORD POWER	5A UK 14-LO (LOMAX) YH396-43V	
PWC1A	4850K01000	CORE FERRITE	BNF-18	
SP01B	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
SP02B	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
V901	485LD13200	LCD PANEL	T200XW02-V0	
ZZ200	PTFMSJG140	MASK FRONT AS	DLT-20W2AMBSCF	
M201	4852094411	MASK FRONT	20W2 HIPS GY503A	
M201A	4857818505	CLOTH BLACK	CLOTH 420X8XT0.5	
M201B	4857818506	CLOTH BLACK	CLOTH 240X8XT0.5	
M201C	2233032405	PAINT WATER	SV 2405BP CETELON	
M201D	2233039604	PAINT WATER	BK9604BP CETELON	
M551	4855556800	DECO SENSOR	20W2 PC SMOG	
M561	48556254SD02	MARK BRAND	SILVER DIA-CUTTING(DOUBLE FACED TYPE)	
ZZ210	PTSPPWG140	SPEAKER AS	DLT-20W2AMBSCF	
P602A	4850704S41	CONNECTOR	YH025-04+YRT205+ULW=300	
SP01	4858319910	SPEAKER	SP-5090F24C	
SP02	4858319910	SPEAKER	SP-5090F24C	
ZZ290	PTMPMSG140	PCB MAIN MANUAL AS	DLT-20W2AMBSCF	
10	2193110001	SOLDER WIRE	SN-3.0AG (NP303T) 3.0	
20	2193110002	SOLDER WIRE	SN-3.0AG-0.5CU (DHB-RMA3)	
30	2291050620	FLUX SOLDER	DF-2810U (0.810)	
40	2291050314	FLUX SOLVENT	IM-1000	
C634	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP	
C655	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP	
C670	CEXF1H221V	C ELECTRO	50V RSS 220MF (10X16) TP	
C671	CEXF1H221V	C ELECTRO	50V RSS 220MF (10X16) TP	
C847	CEXF1A332E	C ELECTRO	10V RM 3300MF TP	
HS505	4857032501	HEAT SINK	AL EX BK L=26	
I302	124LC32A-P	IC EEPROM	24LC32A-I/P 32K 8 PIN DIP STIK	
I307	124LC16B1B	IC MEMORY	24LC16B1B	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
IA02	124LC16B1B	IC MEMORY	24LC16B1B	
IC12	1TS0P34838	IC PREAMP	TSOP34838SJ	
ICD07	14C64WBN6-	IC EEPROM	M24C64-WBN6	
JP401	4855062900	DECO HDMI	PVC T0.3 (BLACK)	
L610	58C0000157	COIL CHOKE	CH-470X	
L620	58C0000157	COIL CHOKE	CH-470X	
LED1	DSPR39MVW-	LED	SPR-39MVW (DUAL)	
M231	4852333701	PANEL CTRL	20W2 HIPS BK	
M231A	4857817300	CLOTH BLACK	CLOTH 152X15XT0.5	
M381	4853831410	FRAME MAIN PCB	SECC T1.0	
M381A	4856815900	CLAMP WIRE	EGI T0.4+PVC COATING	
M381B	7008300851	SCREW MACHINE	WAS 3X8 MFZN 3CR	
M381C	7178300851	SCREW TAPPTITE	TT2 WAS 3X8 MFZN 3CR	
M381D	7178300851	SCREW TAPPTITE	TT2 WAS 3X8 MFZN 3CR	
M381H	4856813600	HOLDER WIRE	NYLON 66 DAWH-13NA	
M481	4854872411	BUTTON POWER	20W2 HIPS GY	
M491	4854964711	BUTTON CTRL	20W2 HIPS GY	
M491A	7178301051	SCREW TAPPTITE	TT2 WAS 3X10 MFZN 3CR	
P205	4859295520	CONN WAFER	4602-02MV2-60-1 PLUG 2P ST	
P206	4859295520	CONN WAFER	4602-02MV2-60-1 PLUG 2P ST	
P403	4959102340	JACK PHONE	YKB21-5157	
P404	4959200160	CONN D-SUB	SHF-015-B111-22/BR2-J0.6	
P501	4859231820	CONN WAFER	YW025-05	
P501A	4850705S24	CONNECTOR	YH025-05+YBH250-05+ULW=200	
P501C	4850705S01	CONNECTOR	YH025-05+YBNH250+ULW=100	
P501P	4850714N08	CONNECTOR	20022HS-14S+SMH200-14P+ULW=150	
P504	485923172S	CONN WAFER	YW025-04 (STICK)	
P504A	4850704S83	CONNECTOR	YH025-04+YBH250-04+ULW=70	
P505	485923172S	CONN WAFER	YW025-04 (STICK)	
P506	485923172S	CONN WAFER	YW025-04 (STICK)	
P602	485923172S	CONN WAFER	YW025-04 (STICK)	
P801A	4850710V02	CONNECTOR	YH025-10+YBNH250+ULW=100	
PA01	4859117750	JACK PIN	TPSE-9612-6	
PA04	97P6316100	JACK HEAD PHONE	DHSE-9959	
PA06	4859105340	JACK S-VHS	DSW-10 (STRAIGHT)	
PA07	4859112850	JACK PIN	DPSS-0173 3PIN STR	
PA08	4859112950	JACK SCART	DSSM-0378 STR	
PA09	4850712N12	CONNECTOR	YH025-12+YBNH250-12+USW=200	
PA10A	4859236920	CONN WAFER	YAW025-12	
PI01	4859200440	CONN PCMCIA	PC68PRA5513XZ	
RX14	RS01Y100J-	R M-OXIDE FILM	1W 10 OHM J	
SW8	5S40101009	SW PUSH	PS-22E06	
TU2	4850A23840	ANT SHIELD BOX	PAXBF01DA (PAL)	
U100	4859731230	TUNER DIGITAL	TD1318AF/IHP-3	
V902	4850M12710	MODULE POWER	PB-6024W02	
V903	4850M018NV	MODULE INVERTER	DS-1020DAW	
X302	5XJ24R576E	CRYSTAL QUARTZ	HC-49/S 24.576MHZ 30PPM	
Z101	5PK3953M—	FILTER SAW	K3953M	
Z102	5PK9650M—	FILTER SAW	K9650M	
ZZ200	PTMPJ2G140	PCB CHIP MOUNT B AS	DLT-20W2AMBSCF	
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	
C123	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C135	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
C205	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C220	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C221	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C222	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C230	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C233	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C245	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C246	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C276	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C320	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C325	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C330	HCQK470JBA	C CHIP CERA	50V CH 47PF J 1608	

