ORION

TV39LB139S

SERVICE MANUAL

LCD/LED-TV

DVBS DVBC **DOLBY.** HƎMI
DVBS2 DVBT DIGITAL PLUS

ORIGINAL
CHASSIS CODE A

Design and specifications are subject to change without notice.
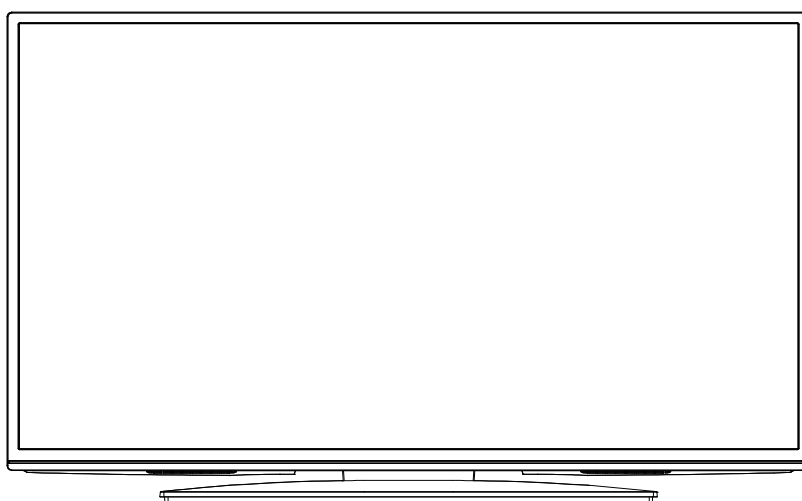
SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. BE CAREFUL WITH THE LCD PANEL

Avoid a shock to the panel while servicing. Take enough care to deal with it.

5. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

6. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]
If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]
External exposure metal: Antenna terminal
                                        Headphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the CHASSIS CODE.)
1. MODEL NUMBER and CHASSIS CODE
   YOU can find it in the back of your unit.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT

When you exchange IC and Transistor with a heat sink, apply silicon grease (YG6260M) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease.
(Old grease may cause damage to the IC and Transistor).

ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCB's (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)
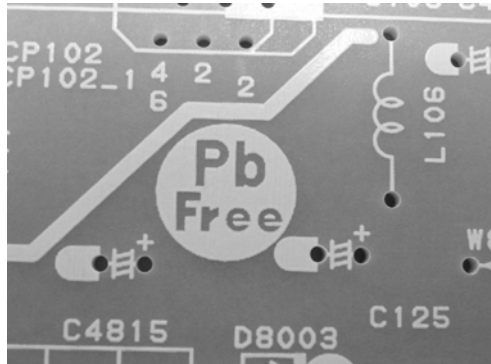
Caution:

- Pb free solder has a higher melting point than standard solder;
  Typically the melting point is 86^oF~104^oF(30^oC~40^oC) higher.
  Please use a soldering iron with temperature control and adjust it to 650^oF $\pm$ 20^oF (350^oC $\pm10^o$C).
  In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100^oF/ 600^oC).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.
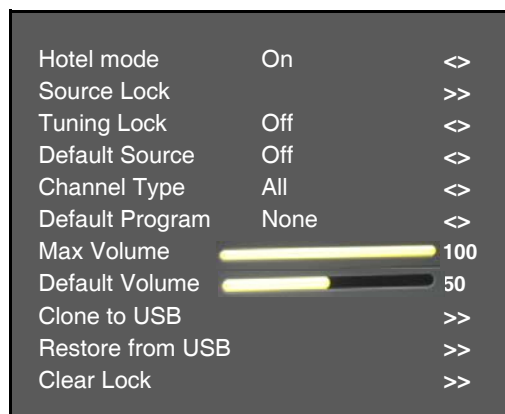
Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

HOTEL MODE FUNCTION

To set the Hotel mode, please follow the steps below.

1. Press the SETUP/MENU ---> 1147 button on the remote control.
2. Press the DOWN button on the remote control,
3. Select the "Setup" menu , then press ENTER button.
4. Select the "Hotel Mode" menu, Select "On".
5. The Hotel mode setting menu will appear.
6. Using the UP/DOWN button on the remote control,
   select the desired mode. Then press the ENTER button.
7. Using the LEFT/RIGHT button on the remote control,
   set the mode to desired setting.
8. The Hotel mode has now been set up.

Hotel mode	On	<>
Source Lock		>>
Tuning Lock	Off	<>
Default Source	Off	<>
Channel Type	All	<>
Default Program	None	<>
Max Volume	▬▬▬▬▬	100
Default Volume	▬▬▬	50
Clone to USB		>>
Restore from USB		>>
Clear Lock		>>

To reset the Hotel mode, please follow the steps below.

1. Press the SETUP/MENU ---> 1147 button on the remote control.
2. Press the DOWN button on the remote control,
3. Select the "Setup" menu , then press ENTER button.
4. Select the "Hotel Mode" menu, Select "On".
5. The Hotel mode setting menu will appear.
6. Press the DOWN button on the remote control,
7. Select the "Clear Lock" menu, then press ENTER button.
8. The setting items has now been returned to initial value.

Setting item	Setting value	Initial value	FUNCTION
Source Lock	ANTENNA/CABLE/ SATELLITE/AV COMPONENT/ HDMI/DVD/USB	——	Setting Input skip, combine with "Default Source".
Tunning Lock	OFF/ON	OFF	Setting of the tunning Lock. When turn on "Tuning lock", User cannot choose the following item in MENU. (skip an item and not available.）Tuner Mode, Channels, Satellite Setup, First time installation, Reset Default, Clean All
Default Source	OFF/ANTENNA/CABLE/ SATELLITE/AV COMPONENT/ HDMI/DVD/USB	OFF	Setting Input Source, combine with "Source Lock" If select "Source Lock" for this function disappear.
Channel Type	ALL/DIGITAL/RADIO/ ANALOGUE	ALL	Setting of the CH if select "Default Source" to ALL/ ANTENNA/CABLE/SATELLITE input.
Default Program	NONE/1/2/3/…/197	NONE	Setting of the CH if select "Default Source" to ANTENNA/ CABLE/SATELLITE input.
Max volume	0~100	100	Setting of the maximum volume value.
Default Volume	0~100	50	Setting volume at Power on.
Clone to USB	——	——	Copy to USB about User Menu setting, Hotel Mode setting and stored channels.
Restore from USB	——	——	Read and Restore data from USB that is saved by Cone to USB.
Clear Lock	——	——	Setting of the Hotel Mode return factory setting.

TABLE OF CONTENTS

GENERAL SPECIFICATIONS

G-1	TV System	LCD	LCD Size / Visual Size	38.57 inch / 979.7mmV
			LCD Type	Color TFT LCD
			Number of Pixels	1920(H) x 1080(V)
			Double Scan	No
			View Range　　　　Left/Right	88/88 degree
			Up/Down	88/88 degree
			Bright Dot	n≦2
			Zero Bright Dot Ratio	70% above
		Color System		PAL / SECAM
		Speaker		2 Speaker
			Position	Bottom
			Size	1.6 x 4.8 inch
			Impedance	8 ohm
		Sound Output	MAX	10W + 10W
			10%(Typical)	---
		NTSC3.58+4.43 /PAL60Hz		Yes
G-2	Tuning System	Broadcasting System	Analog	PAL(B/
			Digital	DVB-T
		Tuner and	System	2Tuner (Analog+DVB-T/C, DVB-S/S2)
		Receive CH	Destination	UK, I.R., CCIR Hyper+France CATV
		CH Coverage	Analog	45.75~858MHz
			Digital (Air, Cable)	E2~E69
			Digital (Satellite)	950~2150MHz
		Intermediate　　　Analog		BG / II
		Frequency	Picture(FP)	38.9 / 38.9 / 38.9MHz
			Sound(FS)	33.4 / 32.9 / 32.4MHz
			FP-FS	5.5 / 6.0 / 6.5MHz
		Digital		DVB-T
		Auto Tuning Method		ALL Band (Not C.C.I.R. CH Plan)
		Preset CH		4000 Service in total of Analog and Digital.
		Stereo/Dual TV Sound		Nicam/A2 Dual
		Tuner Sound Muting		Yes
G-3	Power	Power Source	AC	220-240V AC 50Hz
			DC	---
		Power Consumption	at AC	90 W at AC 230 V 50 Hz
			at DC	--
		Stand by (at AC)	w/ EPG Timer	--
			w/o EPG Timer	0.29 W at AC 230 V 50 Hz
			Per Year	-- kWh/Year
		Protector	Power Fuse	Yes
G-4	Regulation		Safety	CE(EN60065:2002+AMD.11:2008)
			Radiation	CE
			X-Radiation	---
G-5	Temperature		Operation	+5°C ~ +40°C
			Storage	-20°C ~ +60°C
			Space Around Unit	100mm (4inch)
G-6	Operating Humidity			Less than 80% RH
G-7	OSD Language			English, Spanish, German, French, Italian, Swedish Dutch, Russian, Portuguese, Turkish, Greek, Finnish Hungarian, Polish, Danish, Norwegian, Czech, Slovak
G-8	Clock and Timer	Sleep Timer	Max Time	120 Min
			Step	10 / 20 / 30 / 40 / 50 / 60 / 90 / 120　Min
		On/Off Timer	Program(On Timer / Off Timer)	1 Program / 1 Program
		Timer Back-up (at Power Off Mode)　more than		--　Min　　　Sec
		EPG Timer Events		--
G-9	Remote Control	Unit		RC-UE
		Glow in Dark Remocon		No
		Remocon Format		ORION
		Format		NEC
		Custom Code		71-8E h
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		48　Keys
		Keys	Power (Stand By)	Yes
			Information	Yes
			Audio I / II	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			Input Select	Yes
			Guide(EPG)	Yes
			Menu	Yes
			Return	Yes
			Enter / CH List	Yes
			↑	Yes
			↓	Yes
			←	Yes