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LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C331	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
C332	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
C333	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C335	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C338	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C339	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C340	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C341	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C343	HCFC475ZBA	C CHIP CERA	6.3V Y5V 4.7MF Z 1608	
C344	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C366	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C367	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C368	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C369	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C370	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C372	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C373	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C375	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C377	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C380	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C384	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C385	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C387	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C390	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C392	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C393	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C395	HCFC475ZBA	C CHIP CERA	6.3V Y5V 4.7MF Z 1608	
C524	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C525	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C526	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C527	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C528	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C529	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C530	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
C532	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C533	HCFC475ZBA	C CHIP CERA	6.3V Y5V 4.7MF Z 1608	
C534	HCFC475ZBA	C CHIP CERA	6.3V Y5V 4.7MF Z 1608	
C535	HCFC475ZBA	C CHIP CERA	6.3V Y5V 4.7MF Z 1608	
C537	HCFF474ZBA	C CHIP CERA	16V Y5V 0.47MF Z 1608	
C539	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C540	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C542	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C543	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C545	HCFC475ZBA	C CHIP CERA	6.3V Y5V 4.7MF Z 1608	
C547	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C549	HCBK392KBA	C CHIP CERA	50V X7R 3900PF K 1608	
C556	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C558	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C596	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C601	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C602	HCQK681JBA	C CHIP CERA	50V CH 680PF J 1608	
C610	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C611	HCQK681JBA	C CHIP CERA	50V CH 680PF J 1608	
C621	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C622	HCBK153KBA	C CHIP CERA	50V X7R 0.015MF K 1608	
C623	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C625	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C626	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C627	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C628	HCBK153KBA	C CHIP CERA	50V X7R 0.015MF K 1608	
C629	HCQK471JBA	C CHIP CERA	50V CH 470PF J 1608	
C630	HCQK471JBA	C CHIP CERA	50V CH 470PF J 1608	
C631	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C633	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C640	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C641	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C645	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C646	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
C647	HCQK331JBA	C CHIP CERA	50V CH 330PF J 1608	
C648	HCQK331JBA	C CHIP CERA	50V CH 330PF J 1608	
C649	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C650	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C651	HCBF224KBA	C CHIP CERA	16V X7R 0.22MF K 1608	
C652	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C656	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C672	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C673	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	
C731	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	
C732	HCQK221JBA	C CHIP CERA	50V CH 220PF J 1608	
C805	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C823	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
C824	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
C826	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C844	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C846	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	
C852	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C854	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C856	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C857	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C859	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C862	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C871	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C873	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C875	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
C876	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	
CA01	HCQK120JBA	C CHIP CERA	50V CH 12PF J 1608	
CA02	HCQK120JBA	C CHIP CERA	50V CH 12PF J 1608	
CA03	HCQK120JBA	C CHIP CERA	50V CH 12PF J 1608	
CA07	HCBK102KBA	C CHIP CERA	50V X7R 1000PF 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	
CA126	HCQK270JBA	C CHIP CERA	50V CH 27PF J 1608	
CA127	HCQK100JBA	C CHIP CERA	50V CH 10PF J 1608	
CA13	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CA14	HCQK330JBA	C CHIP CERA	50V CH 33PF J 1608	
CA21	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA22	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA23	HCQK331JBA	C CHIP CERA	50V CH 330PF J 1608	
CA24	HCQK331JBA	C CHIP CERA	50V CH 330PF J 1608	
CA30	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA31	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA33	HCBK103KBA	C CHIP CERA	50V X7R 0.01MF K 1608	
CA36	HCQK330JBA	C CHIP CERA	50V CH 33PF J 1608	
CA37	HCQK120JBA	C CHIP CERA	50V CH 12PF J 1608	
CA38	HCQK120JBA	C CHIP CERA	50V CH 12PF J 1608	
CA39	HCQK120JBA	C CHIP CERA	50V CH 12PF J 1608	
CA42	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA43	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CA53	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
CA54	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
CA87	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CC06	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC07	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC08	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC09	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC10	HCBK102KBA	C CHIP CERA	50V X7R 1000PF K 1608	
CC14	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	

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LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
CC15	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC16	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC18	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC27	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CC29	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC30	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CC40	HCQK220JBA	C CHIP CERA	50V CH 22PF J 1608	
CC41	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CD01	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD02	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD03	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD04	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD05	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD06	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD07	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD08	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD10	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD11	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD12	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD13	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD14	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD18	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD19	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD20	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD21	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD22	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD24	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD26	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD27	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD28	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD29	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD33	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD34	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD44	HCBK332KBA	C CHIP CERA	50V X7R 3300PF K 1608	
CD45	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD49	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD53	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD55	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD61	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD62	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD63	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD66	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD68	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD69	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD70	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD71	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD72	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD76	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD77	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
CD86	HCFF105ZBA	C CHIP CERA	16V Y5V 1MF Z 1608	
CD87	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CD88	HCBK472KBA	C CHIP CERA	50V X7R 4700PF K 1608	
CD90	HCFF105ZBA	C CHIP CERA	16V Y5V 1MF Z 1608	
CD91	HCQK101JBA	C CHIP CERA	50V CH 100PF J 1608	
CD94	HCBK104KBA	C CHIP CERA	50V X7R 0.1MF K 1608	
DA19	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA22	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA23	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA24	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA25	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA27	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA30	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA32	D3C09GTA—	CERA DIODE	CDS3C09GTA	
DA34	D3C09GTA—	CERA DIODE	CDS3C09GTA	
I601	1TDA8932TD	IC CHIP AUDIO AMP CLAS$-D	TDA8932T	
L202	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L203	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L204	HLC479J00A	L CHIP COIL	4.7UH MLF2012	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
L205	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L208	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L209	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L210	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L213	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L215	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L312	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L320	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L321	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L322	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L324	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L325	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L326	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L327	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L328	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L329	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L330	HLB300M04A	L CHIP BEAD	30 OHM MPZ 2012	
L332	HFF272Q21B	F CHIP FERRITE BEAD	2.7K OHM TB 201209	
L503	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L521	HLC479J00A	L CHIP COIL	4.7UH MLF2012	
L822	HFF272Q21B	F CHIP FERRITE BEAD	2.7K OHM TB 201209	
R103	HRFT393JBA	R CHIP	1/10 39K OHM J 1608	
R104	HRFT683JBA	R CHIP	1/10 68K OHM J 1608	
R105	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R114	HRFT473JBA	R CHIP	1/10 47K 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	
R134	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R230	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R24	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R240	HRFT221JBA	R CHIP	1/10 220 OHM J 1608	
R244	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R249	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R250	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R251	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R258	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R260	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R261	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R262	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R263	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
R271	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R275	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R28	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R286	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R311	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R312	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R313	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R331	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R336	HRFT220JBA	R CHIP	1/10 22 OHM J 1608	
R341	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R343	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R348	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R349	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R351	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R352	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
R353	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R356	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R358	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R362	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R371	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R372	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R380	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R381	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R383	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R395	HRFT229JBA	R CHIP	1/10 2.2 OHM J 1608	
R396	HRFT229JBA	R CHIP	1/10 2.2 OHM J 1608	
R502	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	