				Yes	
			←	Yes	
			Mute	Yes	
			Picture Size	Yes	
			Volume Up	Yes	
			Volume Down	Yes	
			TV	Yes	
			MEDIA	Yes	
			Freeze	Yes	
			Quick View	Yes	
			Play	Yes	
			Stop	Yes	
			Pause	Yes	
			Play Mode / Rec List	Yes	
			Rec	Yes	
			T-Rec	Yes	
		T'TEXT Keys	Subtitle	Yes	
			CH Up / Page Up	Yes	
			CH Down / Page Down	Yes	
			Skip- / Subpage	Yes	
			Search- / Hold	Yes	
			Search+ / F.T.B.	Yes	
			Skip+ / Reveal	Yes	
			Teletext	Yes	
			Red	Yes	
			Green	Yes	
			Yellow	Yes	
			Cyan	Yes	
G-10	Features	Power On Memory		Yes	
		Auto Shut Off		Yes	
		Just Clock Function			No
		Game Position			No
		DNR		Yes	
				3D	
		Comb Filter		Yes	
				3D	
		Auto Set Up (Fast installation)	Language	Yes	
			Country	Yes	
			TV Location	Yes	
			Auto Power Off	Yes	
			E-POP Demo		No
			Tuner Mode	Yes	
			Auto Tuning (Analog/Digital)	Yes	
			CH sort	Yes	
			ATS	Yes	
			Auto clock (Digital tuner)	Yes	
			Plug in start	Yes	
		Picture Setting(TV)	Picture Mode	Yes	
			Brightness , Contrast , Color	Yes	
			Tint	Yes	
			Sharpness	Yes	
			DNR	Yes	
			Color Temperature	Yes	
			Backlight Control	Yes	
			MPEG NR	Yes	
			DBC (Dynamic Backlight Control)		No
			Film Mode		No
		Picture Setting(PC)	Picture Mode	Yes	
			Brightness , Contrast , Color	Yes	
			HOR POSITION , VER POSITION	Yes	
			PHASE , CLOCK	Yes	
			AUTO ADJUST	Yes	
			RED , GREEN , BLUE		No
			DNR		No
			Color Temperature	Yes	
			Backlight	Yes	
			WXGA INPUT		No
			WVGA INPUT		No
		Audio	Sound Mode		No
			Tone Control (Bass/Treble/Balance)	Yes	
			Surround	Yes	
			Equalizer	Yes	
			Speaker		No
			Stable Sound	Yes	
			BBE		No
			SRS WOW (SRS 3D/Focus/Tru Bass)		No
			Variable Audio Out		No
		Tuning	Auto Tuning (Analog/Digital)	Yes	
			Manual Tuning (Analog/Digital)	Yes	
			Update Scan (Analog/Digital)		No
			TV Connection	Yes	
			CH Skip (Analog/Digital)	Yes	
			CH Sort (Analog/Digital)	Yes	
			CH Edit (Analog/Digital)	Yes	
			Clean CH List (Analog/Digital)	Yes	

GENERAL SPECIFICATIONS

		Fine Tuning (Analog)	Yes
Lock		System Lock	Yes
		Channel Lock	Yes
		Parental Lock (Digital)	Yes
		Hotel Lock	Yes
		USB Clone (Hotel Lock)	Yes
Screen Saver		Inversion	No
		Full White	No
		Screen Saver	No
		Static Image	No
T'Text			Yes
		Text type	Fastext / Toptext
		Text Language	English, German, Swedish, Finnish, Hungarian, Italian, French, Portuguese, Spanish, Czech, Slovak, Polish, Estonian, Lettish, Lithuanian, Slovenian, Rumanian, Russian, Ukrainian, Turkish, Greek, Hebrew, Farisi Arabic, Danish, Flemish, Icelandic, Byelorussian
Text and Picture			No
PVR		Timeshift	No
		Timer Recording	No
		EPG Recording	No
USB Media Player	Photo		JPEG (.jpg/.jpeg), BMP (.bmp), PNG (.png)
	Music		MP3 (.mp3), WAVE (.wav), AAC-LC (.m4a) HE-AAC (.m4a), MPEG1 (.mp2), MPEG4 (.m4a)
	Video	Container	AVI (.avi), MKV (.mkv), MP4 (.mp4/,m4v), PS (.mpg/.mpeg), TS (.ts/.tp/.trp), VOB (.vob)
		Video Codec	Xvid, MPEG1, MPEG2, MPEG4 SP/ASP, H.264 MJPEG
		Audio Codec	MPEG1, MPEG2, MPEG4, MP3, AAC, AAC-LC HE-AAC, PCM/ADPCM, AC3
		DivX DMF Support	No
	Text		Text (.txt)
Internet		Hbb TV	No
		BBC iPLAYER	No
Wide Mode (AUTO/4:3/16:9/Zoom1/Zoom2/1:1)			Yes
CH Label			Yes
Reset TV Setting			Yes
HD Zoom			Yes
Picture Scroll (Vertical Position)			No
PFC(Power Factor circuit)			No
Freeze frame			Yes
Plug and Play			No
Power Management			Yes
Hearing Impaired			Yes
Audio Description			Yes
Power On LED			No
HDMI Mode			Yes
PC Mode			Yes
Blue Back			Yes
Scart Spec	Scart1	AV in	Yes
		AV out	Yes (A.Tuner/D.Tuner)
		S-Video in	Yes
		RGB in	Yes
	Scart2	AV in	No
		AV out	No
		S-Video in	No
		RGB in	No
Digital Text (VBI teletext)			Yes
MHEG-5			Yes
MHP			No
EPG (BBC type 8Days Digital tuner only)			Yes
OAD (Over Air Download)			Yes
CI+			Yes
Common Interface (Digital tuner only)			Yes
Rec Screen Status			No
Ch sorting based on Ch List (Digital/Germany only)			Yes
Rename Carrier (Digital)			No
Edit Event Timer			No
Software Update via CI Slot			No
Preference Language (Audio/Subtitle/Digital Service)(Digital)			Yes
DVB Subtitle (Digital)			Yes
Clock			Yes
DST			No
Signal Status			Yes
Digital Out		Dolby Digital	Dolby Digital
		Dolby Digital Plus	Dolby Digital
		MPEG	PCM
		HE AAC	PCM
Decode(Down Mix)		Dolby Digital	Yes
		Dolby Digital Plus	Yes
		MPEG	Yes
		HE AAC	Yes
PC Monitor Input			Yes

			VGA (640x480)	Yes (60Hz)
			VGA (720x400)	No (Possible to Display)
			WVGA (848x480)	No
			SVGA (800x600)	Yes (60Hz)
			XGA (1024x768)	Yes (60Hz)
			WXGA (1280x768)	Yes (60Hz)
			WXGA (1280x720)	Yes (60Hz)
			WXGA (1360x768)	Yes (60Hz)
			SXGA (1280x1024)	Yes (60Hz)
			WXGA+ (1440x900)	Yes (60Hz)
			WSXGA+ (1680x1050)	No (Possible to Display)
			FULL HD (1920x1080)	Yes (60Hz)
		HDMI Input		Yes
			VGA (640×480)	Yes (60Hz)
			VGA (720x400)	No (Possible to Display)
			WVGA (848x480)	No
			SVGA (800x600)	Yes (60Hz)
			XGA (1024x768)	Yes (60Hz)
			WXGA (1280x768)	Yes (60Hz)
			WXGA (1280x720)	Yes (60Hz)
			WXGA (1360x768)	Yes (60Hz)
			SXGA (1280x1024)	Yes (60Hz)
			WXGA+ (1440x900)	Yes (60Hz)
			WSXGA+ (1680x1050)	No (Possible to Display)
			FULL HD (1920x1080)	Yes (60Hz)
			720×480i (4:3)	Yes (60Hz)
			720×480i (16:9)	Yes (60Hz)
			720×480p (4:3)	Yes (60Hz)
			720×480p (16:9)	Yes (60Hz)
			720×576i (4:3)	Yes (50Hz)
			720×576i (16:9)	Yes (50Hz)
			720×576p (4:3)	Yes (50Hz)
			720×576p (16:9)	Yes (50Hz)
			1280×720p	Yes (50/60Hz)
			1920×1080i	Yes (50/60Hz)
			1920×1080p	Yes (24/50/60Hz)
			CEC(ORION Standard)	No
			Deep Color	No
			xvYCC	No
		Component Input		Yes
			720×480i (4:3)	Yes (60Hz)
			720×480i (16:9)	Yes (60Hz)
			720×480p (4:3)	Yes (60Hz)
			720×480p (16:9)	Yes (60Hz)
			720×576i (4:3)	Yes (50Hz)
			720×576i (16:9)	Yes (50Hz)
			720×576p (4:3)	Yes (50Hz)
			720×576p (16:9)	Yes (50Hz)
			1280×720p	Yes (50/60Hz)
			1920×1080i	Yes (50/60Hz)
			1920×1080p	No (Possible to Display)
		Wall Mount	Size W x H(mm)	Yes (100 x 200)
			Screw Size	M6 x 10
		Stand	Tilt	No
			Swievel	No
G-11	Accessories	Owner's Manual	Language	English/German/French/Polish
			w/Guarantee Card	Yes (except English)
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	-
			Terminal	-
		Loop Antenna (W/ Antenna Change Plug)		No
			Terminal	-
		DVB-T Antenna		No
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-4 x 2 pcs
			OEM Brand	No
		AC Adapter		No
		AC Cord (for AC Adapter)		No
		AC Cord		No
		AV Cord (2Pin-1Pin)		No
		INFORMATION SHEET(21PIN CABLE)		No
		HDMI-DVI Cable		No
		3 in 1Mini Pin Cable (Y/Pb/Pr)		Yes
		3 in 1Mini Pin Cable (CVBS/AudioL, R)		Yes

					Value
			Registration Card		No
			300 ohm to 75 ohm Antenna Adapter		No
			Stand Screw		Yes (4pcs)
			Stand Screw(Prevent?Of Set Fall Down)		No
			Stand		Yes
			Frame Stand		No
G-12	Interface	Switch	Side	Power	Yes
				System Select	No
				Main Power SW	No
				Channel Up / Menu Up	Yes
				Channel Down / Menu Down	Yes
				Volume Up / Menu >	Yes
				Volume Down / Menu <	Yes
				Menu	No ("Vol-"+"Vol+" 1sec)
				Play	No
				Stop	No
				Eject	No
				Input Select/Enter	Yes
		Indicator		Power/Stand-by	Yes (Green / Red)
				On Timer	No
		Terminals	Side	Video/Audio Input 1	Mini Pin Jack(φ3.5, CVBS, Audio Input L/R)
				S- Input 1	No
				Video/Audio Input 2	No
				S- Input 2	No
				Video Output	No
				Audio Output	No
				Euro Scart (21Pin)	No
				Component In	Mini Pin Jack(φ3.5, Y/Pb/Pr)
				Audio Input (Component In use)	Composite Audio Input Alternative
				HDMI Input 1	Yes
				Audio Input (HDMI/DVI In use)	PC Monitor Audio Input Alternative
				USB (Media)	Yes
				Sub Woofer Output	No
				Diversity	No
				Ext Speaker	No
				DC Jack 12V(Center +)	No
				VHF/UHF Antenna Input	F Type (DVB-S, S2)
				Headphone	Yes
				CI Card Slot	Yes
				AC Inlet	No
			Rear	Euro Scart (21Pin)	Yes
				VHF/UHF Antenna Input	DIN Type (Analog, DVB-T, C)
				Digital Audio Out (Coaxial)	Yes
				HDMI Input 2	Yes
				Audio Input (HDMI/DVI In use)	No
				HDMI Input 3	Yes
				Audio Input (HDMI/DVI In use)	No
				PC Monitor Input (D-Sub)	Yes
				Audio Input	Mini Pin Jack(φ3.5), STEREO
G-13	Set Size			Approx. W x D x H (mm)	888 x 232 x 563.2
				w/o Stand,Handle Approx. W x D x H (mm)	888 x 68.8 x 531.4
G-14	Weight			Net Approx.	10.2kg (22.5lbs)
				Net w/o Stand,Handle Approx.	8.7kg (19.2lbs)
				Gross Approx.	12.7kg (28.0lbs)
				Gross w/Master Carton (Approx.)	--- kg (--- lbs)
G-15	Carton	Master Carton			No
				Content	---- Sets
				Material	-- /--
				Dimensions W x D x H(mm)	-- x -- x --
				Description of Origin	No
		Gift Box			Yes
				Material	Double/Full color(HQP)
				Dimensions W x D x H(mm)	991 x 135 x 625
				Design	As per Buyer's
				Description of Origin	No
		Drop Test			Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
				Height (cm)	62
		Container Stuffing			594 Sets/45' Trailer
		w/Pallet			Yes
		w/Wrapping			Yes
G-16	Material	Cabinet		Cabinet Front	PC+ABS 94V0 NON-HALOGEN
				Cabinet Rear	PS 94V0 NON-DECABROM
				Speaker Box	PS 94V0 NON-DECABROM
				Stand	PC+ABS 94V0 NON-HALOGEN
		PCB		Non-Halogen	No
				Eyelet	Yes
G-17	Environment			Environmental standard requirement	Green procurement of ORION
		Pb- Free			Phase3(PHASE3A)
				Measures for Whisker	Yes
		WEEE			Yes

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

> **CAUTION**
> Be careful not to remove the LVDS cable forcibly, because the LVDS cable may be damaged.

1-1: STAND ASS'Y (Refer to Fig. 1-1)

1. Remove the 4 screws (1).
2. Remove the Stand Ass'y in the direction of arrow.

Fig. 1-1
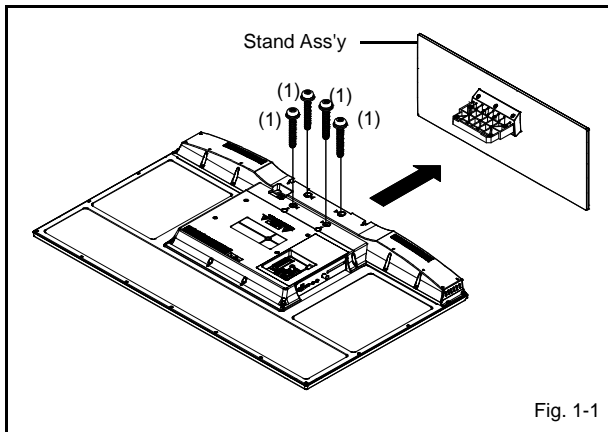
1-2: COVER BACK ASS'Y (Refer to Fig. 1-2)

1. Remove the 11 screws (1)
2. Remove the Cover Back Ass'y in the direction of arrow.

Fig. 1-2
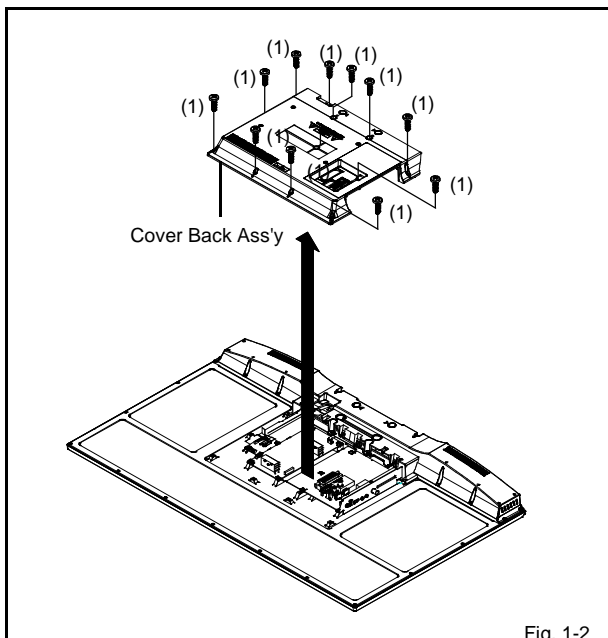
1-3: SPEAKER BOX ASSY, REMOCON PCB and OPERATION PCB (Refer to Fig. 1-3)

1. Remove the 8 screws (1)
2. Disconnect the following connectors: **(CD301, CD2201 and CD2202)**.
3. Remove the Speaker Box Ass'y in the direction of arrow (A).
4. Unlock the 2 supports (2)
5. Remove the Remocon PCB in the direction of arrow (B).
6. Unlock the support (3)
7. Remove the Operation PCB in the direction of arrow (C).

Fig. 1-3
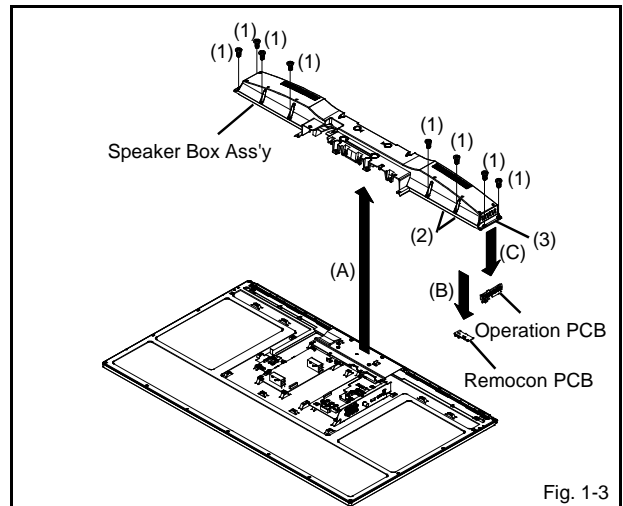
1-4: MAIN PCB (Refer to Fig. 1-4)

1. Remove the 4 screws (1)
2. Remove the 4 screws (2)
3. Disconnect the following connectors: **(CD502 and CD2801).**
4. Remove the Plate Jack in the direction of arrow (A).
5. Remove the Main PCB in the direction of arrow (B).

Fig. 1-4
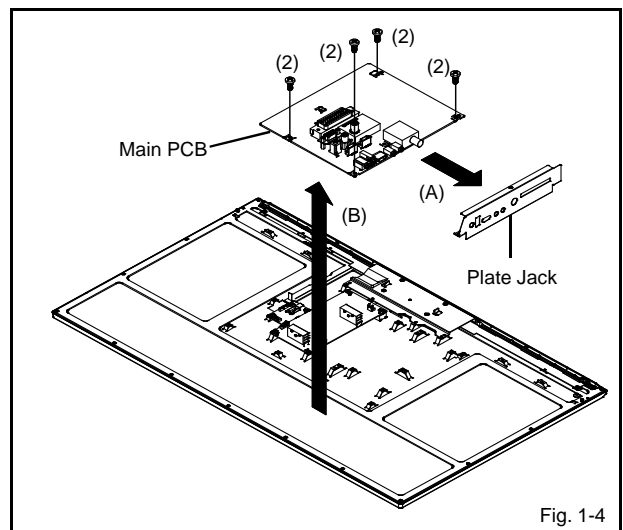
DISASSEMBLY INSTRUCTIONS

1-5: POWER PCB and BACL LIGHT PCB (Refer to Fig. 1-5)

1. Remove the 4 screws (1)
2. Disconnect the following connectors:
   (CD503, CP7002 and CP7003).
3. Remove the POWER PCB in the direction of arrow (A).
4. Remove the 2 screws (2)
5. Remove the Back Light PCB in the direction of arrow (B).

Fig. 1-5
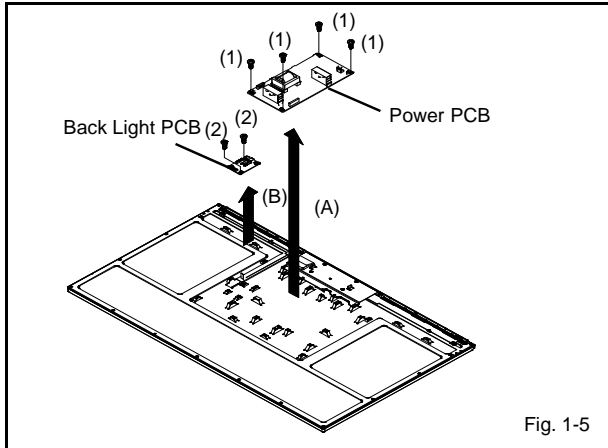
1-6: ANGLE HING (Refer to Fig. 1-6)

1. Remove the 17 screws (1).
2. Remove the Angle Hing in the direction of arrow.

Fig. 1-6
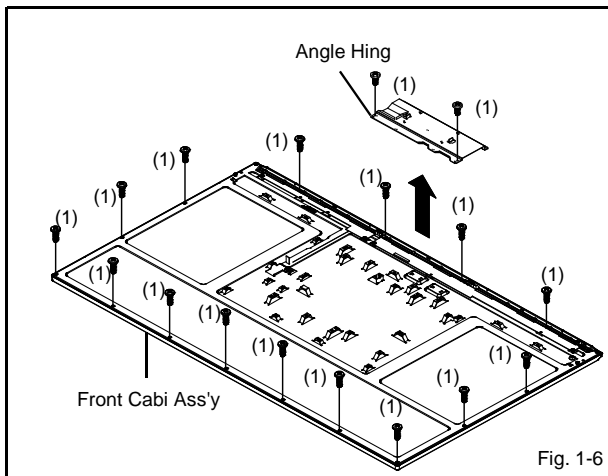
1-7: LED MODULE ASS'Y (Refer to Fig. 1-7)

1. Unlock the 14 supports (1).
2. Remove the LED Module Ass'y in the direction of
   arrow (A) -> (B) -> (C) -> (D), Please remove carefully
   and slowly.

• Do not touch LED Module Ass'y.

Fig. 1-7
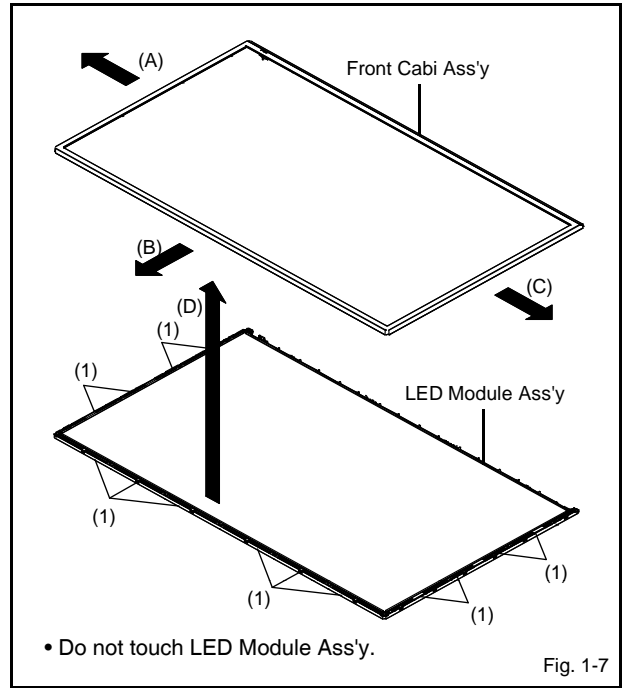
DISASSEMBLY INSTRUCTIONS

2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 2-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

Fig. 2-1
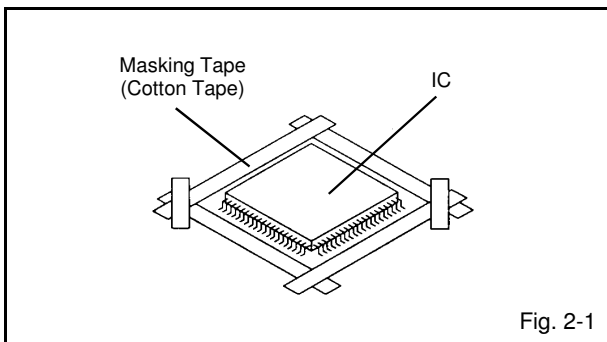
2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 2-2.)**

   NOTE

   Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.