Service part list

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
R506	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R525	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R526	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R527	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R528	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R530	HRFT151JBA	R CHIP	1/10 150 OHM J 1608	
R531	HRFT181JBA	R CHIP	1/10 180 OHM J 1608	
R540	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
R545	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R549	HRFT569JBA	R CHIP	1/10 5.6 OHM J 1608	
R550	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R551	HRFT393JBA	R CHIP	1/10 39K OHM J 1608	
R552	HRFT569JBA	R CHIP	1/10 5.6 OHM J 1608	
R553	HRFT339JBA	R CHIP	1/10 3.3 OHM J 1608	
R554	HRFT391JBA	R CHIP	1/10 390 OHM J 1608	
R556	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R601	HRFT562JBA	R CHIP	1/10 5.6K OHM J 1608	
R602	HRFT912JBA	R CHIP	1/10 9.1K OHM J 1608	
R605	HRFT104JBA	R CHIP	1/10 100K OHM J 1608	
R606	HRFT104JBA	R CHIP	1/10 100K OHM J 1608	
R611	HRFT562JBA	R CHIP	1/10 5.6K OHM J 1608	
R612	HRFT912JBA	R CHIP	1/10 9.1K OHM J 1608	
R633	HRFT105JBA	R CHIP	1/10 1M OHM J 1608	
R634	HRFT105JBA	R CHIP	1/10 1M OHM J 1608	
R641	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R642	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R643	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R644	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R645	HRFT393JBA	R CHIP	1/10 39K OHM J 1608	
R646	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R647	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R649	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R662	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
R663	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	
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	
R731	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R732	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R733	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R734	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
R814	HRFT681JBA	R CHIP	1/10 680 OHM J 1608	
R815	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
R824	HRFT681JBA	R CHIP	1/10 680 OHM J 1608	
R826	HRFT202JBA	R CHIP	1/10 2K OHM J 1608	
R832	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R846	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R849	HRFT100JBA	R CHIP	1/10 10 OHM J 1608	
R857	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
R858	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R865	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
R868	HRFT000-BA	R CHIP	1/10 0 OHM 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	
R893	HRFT123JBA	R CHIP	1/10 12K OHM J 1608	
R897	HRFT512JBA	R CHIP	1/10 5.1K OHM J 1608	
R898	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
R899	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA01	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA02	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA03	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA04	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA06	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA07	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
RA100	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA101	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA108	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA11	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RA114	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA12	HRFT271JBA	R CHIP	1/10 270 OHM J 1608	
RA15	HRFT105JBA	R CHIP	1/10 1M OHM J 1608	
RA16	HRFT105JBA	R CHIP	1/10 1M OHM J 1608	
RA19	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA191	HRFT471JBA	R CHIP	1/10 470 OHM J 1608	
RA20	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA201	HRFT391JBA	R CHIP	1/10 390 OHM J 1608	
RA21	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA235	HRFT152JBA	R CHIP	1/10 1.5K OHM J 1608	
RA25	HRFT101JBA	R CHIP	1/10 100 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	
RA29	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA30	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA31	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA32	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA33	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA35	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA36	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA37	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
RA38	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
RA40	HRFT220JBA	R CHIP	1/10 22 OHM J 1608	
RA41	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA45	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RA48	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA49	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
RA50	HRFT221JBA	R CHIP	1/10 220 OHM J 1608	
RA51	HFF300B01A	F CHIP FERRITE BEAD	30 OHM UPB 1608	
RA52	HFF300B01A	F CHIP FERRITE BEAD	30 OHM UPB 1608	
RA53	HRFT221JBA	R CHIP	1/10 220 OHM J 1608	
RA55	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RA56	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RA57	HRFT271JBA	R CHIP	1/10 270 OHM J 1608	
RA58	HRFT154JBA	R CHIP	1/10 150K OHM J 1608	
RA59	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RA60	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA63	HRFT224JBA	R CHIP	1/10 220K OHM J 1608	
RA64	HRFT224JBA	R CHIP	1/10 220K OHM J 1608	
RA68	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA70	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA71	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RA73	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA76	HRFT680JBA	R CHIP	1/10 68 OHM J 1608	
RA77	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA78	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA79	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA82	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA84	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA85	HRFT473JBA	R CHIP	1/10 47K OHM J 1608	
RA86	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA89	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA90	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RA92	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA95	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RA97	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RC08	HRFT684JBA	R CHIP	1/10 680K OHM J 1608	
RC09	HRFT224JBA	R CHIP	1/10 220K OHM J 1608	
RC12	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RC13	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RC20	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
RC21	HRFT683JBA	R CHIP	1/10 68K OHM J 1608	
RC22	HRFT821JBA	R CHIP	1/10 820 OHM J 1608	

Service part list

LOC	PART CODE	PART NAME	DESCRIPTION	REMARK
RC23	HRFT152JBA	R CHIP	1/10 1.5K OHM J 1608	
RC24	HRFT333JBA	R CHIP	1/10 33K OHM J 1608	
RC25	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
RC26	HRFT683JBA	R CHIP	1/10 68K OHM J 1608	
RC27	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
RC28	HRFT821JBA	R CHIP	1/10 820 OHM J 1608	
RC29	HRFT333JBA	R CHIP	1/10 33K OHM J 1608	
RC30	HRFT821JBA	R CHIP	1/10 820 OHM J 1608	
RC50	HRFT821JBA	R CHIP	1/10 820 OHM J 1608	
RC56	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC58	HRFT202JBA	R CHIP	1/10 2K OHM J 1608	
RC65	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RC66	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RC67	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC71	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC72	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC73	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
RC74	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
RC76	HRFT470JBA	R CHIP	1/10 47 OHM J 1608	
RC81	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC82	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC92	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC93	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC95	HRFT330JBA	R CHIP	1/10 33 OHM J 1608	
RC96	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RC97	HRFT472JBA	R CHIP	1/10 4.7K OHM J 1608	
RC99	HRFT330JBA	R CHIP	1/10 33 OHM J 1608	
RD02	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD05	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD07	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD09	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD15	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD17	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD20	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD21	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD22	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD28	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD31	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD45	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
RD48	HRFT122JBA	R CHIP	1/10 1.2K OHM J 1608	
RD49	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD51	HRFT332JBA	R CHIP	1/10 3.3K OHM J 1608	
RD62	HRFT181JBA	R CHIP	1/10 180 OHM J 1608	
RD63	HRFT680JBA	R CHIP	1/10 68 OHM J 1608	
RD65	HRFT471JBA	R CHIP	1/10 470 OHM J 1608	
RD66	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RD85	HRFT102JBA	R CHIP	1/10 1K OHM J 1608	
RD97	HRFT103JBA	R CHIP	1/10 10K OHM J 1608	
RX03	HRFT101JBA	R CHIP	1/10 100 OHM J 1608	
RX11	HRFT330JBA	R CHIP	1/10 33 OHM J 1608	
RX19	HRFT750JBA	R CHIP	1/10 75 OHM J 1608	
RX46	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RX95	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RX96	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RX97	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
RX98	HRFT000-BA	R CHIP	1/10 0 OHM 1608	
ZZ200	PTMPJRG140	PCB MAIN RADIAL AS	DLT-20W2AMBSCF	
C102	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP	
C106	CEXF1C220V	C ELECTRO	16V RSS 22MF TP	
C232	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C235	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C244	CEXF1C470V	C ELECTRO	16V RSS 47MF (5X11) TP	
C265	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP	
C334	CEXF1C221V	C ELECTRO	16V RSS 220MF (8X11.5) TP	

9. Power

9-1. IPB-6024W02(The powe 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 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 4MΩ 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 80mΩ 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 +15Vdc'					

10. Inverter

10-1. Feature

- Drive 6 lamps with one module
- Norminal current 6.5mArms 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.