Fig. 2-2
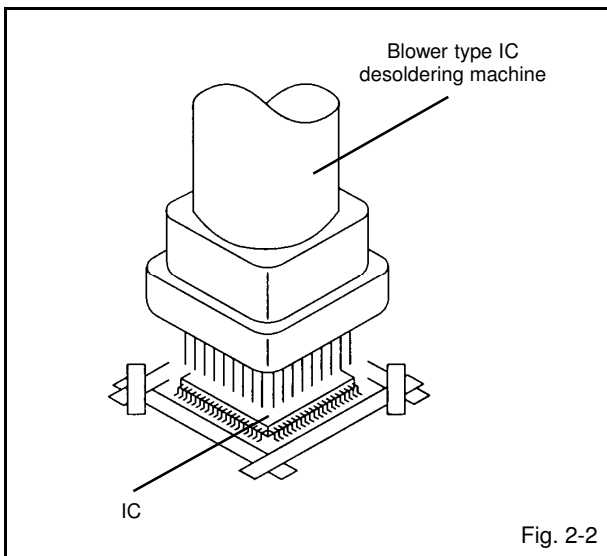
3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 2-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

Fig. 2-3
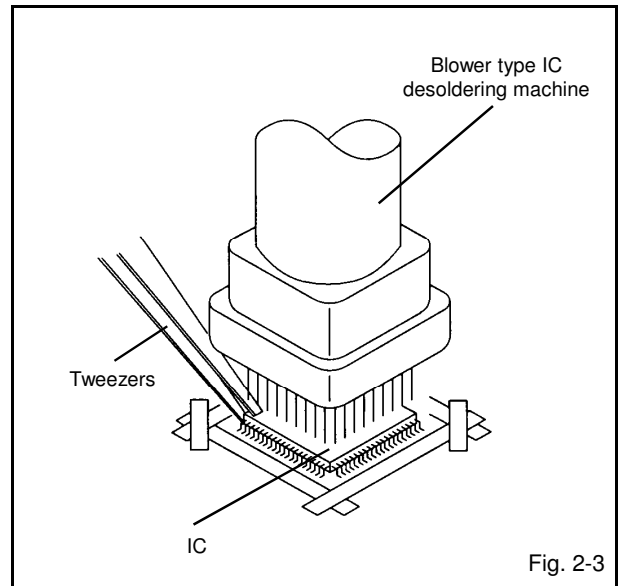
4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 2-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

Fig. 2-4
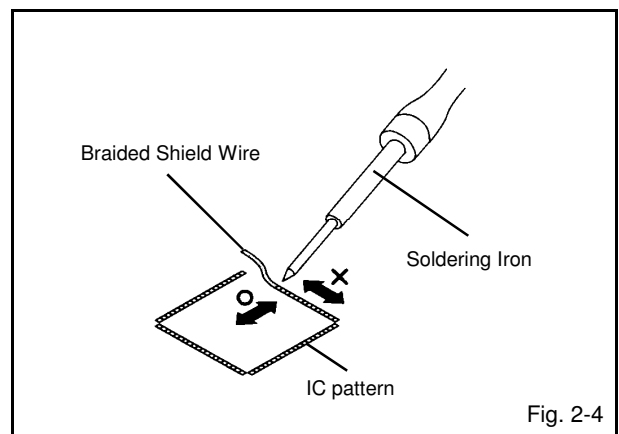
DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**

Soldering Iron

Solder temporarily   Solder temporarily

Fig. 2-5
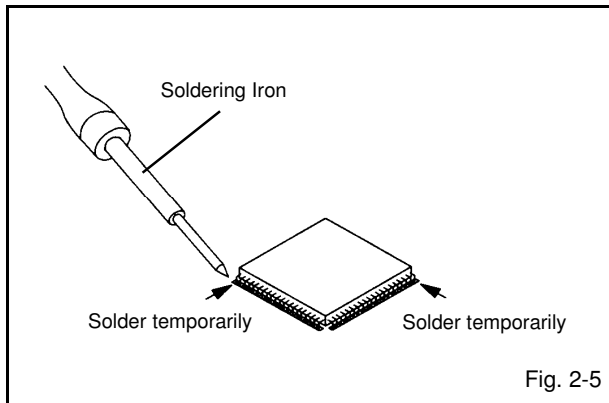
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**

Solder

Soldering Iron

IC

Supply soldering from upper position to lower position

Fig. 2-6
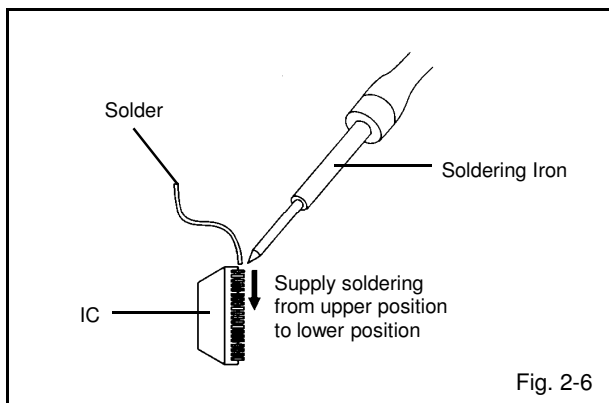
3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

NOTE

Do not absorb the solder to excess.

Soldering Iron

IC

Braided Shield Wire

Fig. 2-7
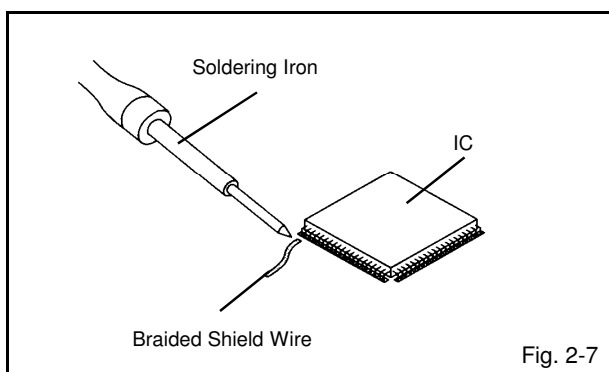
4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thintip Soldering Iron. **(Refer to Fig. 2-8.)**

Thin-tip Soldering Iron   IC

Fig. 2-8
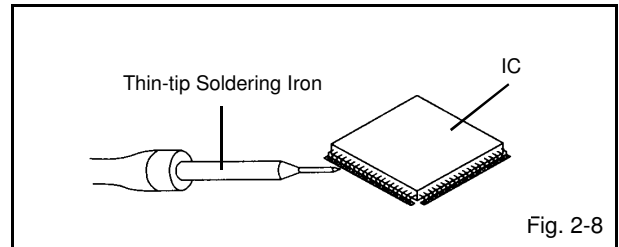
5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

NOTE

When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

CAUTION

Do not feel after other MENU.

1. Check of the VERSION and SUM DATA on the screen.
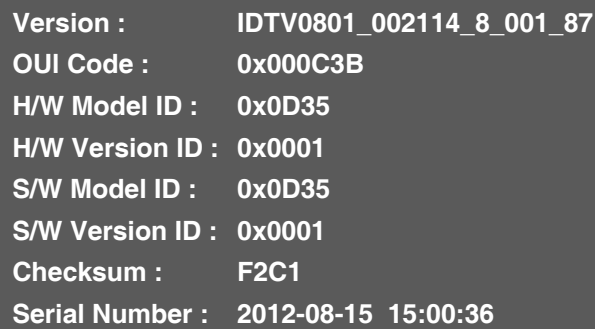
    1-1 : Press the SETUP/MENU ---> 1147 button on the remote control.
    1-2 : Press the DOWN button on the remote control,
    1-3 : Select the "Setup" menu , then press ENTER button.
    1-4 : Select the "Version Info" menu, then press ENTER button.
    1-5 : On the screen as shown in **Fig. 1-1**.

Version :	IDTV0801_002114_8_001_87
OUI Code :	0x000C3B
H/W Model ID :	0x0D35
H/W Version ID :	0x0001
S/W Model ID :	0x0D35
S/W Version ID :	0x0001
Checksum :	F2C1
Serial Number :	2012-08-15 15:00:36

Fig. 1-1

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

On-Screen Display Adjustment

1. Press the SETUP/MENU ---> 1147 button on the remote control.
2. Press the DOWN button on the remote control.
3. Select the "Video" menu, then press ENTER button on the remote control.
4. Select the "Color Temperature" menu , then press ENTER button on the remote control.
5. On the screen as shown in **Fig. 1-1.**

Color Temperature	Cool	<>
R Gain		-37
G Gain		0
B Gain		102
R Offset		-2
G Offset		0
B Offset		-1

Fig 1-1
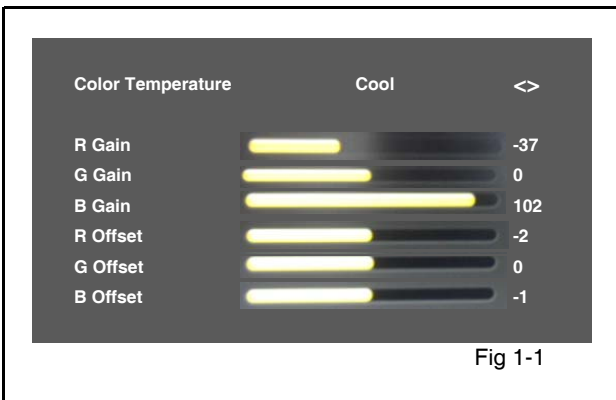
2. BASIC ADJUSTMENTS

2-1: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Please select input About mode to adjust W/B.
3. Receive the gray scale pattern from the Pattern Generator.
4. Press the INPUT SELECT button on the remote control to set to the AV mode.
5. Using the remote control, set the brightness and contrast to normal position.
6. Press the MENU---> 1147 button on the remote control.
7. Press the DOWN button on the remote control.
8. Select the "Video" menu, then press ENTER button on the remote control.
9. Select the "Color Temperature" menu , then press ENTER button on the remote control.
10. Press the UP/DOWN button on the remote control to select the "R Gain", "G Gain", "B Gain", "R Offset", "G Offset", "B Offset.
11. Adjust the LEFT/RIGHT button on the remote control to whiten the R Gain, G Gain, B Gain, R Offset, G Offset, B Offset at each step tone sections equally..
12. Perform the above adjustments 10 and 11 until the white color is achieved.

ELECTRICAL ADJUSTMENTS

3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)

LCD PANEL

CD2801

REMOCON PCB

REMOCON PCB

CP2201

OS2201

OPERATION PCB

CP2202

CD2202

CD2201

POWER PCB

SPEAKER CN6

CD301

CN16   CN13   CN17

CP502

CP503

CD502

CD501

CN1

CP7001   CP7003

CP7002

BACK LIGHT PCB

CP501

AC IN
CD501

D-2

BLOCK DIAGRAM

DVB-T/C/S/S2 Model Only

DVB-S/S2 TUNER
GAIA-20R (GOSPELL)

S/S2 Demod
AVL6211 (AVAILINK)

<Remonon PCB>

<Operation PCB>

DVD Combo Model Only

<DVD PCB>

Y/Pb/Pr   L/R

<LCD PANEL>

MPEG/SCALER
MT5310 (MEDIATEK)

DVB-T/C TUNER
TDTK-G941D (LG)

DEMOD.
BUS SW

MT5135AE
(MTK)

LVDS

PCMCIA

TS

Bus

HDMI SW IC
IT6633E

【HDMI-1】

【HDMI-2】

【HDMI-3】

SPI FLASH 64Mbit
EN25Q64-104HIP
(EON)

Mini
【AV1/AV】
CVBS, AUDIO L/R

Mini
【AV2/Component】
Y, Pb, Pr

SPDIF Out
(Coaxial) Side

HP AMP
(OP AMP)

HP Jack

5V

USB

FUSE

USB
Side

Sound AMP
STA333W
(ST)

Main Speake
10W + 10W

DDR3-1333 1Gb
NT5CB64M16DP-CF
(NANYA)

E-1

E-2

PRINTED CIRCUIT BOARDS
POWER (INSERTED PARTS)
SOLDER SIDE
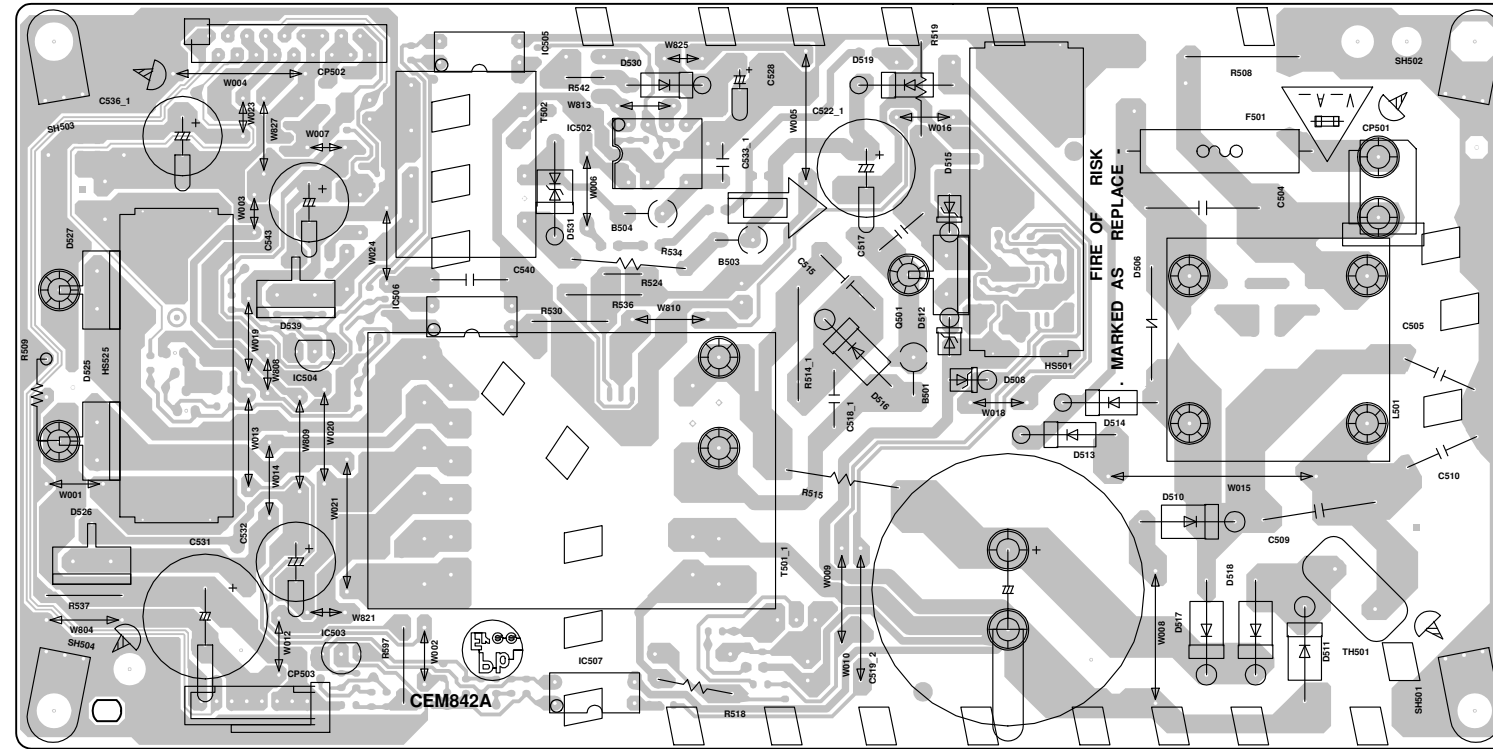
POWER (CHIP MOUNTED PARTS)
SOLDER SIDE
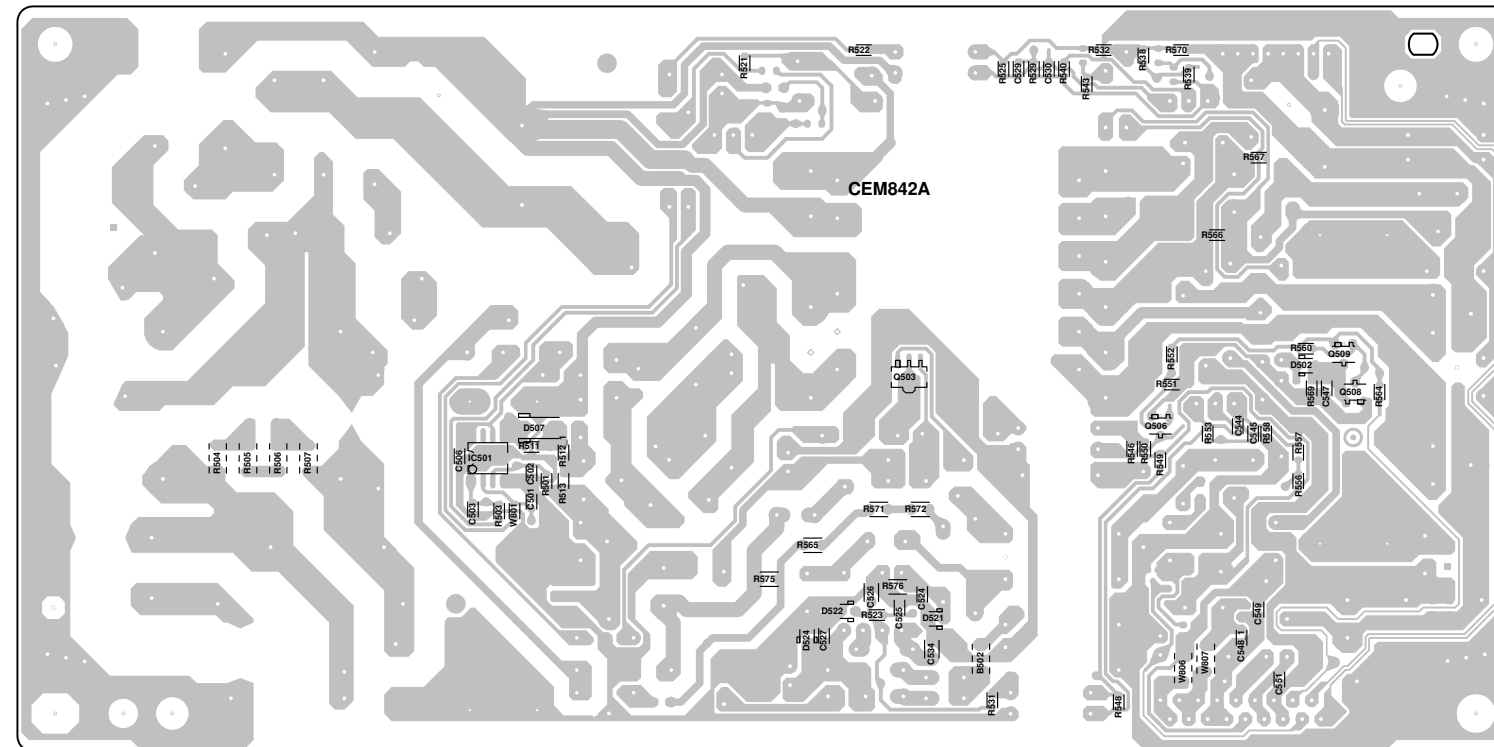
PRINTED CIRCUIT BOARDS

OPERATION (INSERTED PARTS)
SOLDER SIDE

SW2204 SW2202 SW2205 SW2206 SW2201 SW2203
CEM844A
CP2202

REMOCON (INSERTED PARTS)
SOLDER SIDE

D2201 CEM846A
OS2201 CP2201

OPERATION (CHIP MOUNTED PARTS)
SOLDER SIDE

C2202_1
C2201_1
CEM844A
R2202 R2201 R2204 R2203

REMOCON (CHIP MOUNTED PARTS)
SOLDER SIDE

R2210
R2209
C2203 C2204
R2208 CEM846A

BACK LIGHT (TOP SIDE)

CP7003 CP7002 CEM855A
R7039 R7038 R7037 R7036 R7035 R7034 R7024 R7023
C7033
C7015 C7014
R7026
CP7001 C7032 R7025
C7001 C7026 C7031 B7001 C7035
C7029 C7030 C7034
D7008 R7032
R7033
IC7001 HS501
L7001
C7002 C7003 D7009 C7004
R7002 C7008 C7022 C7003 R7005
R7003 R7006
R7001 W807 R7012 R7010
R7004 Q7001 W806 R7007
W804 R7021 C7010
R7020 C7011
W803 R7017 R7012 R7011
C7027 R7016 R7014
R7030 R7019 R7015 R7013
R7029 R7018

BACK LIGHT (BOTTOM SIDE)

CEM855A

POWER SCHEMATIC DIAGRAM
(POWER PCB)

EPT,FB,Vdd-GNDC
PIN

CAUTION: ⏚ IS THE LIVE CONNECTION

CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE

T3.15A L250V(F501)

ATTENTION :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE
N'UTILISER QUE DES FUSIBLE DE MEME TYPE

T3.15A L250V(F501)

CAUTION F501 IS MANUFACTURED BY SKYGATE CO., LTD., TYPE SCT.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE:THE RESISTOR MARKED F IS FUSE RESISTOR.
THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP
IS NON POLAR ONE.

ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT
DANGEREUSES AN POINT DE VUE SECURITE
N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE
CRITICAL FOR SAFETY,USE ONES
DESCRIBED IN PARTS LIST ONLY.