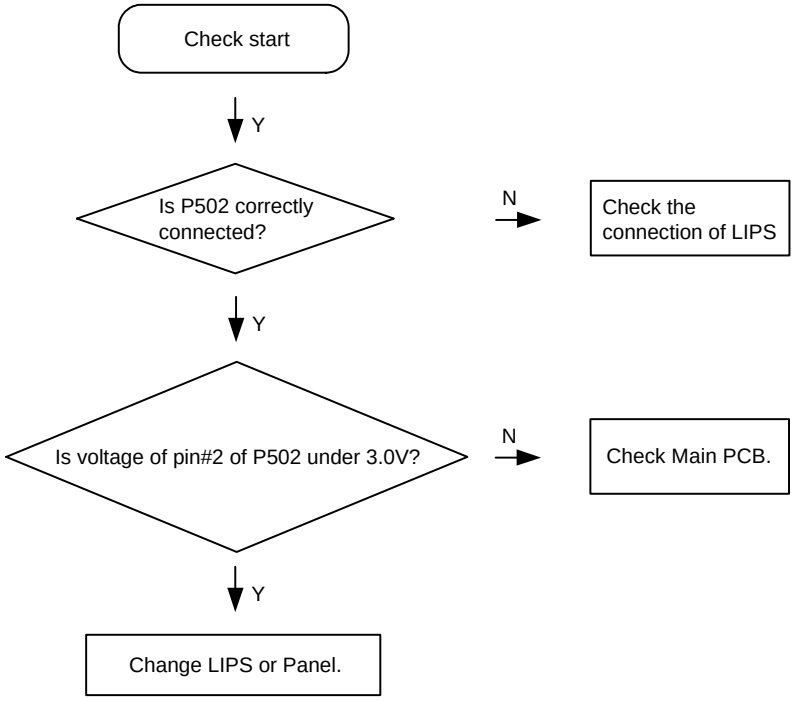
Parameter	Symbol	Recommendation			Units
		Min	R.C.	Max	
Input supply voltage	V_{IN}	21.6	24.0	26.4	V
Full bright lamp current	$I_{O(MAX)}$	4.0	6.5	7.5	mArms
Brightness control voltage range	V_{BRT}	0		5.0	V
Lamp on/off control voltage	V_{SLEEP}	3.0	5.0	7.0	V
Lamp operating voltage(reference)	V_O		850		Vrms
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