PCB240
CEM842

G-1
G-2

BACK LIGHT SCHEMATIC DIAGRAM 1
(BACK LIGHT PCB)

CASE OF SILVER THROUGHT PCB,
IT IS NG, THAT PATTERN IS CONNECTED USING THROUGHT-HOLE

C7029 50V 470P CH
C7030 50V 470P CH

L7001 33uH B966BS
D7009 SK3BA
B7001 HCB3216KF-391T20

DRIVE Q7001 RSD050N10

VIN_24V

P_GND

FROM/TO POWER

CP7001 (CP503)
A2001WR-8A

1	VBL(+24V)
2	VBL(+24V)
3	VBL(+24V)
4	GND
5	GND
6	GND
7	BLON
8	PWM

VIN_24V

HS501 763WSA0073

A_GND

C7001 50V 0.1 B (1608)

C7002_1 50V 0.001 CH
C7003_1 50V 0.001 CH

R7003 22K 1/16W
R7004 22K 1/16W

R7002 100 1/16W
R7001 100 1/16W

GND

EN

PWM

R7005 47K 1/16W +-1%
R7006 10K 1/16W +-1%
C7004 10V 0.1 B

R7010 180K 1/16W +-1%
C7007 16V 0.1 B (1005) R7022 240 1/16W
C7008 6.3V 0.01 B
C7009 6.3V 0.47 B
R7011 510K 1/16W +-1%
R7012 120K 1/16W +-1%
C7010 10V 0.1 B

R7013 1.5 1/4W +-1%(2125)
R7014 1.5 1/4W +-1%(2125)
R7015 1.5 1/4W +-1%(2125)
R7016 1.5 1/4W +-1%(2125)
R7017 1.5 1/4W +-1%(2125)
R7018 1.5 1/4W +-1%(2125)
R7019 1.5 1/4W +-1%(2125)
R7020 1.5 1/4W +-1%(2125)

W806
W807

R7021 10 1/16W

C7014 50V 2.2 B (3216)

LED DRIVER
IC7001 BD8779EFV-E2

AGND
UVLO
LSP
RT
FB
SS
CP
VREF
S1
S2
S3
S4
S5
S6
S7
S8
PWM8
PWM7
PWM6
PWM5

VCC 23.6
FAIL
VREG
N 1.7
PGND
CS 0
OVP 1.8
STB

R7025 100K 1/16W
C7015 10V 4.7 B (2125)

R7026 10 1/16W EN

LED1
LED2
LED3
LED4
LED5
LED6
LED7
LED8

PWM1
PWM2
PWM3
PWM4

C7027 50V100P CH
W803
W804

C7026 50V 0.1 B(1608)

R7029 0.1 1/4W +-1% (2125)
R7030 0.1 1/4W +-1% (2125)

C7031 100V 100V0.1 X7R (1608)
C7032 100V 100V0.1 X7R (1608)
C7033 63V 270 ZLJ

R7032 680K 1/16W +-1%
R7033 33K 1/16W +-1%

R7031 1/16W +-1%

C7035 50V 0.001 B

C7036 50V 0.001 B

CP7002 FCZ100E-07SS-K

R7023	4.7 1/4W +-1%	LED1	1
R7024	4.7 1/4W +-1%	LED2	2
R7034	4.7 1/4W +-1%	LED3	3
R7035	4.7 1/4W +-1%	LED7/NC	4
NC		NC	5
		VLED	6
		VLED	7

CP7003 FCZ100E-07SS-K

R7036	4.7 1/4W +-1%	LED4	1
R7037	4.7 1/4W +-1%	LED5	2
R7038	4.7 1/4W +-1%	LED6	3
R7039	4.7 1/4W +-1%	LED8/NC	4
NC		NC	5
		VLED	6
		VLED	7

PCB350
CEM855

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR.
THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP
IS NON POLAR ONE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED
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N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES.

G-3

G-4

OPERATION/REMOCON SCHEMATIC DIAGRAM
(OPERATION/REMOCON PCB)

(REMOCON PCB)

FROM/TO MAIN UNIT

OS2201
KSM-2003TCW2P

Vout ①
GND ②
B+ ③

R2208
47 1/16W

C2204
22 B
6.3V

C2203
22 B
6.3V

R2209
330 1/16W

R2210
330 1/16W

STANDBY/POWER
D2201
LTL-1BEFJ-002A

CP2201
A2001WR-5A

REMOCON IN	1
GND	2
AT+5VAT+3.3V	3
STANDBY LED	4
POWER ON LED	5

CD2201
EH266601

GND4

PCBDAC
CEM846

(OPERATION PCB)

CH+
SW2201
EVQ21505R

VOL-
SW2202
EVQ21505R

INPUT/ENTER
SW2203
EVQ21505R

POWER
SW2204
EVQ21505R

VOL+
SW2205
EVQ21505R

CH-
SW2206
EVQ21505R

C2201_1
0.1 B

C2202_1
0.1 B

R2204
56K 1/16W

R2201
12K 1/16W

R2202
6.8K 1/16W

R2203
3.9K 1/16W

KEY-B

KEY-A

FROM/TO MAIN UNIT

CP2202 (CN3)
A2001WR-3A

GND	1
KEY B	2
KEY A	3

CD2202
CH246809

PCB270
CEM844

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

INTERCONNECTION DIAGRAM

CP7002

1	LED1
2	LED2
3	LED3
4	LED7/NC — NC
5	NC — NC
6	VLED
7	VLED

CP7003

1	LED4
2	LED5
3	LED6
4	LED8/NC — NC
5	NC — NC
6	VLED
7	VLED

CP7001

VBL(+24V)	1 1
VBL(+24V)	2 2
VBL(+24V)	3 3
GND	4 4
GND	5 5
GND	6 6
BLON	7 7
PWM	8 8

P=2.0mm 8PIN
CD503

CP503

1	+24V
2	+24V
3	+24V
4	GND
5	GND
6	GND
7	INVERTER_H
8	LIGHT_CTL

BACK LIGHT PCB
PCB350
CEM855

CD502

CP502

SW+12V	18	18 — 18
SW+12V	17	17 — 17
AT+5.5V	16	16 — 16
AT+5.5V	15	15 — 15
AT+5.5V	14	14 — 14
GND	13	13 — 13
GND	12	12 — 12
GND	11	11 — 11
SW+12V/GND	10	10 — 10 NC
SW+12V	9	9 — 9
SOUND+B	8	8 — 8
SOUND+B	7	7 — 7
SOUND_GND	6	6 — 6
SOUND_GND	5	5 — 5
POWER_ON_H	4	4 — 4
POWER_FAIL	3	3 — 3
LIGHT_CTL	2	2 — 2
INVERTER_H	1	1 — 1

POWER PCB
PCB240
CEM842

CN3

11	RELAY_H
10	BL_ON
9	DC_ADJ
8	
7	PW_ON
6	GND
5	GND
4	AMP+18V
3	AMP+18V
2	SW+12V
1	SW+12V
10	GND
9	GND
8	GND
7	AT+6.0V
6	AT+6.0V
5	AT+6.0V
4	SW+12V
3	SW+12V
2	GND
1	GND

CN4

CD501

BLADE WIDE

CP501

WHITE	1
BLACK	2
	1
	3

OS2201
TM101 COMMAND TRANSMITTER
① Vout ② GND ③ B+

CP2201

REMOCON IN	1
GND	2
AT+5VAT+3.3V	3
STANDBY LED	4
POWER ON LED	5

STANDBY/POWER
D2201

CD2001

CN16

1	1 — 1
2	2 — 2
3	3 — 3
4	4 — 4
5	5 — 5
6	

REMOCON PCB
PCBDA0
CEM846

CP2202

GND	1
KEY B	2
KEY A	3

CD2202

CN13

1	+3V3STB
2	GND
3	KEY B → KEY A
4	GND

GND	1 — 3
KEY B	2 — 2
KEY A	3 — 1

OPERATION PCB
PCB270
CEM844

CN4

1		2		3		4		5		6		7		8		9		10

CN17

| 1 | | 2 | | 3 | | 4 |

CN8

1	LED_R
2	GND
3	LED_G

CN1

1	GND
2	GND
3	SW+12V
4	SW+12V
5	AT+6.0V
6	AT+6.0V
7	AT+50V
8	GND
9	GND
10	GND
11	SW+12V
12	SW+12V
13	AMP+18V
14	AMP+18V
15	GND
16	GND
17	PW_ON
18	
19	DC_ADJ
20	BL_ON
21	RELAY_H
22	GND

CN11

1	GND
2	
3	GND
4	DVD EN
5	DVD KEY
6	DVD MUTE
7	GND
8	DVD R IN
9	GND
10	DVD L IN
11	GND
12	DVD Y
13	
14	DVD C
15	GND
16	DVD RESET
17	GND
18	START SW
19	GND
20	DVD TXD
21	DVD RXD
22	GND
23	
24	

CN12

1	AT+6.0V
2	AT+6.0V
3	GND
4	GND
5	GND
6	SW+12V

CN27

1	HDMI1 RX2+
2	GND
3	HDMI1 RX2-
4	HDMI1 RX1+
5	GND
6	HDMI1 RX1-
7	HDMI1 RX0+
8	GND
9	HDMI1 RX0-
10	HDMI1 RXC+
11	GND
12	HDMI1 RXC-
13	CEC
14	NC
15	RX5V1 DDC SCL
16	RX5V1 DDC SDA
17	GND
18	HDMI1 5VIN
19	RX1 HOTPLUG/

CN29

1	HDMI2 RX2+
2	GND
3	HDMI2 RX2-
4	HDMI2 RX1+
5	GND
6	HDMI2 RX1-
7	HDMI2 RX0+
8	GND
9	HDMI2 RX0-
10	HDMI2 RXC+
11	GND
12	HDMI2 RXC-
13	CEC
14	NC
15	RX5V2 DDC SCL
16	RX5V2 DDC SDA
17	GND
18	HDMI2 5VIN
19	RX2 HOTPLUG/

CN28

1	HDMI3 RX2+
2	GND
3	HDMI3 RX2-
4	HDMI3 RX1+
5	GND
6	HDMI3 RX1-
7	HDMI3 RX0+
8	GND
9	HDMI3 RX0-
10	HDMI3 RXC+
11	GND
12	HDMI3 RXC-
13	CEC
14	NC
15	RX5V3 DDC SCL
16	RX5V3 DDC SDA
17	GND
18	HDMI3 5VIN
19	RX3 HOTPLUG/

CN25 CN26 CN22 CN9

CN5

VCC_PANEL	1
VCC_PANEL	2
GND	3
	4
GND	5
RXE4-	6
REX3-	7
RXEC+	8
GND	9
REX2-	10
RXE1-	11
RXE0-	12
VCC_PANEL	13
VCC_PANEL	14
VCC_PANEL	15
	16
RXE4+	17
RXE3+	18
GND	19
RXEC-	20
RXE2+	21
RXE1+	22
RXE0+	23
GND	24

CN6

GND	1
RXO4+	2
GND	3
RXO3-	4
RXOC+	5
GND	6
RXO2-	7
RXO1+	8
GND	9
RXO0-	10
GND	11
GND	12
GND	13
VCC_PANEL	14
VCC_PANEL	15
GND	16
RXO4-	17
RXO3+	18
GND	19
RXO2+	20
RXO0+	21
GND	22
RXO1-	23
RXO0+	24
GND	25
M_SCL	26
M_SDA	27
	28
VCC_PANEL	29
VCC_PANEL	30