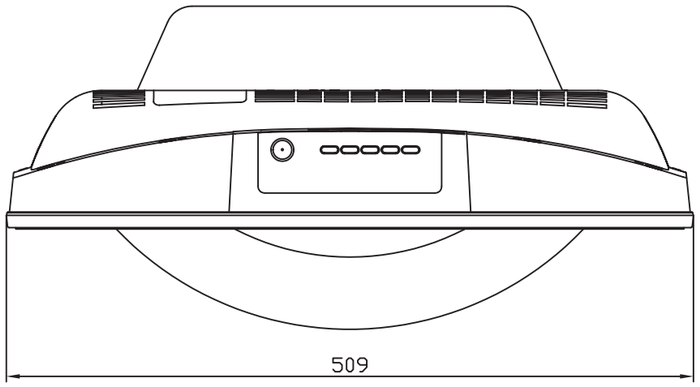
*Backlight doesn't turn on

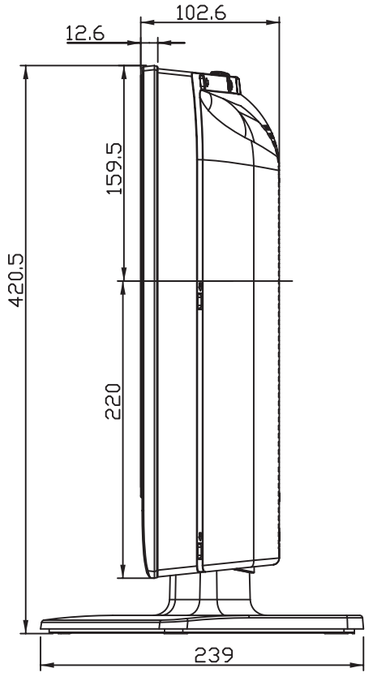


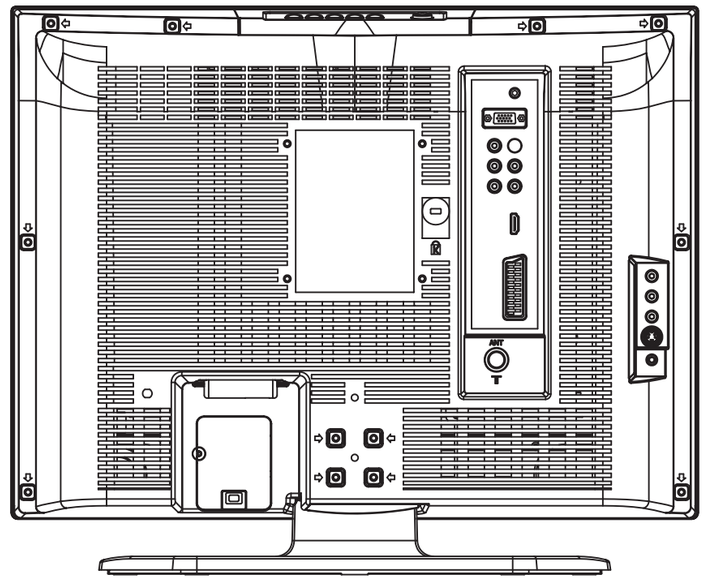
11. Out Line

DLT-20W2

REV	LIST OF MODIFICATION	REASON OF MODIFICATION	DATE	NAME	APPR
1					
2					



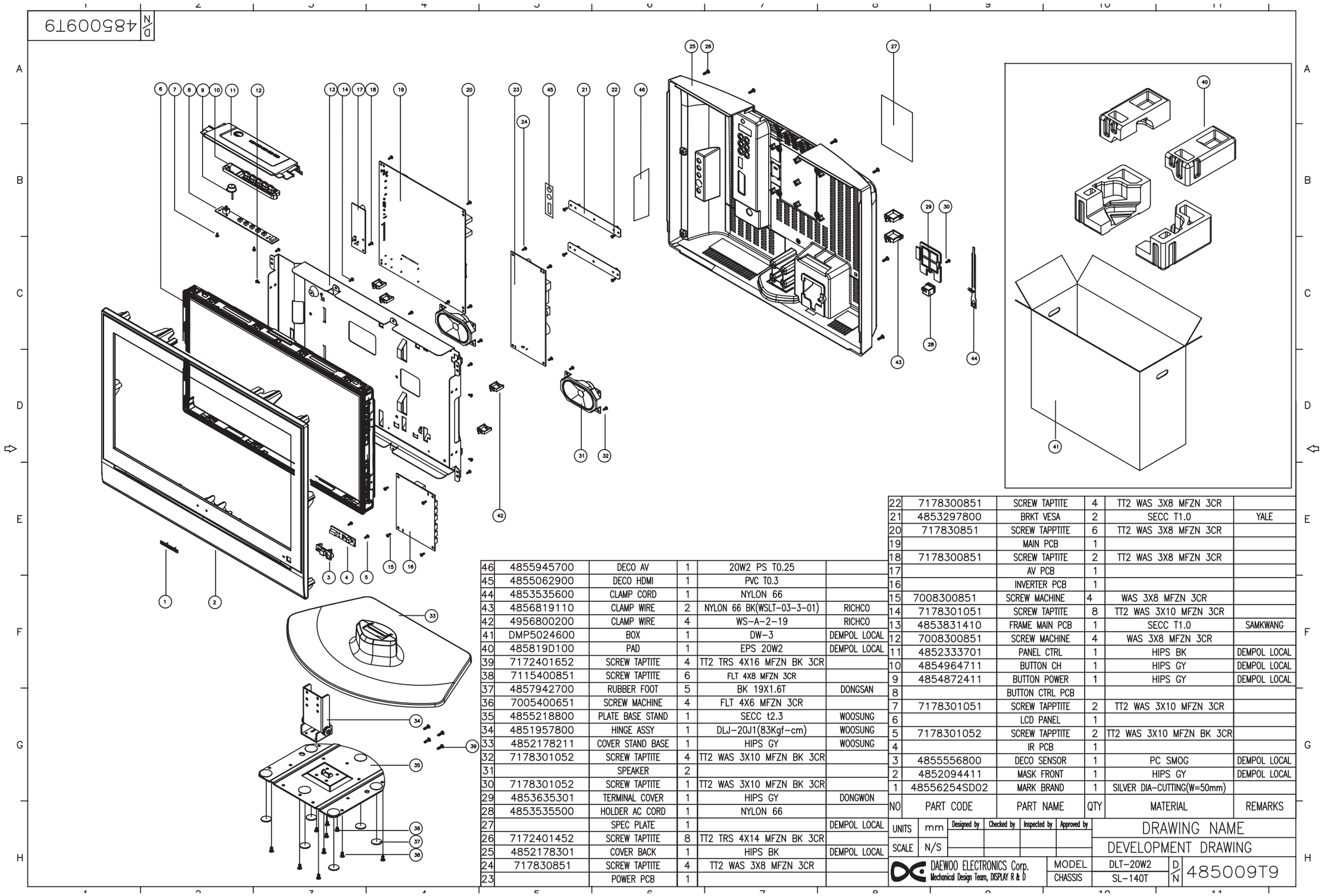




UNITS	mm	Designed by	Checked by	Inspected by	Approved by	PART NAME
SCALE	1/4	PARK.Y.K 06.08.22				OUTLINE DRAWING
DAEWOO ELECTRONICS Corp. Mechanical Design Team, DISPLAY R & D		MODEL	DLT-20W2	D/N	485009TA	
		CHASSIS	SL-140T			

12. Exploded View

DLT-20W2



NO	PART CODE	PART NAME	QTY	MATERIAL	REMARKS
46	4855945700	DECO AV	1	20W2 PS T0.25	
45	4855062900	DECO HDMI	1	PVC T0.3	
44	4853535600	CLAMP CORD	1	NYLON 66	
43	4856819110	CLAMP WIRE	2	NYLON 66 BK(WSLT-03-3-01)	RICHCO
42	4956800200	CLAMP WIRE	4	WS-A-2-19	RICHCO
41	DMP5024600	BOX	1	DW-3	DEMPOL LOCAL
40	485819D100	PAD	1	EPS 20W2	DEMPOL LOCAL
39	7172401652	SCREW TAPTITE	4	TT2 TRS 4X16 MFZN BK 3CR	
38	7115400851	SCREW TAPTITE	6	FLT 4X8 MFZN 3CR	
37	4857942700	RUBBER FOOT	5	BK 19X1.6T	DONGSAN
36	7005400651	SCREW MACHINE	4	FLT 4X6 MFZN 3CR	
35	4855218800	PLATE BASE STAND	1	SECC t2.3	WOOSUNG
34	4851957800	HINGE ASSY	1	DLJ-20J1(83Kgf-cm)	WOOSUNG
33	4852178211	COVER STAND BASE	1	HIPS GY	WOOSUNG
32	7178301052	SCREW TAPTITE	4	TT2 WAS 3X10 MFZN BK 3CR	
31		SPEAKER	2		
30	7178301052	SCREW TAPTITE	1	TT2 WAS 3X10 MFZN BK 3CR	
29	4853635301	TERMINAL COVER	1	HIPS GY	DONGWON
28	4853535500	HOLDER AC CORD	1	NYLON 66	
27		SPEC PLATE	1		DEMPOL LOCAL
26	7172401452	SCREW TAPTITE	8	TT2 TRS 4X14 MFZN BK 3CR	
25	4852178301	COVER BACK	1	HIPS BK	DEMPOL LOCAL
24	717830851	SCREW TAPTITE	4	TT2 WAS 3X8 MFZN 3CR	
23		POWER PCB	1		
22	7178300851	SCREW TAPTITE	4	TT2 WAS 3X8 MFZN 3CR	
21	4853297800	BRKT VESA	2	SECC T1.0	YALE
20	717830851	SCREW TAPPTITE	6	TT2 WAS 3X8 MFZN 3CR	
19		MAIN PCB	1		
18	7178300851	SCREW TAPTITE	2	TT2 WAS 3X8 MFZN 3CR	
17		AV PCB	1		
16		INVERTER PCB	1		
15	7008300851	SCREW MACHINE	4	WAS 3X8 MFZN 3CR	
14	7178301051	SCREW TAPTITE	8	TT2 WAS 3X10 MFZN 3CR	
13	4853831410	FRAME MAIN PCB	1	SECC T1.0	SAMKWANG
12	7008300851	SCREW MACHINE	4	WAS 3X8 MFZN 3CR	
11	4852333701	PANEL CTRL	1	HIPS BK	DEMPOL LOCAL
10	4854964711	BUTTON CH	1	HIPS GY	DEMPOL LOCAL
9	4854872411	BUTTON POWER	1	HIPS GY	DEMPOL LOCAL
8		BUTTON CTRL PCB			
7	7178301051	SCREW TAPPTITE	2	TT2 WAS 3X10 MFZN 3CR	
6		LCD PANEL	1		
5	7178301052	SCREW TAPPTITE	2	TT2 WAS 3X10 MFZN BK 3CR	
4		IR PCB	1		
3	4855556800	DECO SENSOR	1	PC SMOG	DEMPOL LOCAL
2	4852094411	MASK FRONT	1	HIPS GY	DEMPOL LOCAL
1	48556254SD02	MARK BRAND	1	SILVER DIA-CUTTING(W=50mm)	

UNITS	mm	Designed by	Checked by	Inspected by	Approved by	DRAWING NAME
SCALE	N/S					DEVELOPMENT DRAWING

DAEWOO ELECTRONICS Corp. Mechanical Design Team, DISPLAY R & D

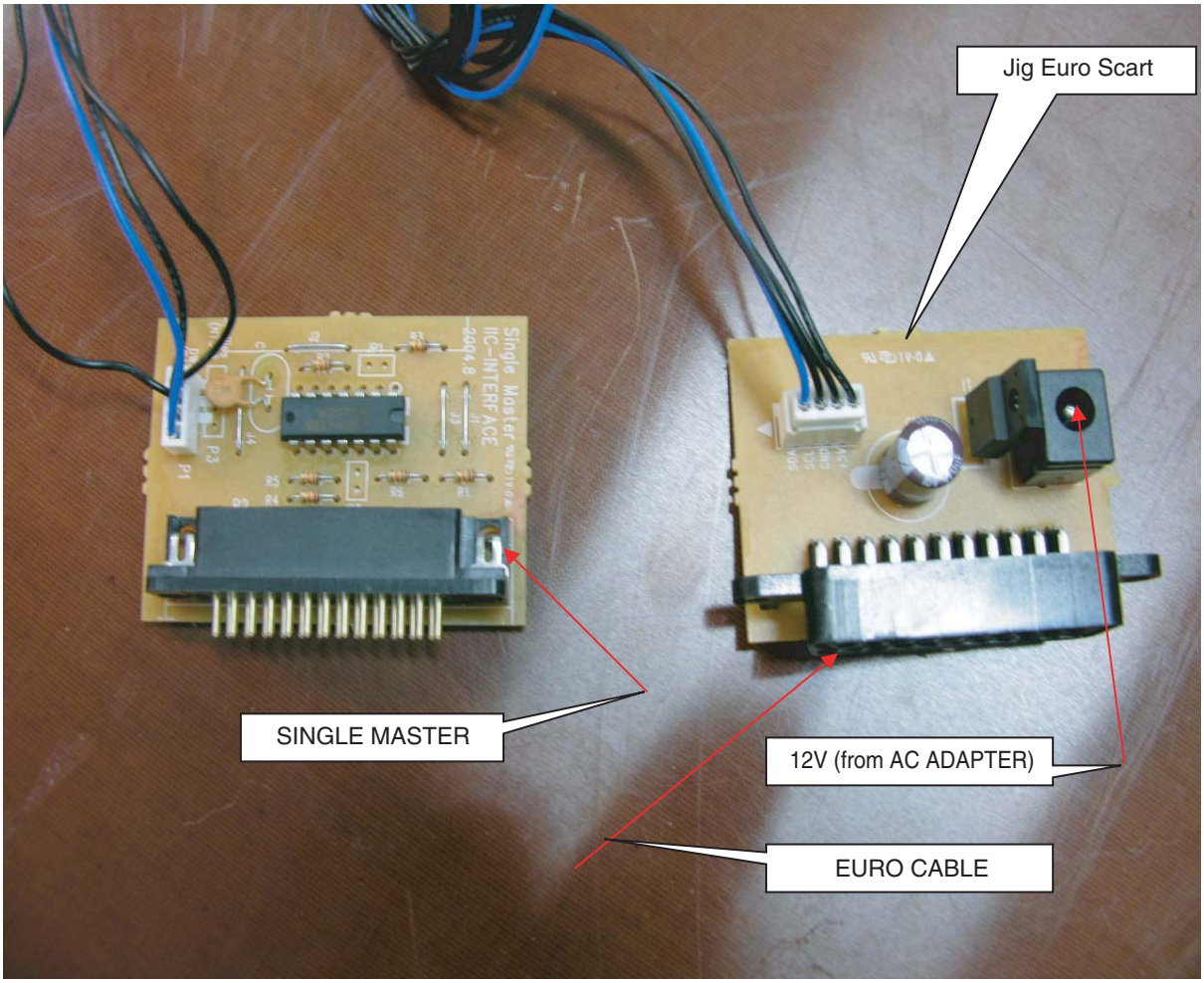
MODEL	DLT-20W2	D/N	485009T9
CHASSIS	SL-140T		

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.

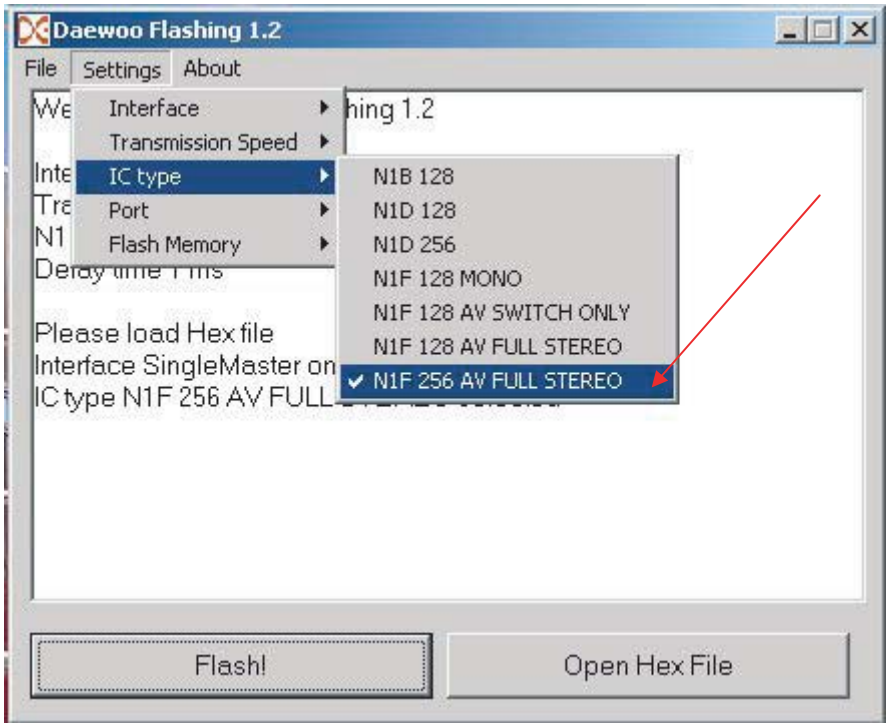


2. Please install software Daewoo Flashing (DF1_2Setup.exe).

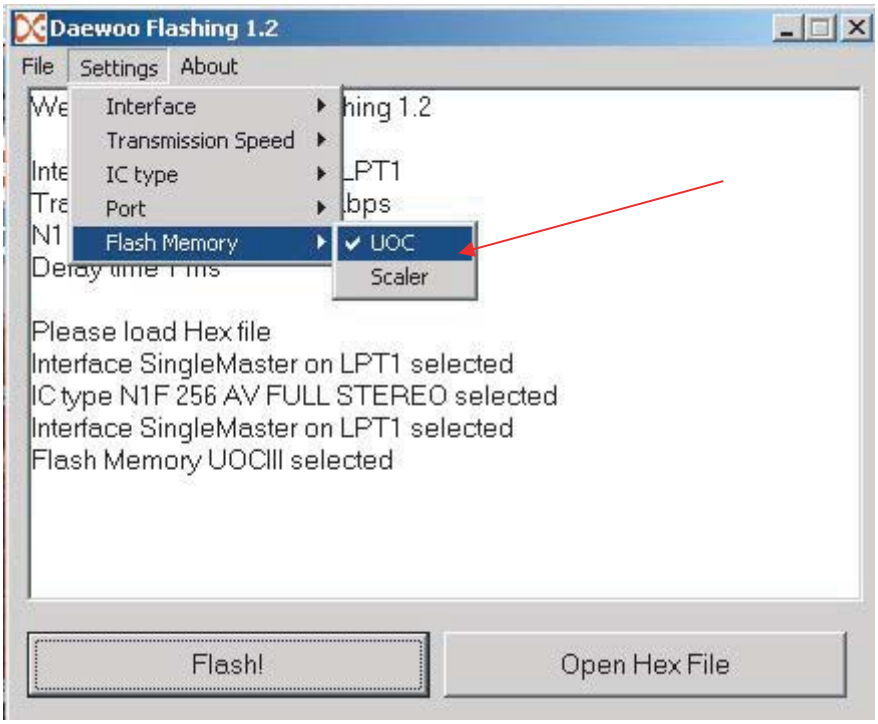
After install please restart computer.