MAIN UNIT
MAIN001

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.
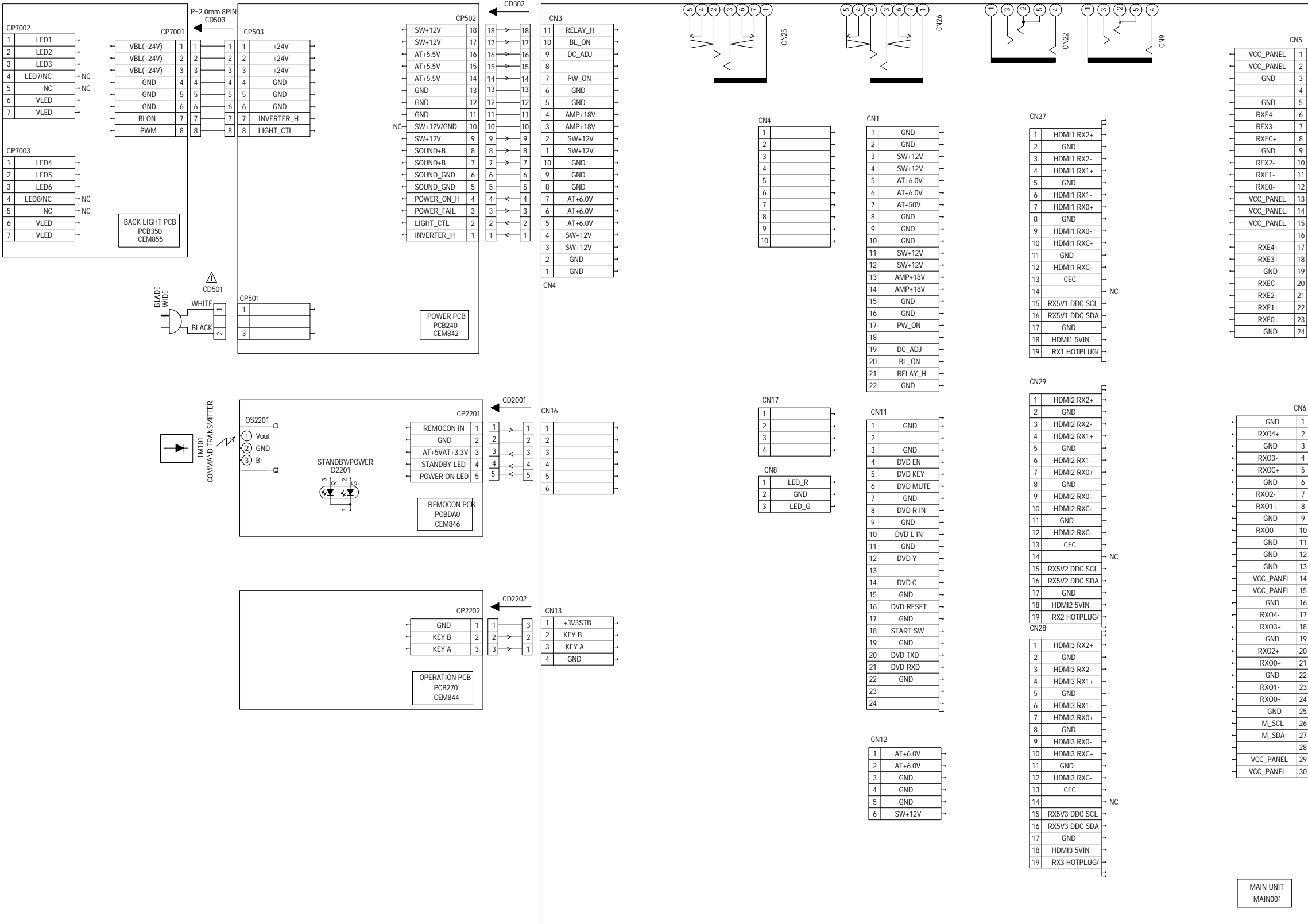
ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.
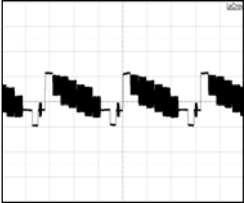
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY 。
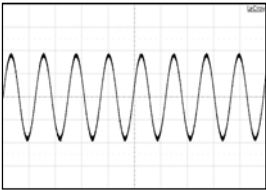
WAVEFORMS
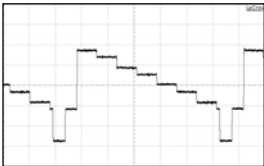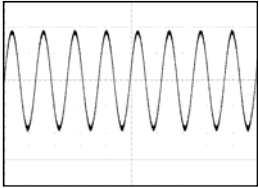
SCALER VIDEO/AUDIO

20us 500mv		200mv 2ms	
AV IN		PC AUDIO L	

200mv 10us		200mv 2ms	
PY		PC AUDIO R	
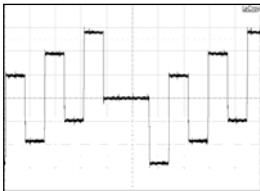
100mv 10us		500mv 1ms	
PR		AUDIO OUT L	
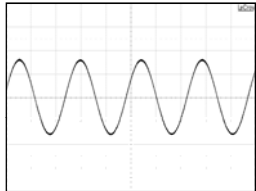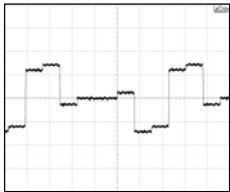
200mv 10us		500mv 1ms	
PB		AUDIO OUT R	
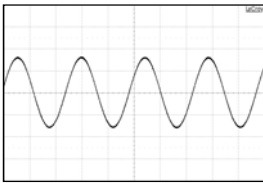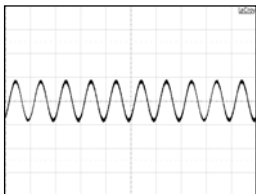
200mv 1ms		2v 1ms	
AU AUDIO IN L		SPEAKER L	
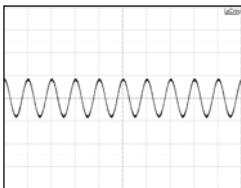
200mv 1ms		2v 1ms	
AU AUDIO IN R		SPEAKER R	

NOTE: Main Board Signal Input/Output.

MECHANICAL EXPLODED VIEW

PCB270
(OPERATION PCB ASS'Y)

PCBDA0
(REMOCON PCB ASS'Y)

MAIN001
(MAIN UNIT)

PCB240
(POWER PCB ASS'Y)

Note : SCREW TAP TITE(B) BIND 3x6 CH 2 PCS. (209)
is included in LED MODULE ASS'Y (SCREW).

PCB350
(BACK LIGHT PCB ASS'Y)
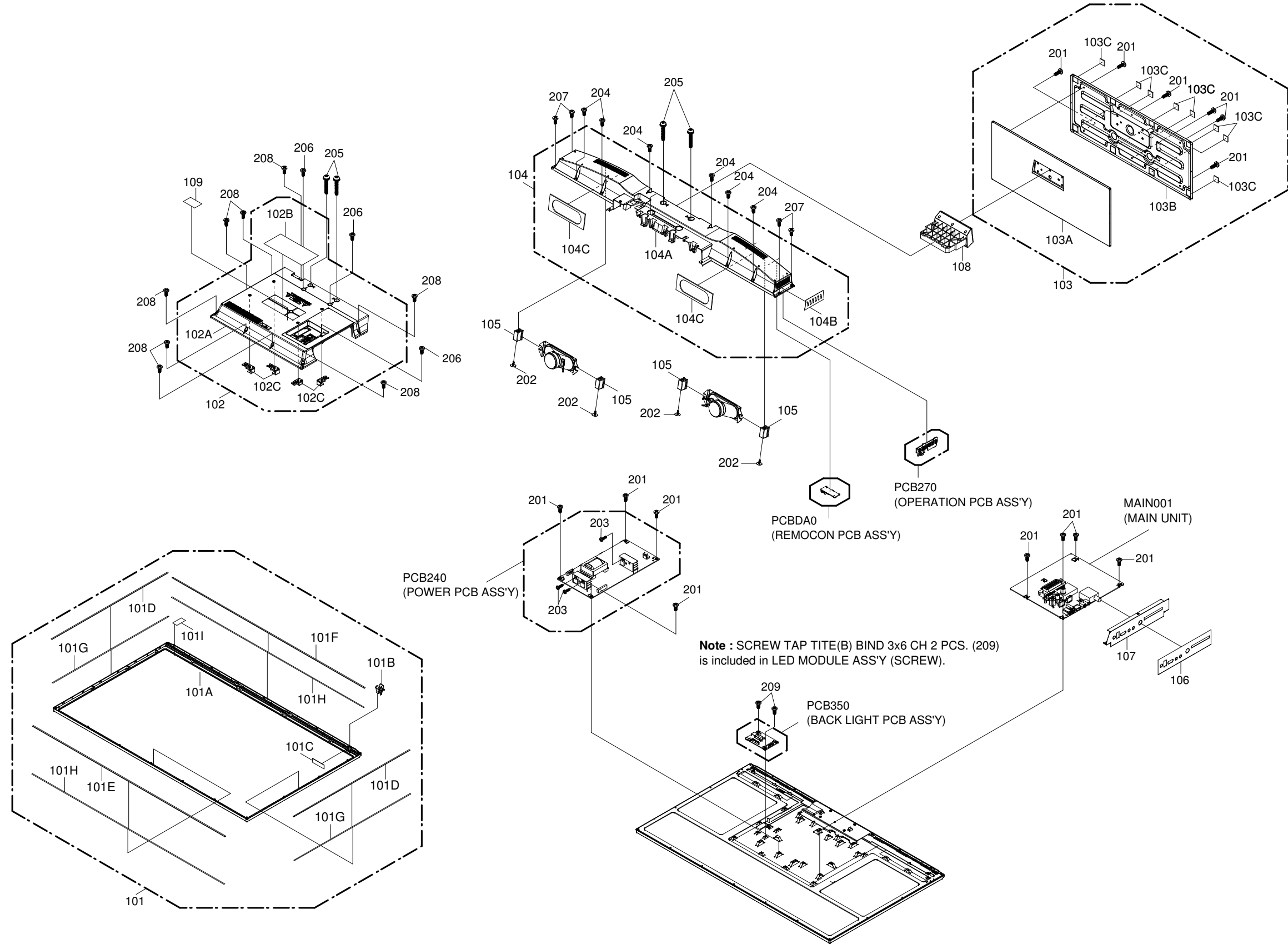
MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
101	7A708A998B	FRONT CABI ASS'Y	
101A	708WPDA796	CABINET FRONT	
101B	713WPA0478	GLASS LED	
101C	800WQ00190	FELT SHEET	
101D	92P200033A	CUSHION BEZEL LR	
101E	92P200035A	CUSHION BEZEL TB	
101F	92P200041A	CUSHION BEZEL TB	
101G	93P30A014A	TAPE	
101H	93P30A015A	TAPE	
101I	93P300065A	TAPE	
102	7A702B728A	COVER BACK ASS'Y	
102A	702WPAC058	COVER BACK	
102B	722202B586	SHEET RATING	
102C	761WSA0867	ANGLE BACK	
103	7A704A459A	STAND ASS'Y	
103A	704WPAA320	STAND	
103B	761WSAA522	ANGLE STAND	
103C	800WFA0140	CUSHION LEG	
104	7A709A004B	SPEAKER BOX ASS'Y	
104A	709WPAA026	SPEAKER BOX	
104B	721000A147	SHEET BUTTON	
104C	800WF0A031	CUSHION SPEAKER	
105	800CR00001	DAMPER SPEAKER	
106	723000F999	SHEET JACK 1	
107	761WSAA519	PLATE JACK	
108	704WPAA311	STAND FRAME	
109	722000A910	HELP LINE LABEL	
201	810923080U	SCREW TAP TITE(B) BIND	3x8
202	8171130A0U	SCREW TAP TITE(B) WASHER12	3x10
203	8109I30A0U	SCREW TAP TITE(B) WH7	3x10
204	8110226A0S	SCREW TAP TITE(P) BIND	2.6x10
205	810B150C0S	SCREW WASHER(B)	M5x30
206	8109230A0S	SCREW TAP TITE(B) BIND	3x10
207	810923060S	SCREW TAP TITE (B)BIND	3x6
208	810923080S	SCREW TAP TITE(B) BIND	3x8
209	810923060U	SCREW TAP TITE(B) BIND	3x6
---	723000G001	SHEET CARTON	
---	723000G002	ENERGY LABEL	
---	791WHAA450	FILM BAG	
---	791WHAA500	LAMIFILM BAG	
---	791WHAA503	GIFT SHEET	
---	792PHAA124	PACKAGE TOP	
---	792PHAA125	PACKAGE BOTTOM	
---	792PHAA126	PACKAGE CENTER	
---	793PCDA489	GIFT BOX	
---	7G8900007A	SCREW ASS'Y	
---	J3NU0101A	INSTRUCTION BOOK(DE)	
---	J3NU0110A	INSTRUCTION BOOK(FR)	
---	J3NU0111A	INSTRUCTION BOOK(PL)	
---	J3NU0114A	INSTRUCTION BOOK(EN)	
---	JB5PD000	POLYBAG INSTRUCTION(RED CAUTION)	