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

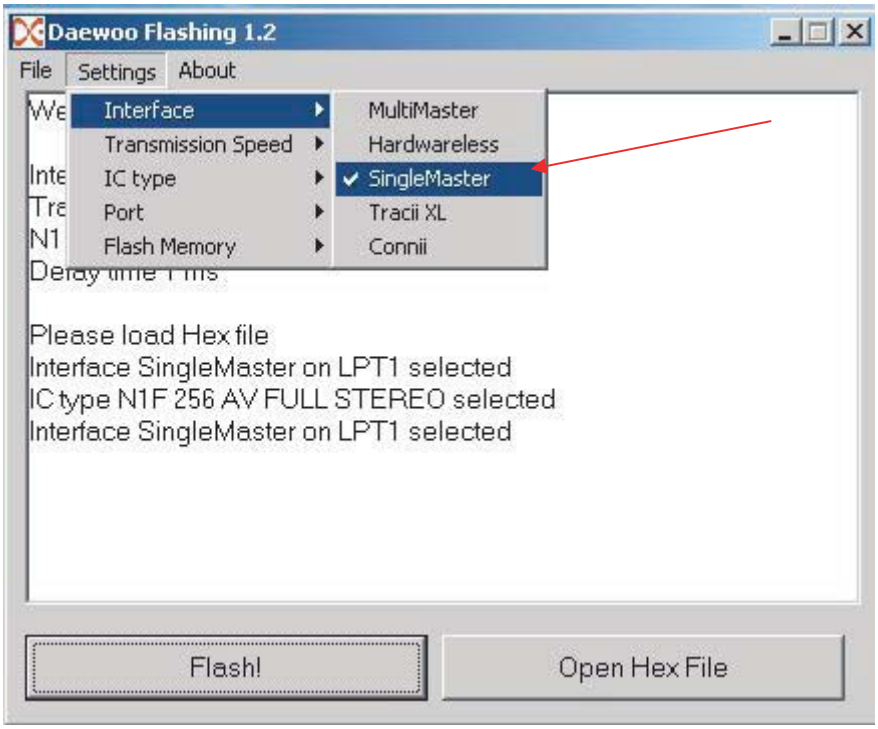
4. Please choose IC type (for LCD TV - N1F 256 AV FULL STEREO).



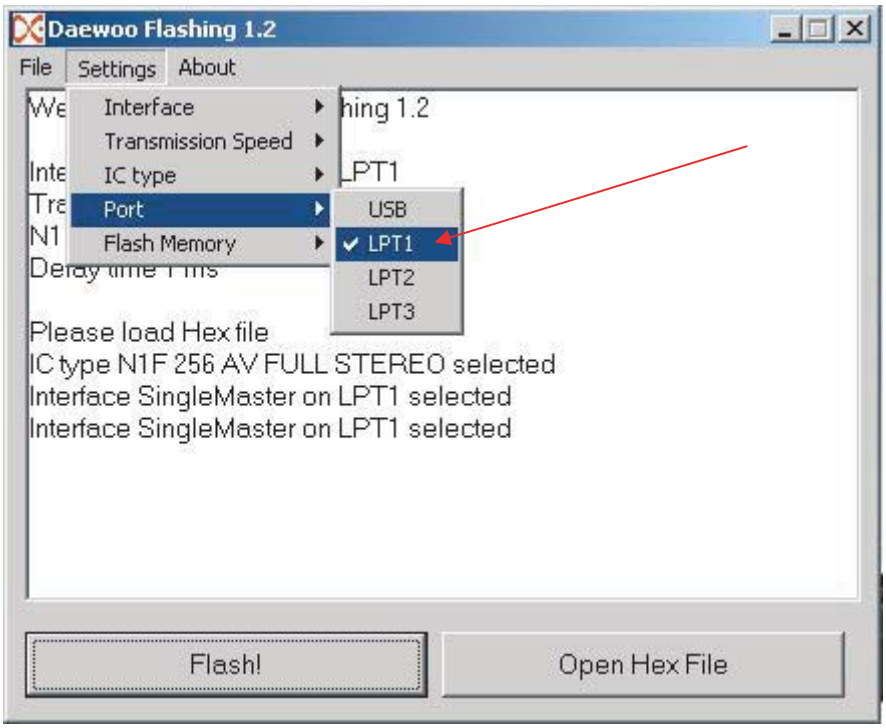
5. Please choose Flash Memory (UOC).



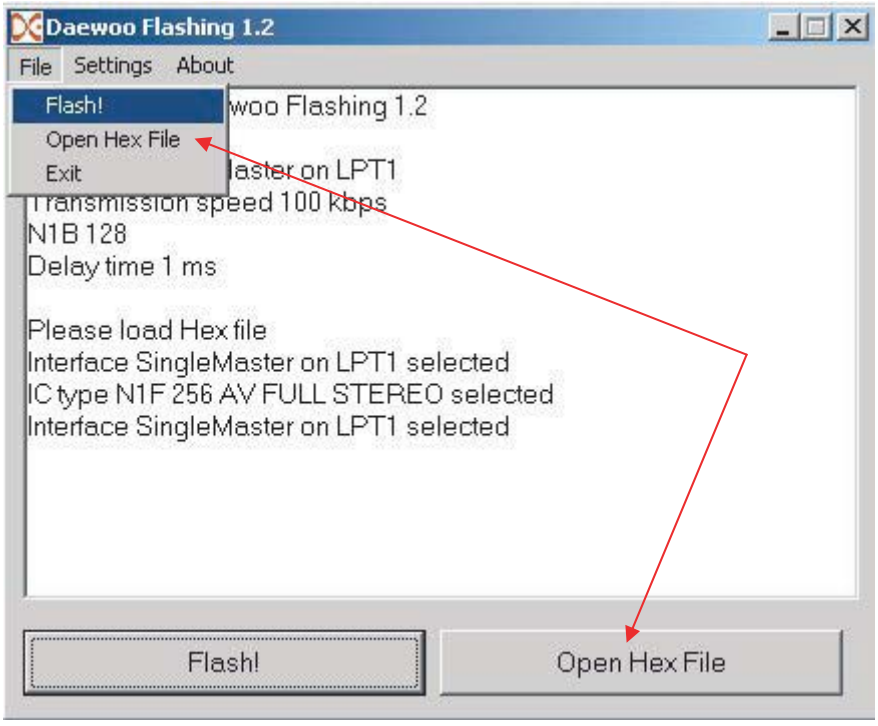
6. Please choose Interface (Single Master).



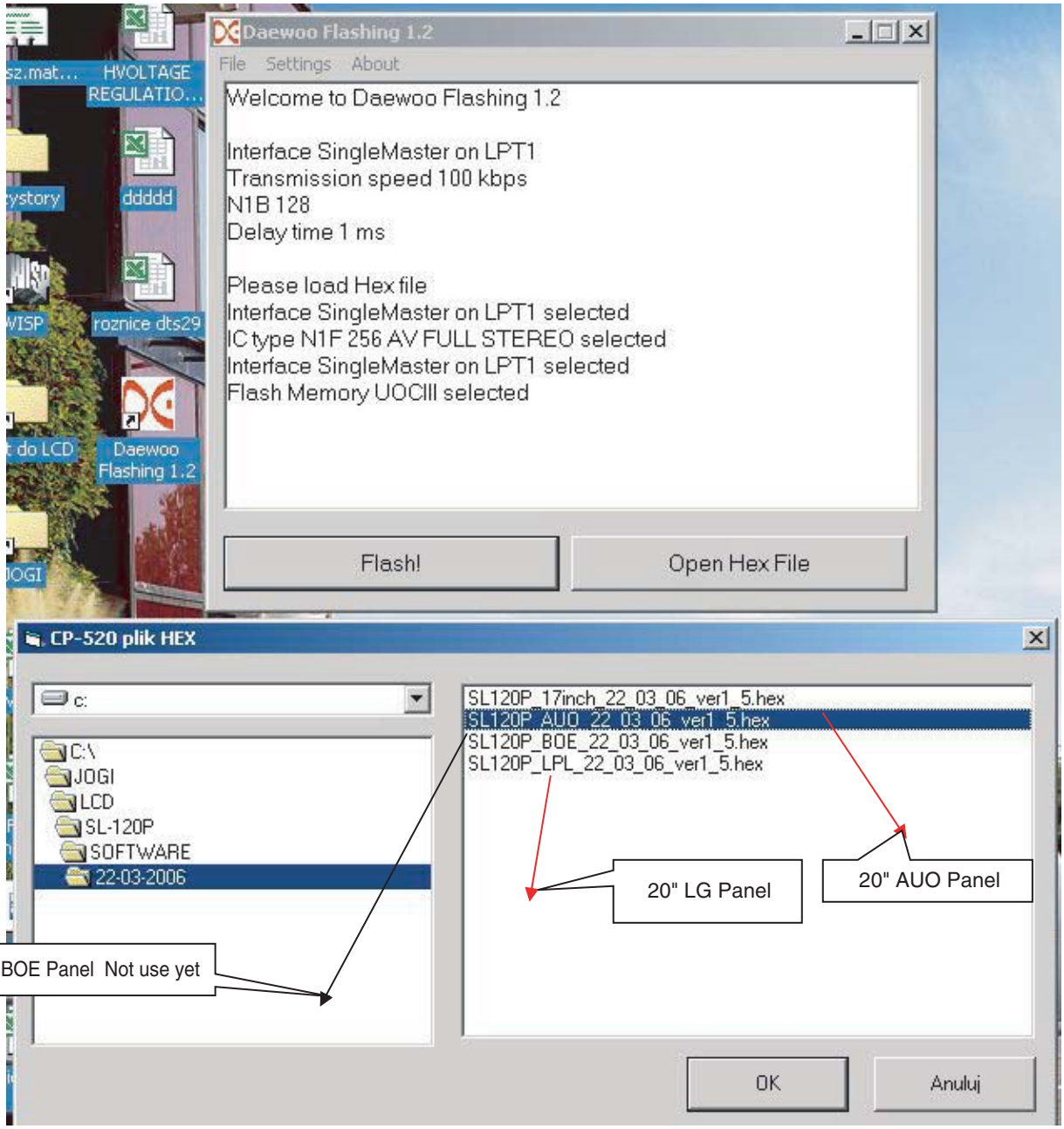
7. Please choose port (LPT1)



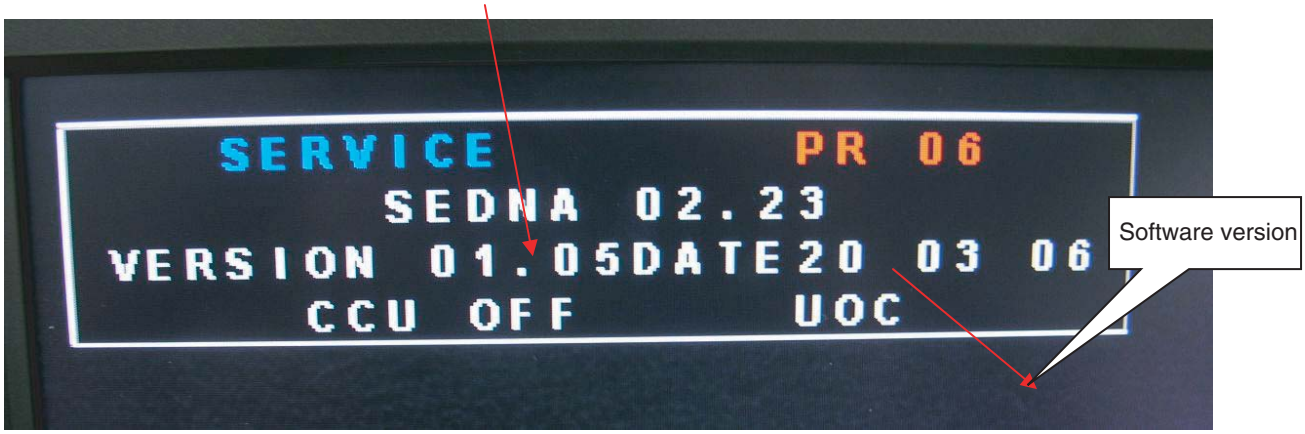
8. Please open HEX FILE



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).

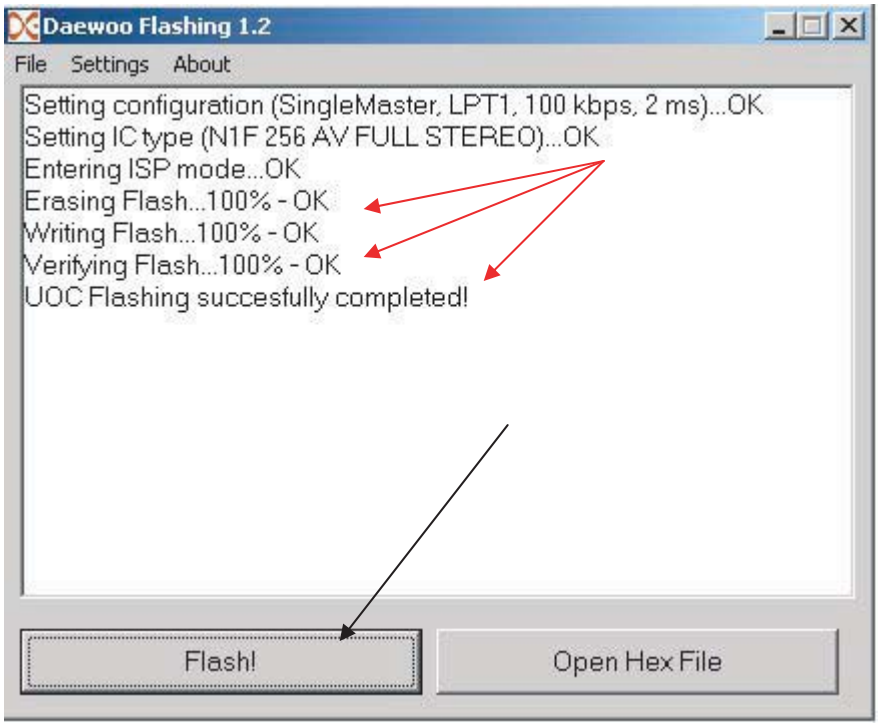


10. Please ON LCD TV and press SVC button on Service remocon and next press SCREEN button to make UOC OFF.



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.



13. After finish please disconect 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.

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