ELECTRICAL REPLACEMENT PARTS LIST

RESISTORS

REF. NO.	PART NO.	DESCRIPTION	
R504	R8X2R8334J	RC	330K OHM 1/8W
R507	R8X2R8334J	RC	330K OHM 1/8W
R508	RC31X1126J	RC	12M OHM 1W
R513	R803R9333J	RC	33K OHM 1/16W
R514	RC31X1224J	RC	220K OHM 1W
R515	R63881R22J	R,FUSE	0.22 OHM 1W
R518	R65584470J	R,FUSE	47 OHM 1/4W
R519	R3K781R12J	R,METAL OXIDE	0.12 OHM 1W
R534	R63881R22J	R,FUSE	0.22 OHM 1W

CAPACITORS

REF. NO.	PART NO.	DESCRIPTION	
C501	CS0PB04E4K	CC	0.015 UF 50V B
C502	CS0PCH4L2J	CC	330 PF 50V CH
C503	CS0PCH4L1J	CC	33 PF 50V CH
C504	P4K12D334K	CMPP	0.33 UF 310V
C505	CE39E0ME3M	CC	0.0015UF 250V E
C506	CS0PB0415K	CC	0.1 UF 50V B
C509	P4K12D224K	CMPP	0.22 UF 310V
C510	CE39E0ME3M	CC	0.0015UF 250V E
C515	P3N5F5222J	CPP	0.0022UF 630V PP
C517	C0PLRR7Q2K	CC	470 PF 2KV R
C518	CP3YSL7Q1J	CC	47 PF 2KV SL
C519	E83FHH121D	CE	120 UF 400V or
	E9EHHJ121D	CE	120 UF 450V
C522	E63ZFH220D	CE	22 UF 400V
C528	E8E2U5470D	CE	47 UF 50V
C531	E8E1G4152M	CE	1500 UF 35V
C532	E9E8F3102D	CE	1000 UF 25V
C533	CP3YSL7Q1J	CC	47 PF 2KV SL
C536	E9E8F3102D	CE	1000 UF 25V
C540	CE39E0M13M	CC	0.001 UF 250V E
C543	E83YT1102D	CE	1000 UF 10V
C7026	CS0PB0415K	CC	0.1 UF 50V B
C7033	E9E806271D	CE	270 UF 63V

DIODES

REF. NO.	PART NO.	DESCRIPTION	
D502	DE7RB3002B	DIODE ZENER	UDZSNP30B TE-17
D506	DOU011020M	DIODE VARISTA	DA38-102MB-M
D507	D28R11FS20	DIODE	EC11FS2-TE12L
D508	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D510	D4JXRM11C0	DIODE SILICON	ZRM11C
D511	D4JXRM11C0	DIODE SILICON	ZRM11C
D512	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D513	D4CTN40060	DIODE SILICON	1N4006-A5
D514	D4CTN40060	DIODE SILICON	1N4006-A5
D515	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D516	D2BFARS020	DIODE SILICON	SARS02-LFB2
D517	D4JXRM11C0	DIODE SILICON	ZRM11C
D518	D4JXRM11C0	DIODE SILICON	ZRM11C
D519	D4CTN40060	DIODE SILICON	1N4006-A5
D521	DE7RB1502B	DIODE ZENER	UDZSNP15B TE-17
D522	DE7RB3002B	DIODE ZENER	UDZSNP30B TE-17
D524	DE7RB3302B	DIODE ZENER	UDZSNP33B TE-17
D525	D28A10A200	DIODE SILICON	FCF10A20
D526	D28A10A100	DIODE SCHOTTKY BARRIER	FCH10A10
D527	D28A10A200	DIODE SILICON	FCF10A20
D530	D2LT001F50	DIODE SILICON	1F5-E
D531	DK1T2D1400	POWER CLAMPER	ST02D-140
D539	D28A10A061	DIODE SCHOTTKY BARRIER	FCQS10A065
D2201	0021E9Q010	LED	LTL-1BEFJ-002A
D7009	D4CRSK3BA0	DIODE SCHOTTKY BARRIER	SK3BA

ICS

REF. NO.	PART NO.	DESCRIPTION	
IC501	ICAJ0A5640	POWER IC CONTROL	FA5640N-C6-TE3
IC502	I5SD0P2M40	VDSS=700V F=67KHZ	MIP2M40MSSCF
IC503	I1KJ9A431A	VARIABLE SHUNT REGULATOR TAPE	KIA431A-AT
IC504	I1KJ9A431A	VARIABLE SHUNT REGULATOR TAPE	KIA431A-AT
IC505	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
IC506	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
IC507	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
IC7001	I07F087790	LED DRIVER IC	BD8779EFV-E2

TRANSISTORS

REF. NO.	PART NO.	DESCRIPTION	
Q501	TK1009N900	FET	FMV09N90E
Q503	TAAA01664Y	TRANSISTOR SILICON	KTA1664-Y-RTF/P
Q506	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q508	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q509	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q7001	TJ7T50N100	FET	RSD050N10TL

COILS &TRANSFORMERS

REF. NO.	PART NO.	DESCRIPTION	
L501	029B000185	COIL,LINE FILTER	JLB28120
L7001	021YM5330M	COIL	33 UH
T501	0481351254	TRANSFORMER,SWITCHING	81351254
T502	0481190201	TRANSFORMER,SWITCHING	81190201

SWITCHES

REF. NO.	PART NO.	DESCRIPTION	
SW2201	0504101T34	SWITCH,TACT	EVQ21505R
SW2202	0504101T34	SWITCH,TACT	EVQ21505R
SW2203	0504101T34	SWITCH,TACT	EVQ21505R
SW2204	0504101T34	SWITCH,TACT	EVQ21505R
SW2205	0504101T34	SWITCH,TACT	EVQ21505R
SW2206	0504101T34	SWITCH,TACT	EVQ21505R

P.C.BOARD ASSEMBLIES

REF. NO.	PART NO.	DESCRIPTION	
PCB240	A3NU01W240P	POWER PCB ASS'Y	CEM842A
PCB270	A3NU01W270P	OPERATION PCB ASS'Y	CEM844A
PCB350	A3NU01W350P	BACK LIGHT PCB ASS'Y	CEM855A
PCBDA0	A3NU01WDA0P	REMOCON PCB ASS'Y	CEM846A

MISCELLANEOUS

REF. NO.	PART NO.	DESCRIPTION	
B501	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B502	024AC1121G	CORE,BEADS	BLM31PG121SN1L
B503	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B504	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B7001	024HC13914	CORE,BEADS	HCB3216KF-391T20
BT001	141U004021	BATTERY,MANGAN	AAA(R03)
BT002	141U004021	BATTERY,MANGAN	AAA(R03)
CD301	06EH147101	CORD CONNECTOR	EH147101
CD501	120A658807	CORD AC	MO27-019BK
CD502	12C10I1701	CORD JUMPER	FFC125181700510T1-GOO
CD503	06EH280801	CORD CONNECTOR	EH280801
CD505	06EHB18006	CORD,RCA PIN	CRM0318002
CD506	06EHB18005	CORD,RCA PIN	CRM0318001
CP501	069S320419	CONNECTOR PCB SIDE	A3963WV2-3PD
CP502	069E7I0630	CONNECTOR PCB SIDE	00_6216_018_000_808+
CP503	06GG280029	CONNECTOR PCB SIDE	A2001WV-8A
CD2201	06EH266601	CORD CONNECTOR	EH266601
CD2202	06CH246809	CORD CONNECTOR	CH246809
CP2201	06GG250019	CONNECTOR PCB SIDE	A2001WR-5A
CP2202	06GG230019	CONNECTOR PCB SIDE	A2001WR-3A
CP7001	06GG280019	CONNECTOR PCB SIDE	A2001WV-8A
CP7002	06GRV73019	CONNECTOR PCB SIDE	FCZ100E-07SS-K
CP7003	06GRV73019	CONNECTOR PCB SIDE	FCZ100E-07SS-K
EL2401	124116281A	EYE LET	EYE LET XRY16X28BD
EL2402	124120301A	EYE LET	EYE LET XRY20X30BD
F501	0805A05003	FUSE	SG5013005P-R(GF-009)
MAIN001	1564Y00018	MAIN UNIT	T.MT5310.72A_18P
OS2201	077Q038009	REMOTE RECEIVER	KSM-2003TCW2P
SH501	126D000045	TERMINAL PIN	YQ-12
SH502	126D000045	TERMINAL PIN	YQ-12
SH503	126D000045	TERMINAL PIN	YQ-12
SH504	126D000045	TERMINAL PIN	YQ-12
SP301	070Y056014	SPEAKER	S0412F41
SP302	070Y056014	SPEAKER	S0412F41
TH501	DSVEHE4R7M	THERMISTOR	B57237S0479M000
TM101	076D0UE071	TRANSMITTER	000-225000070
TU001	0164E03021	DIGITAL TUNER	TDTK-G731D(A)
TU002	0164E03022	DIGITAL TUNER	EDS-10830FNBHB
V2801	A3NU01WFM0P	LED MODULE ASS'Y	V390HJ1-P01-LED OR1A

RESISTOR
RC.................. CARBON RESISTOR

CAPACITORS
CC.................. CERAMIC CAPACITOR
CE.................. ALUMI ELECTROLYTIC CAPACITOR
CP.................. POLYESTER CAPACITOR
CPP................. POLYPROPYLENE CAPACITOR
CPL................. PLASTIC CAPACITOR
CMP................. METAL POLYESTER CAPACITOR
CMPL.............. METAL PLASTIC CAPACITOR
CMPP.............. METAL POLYPROPYLENE CAPACITOR

SPEC.NO.	M3NU-01W
O/R NO.	F295101