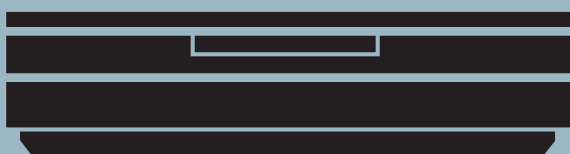


# DVD 1

Type 4620

Service Center repair guide

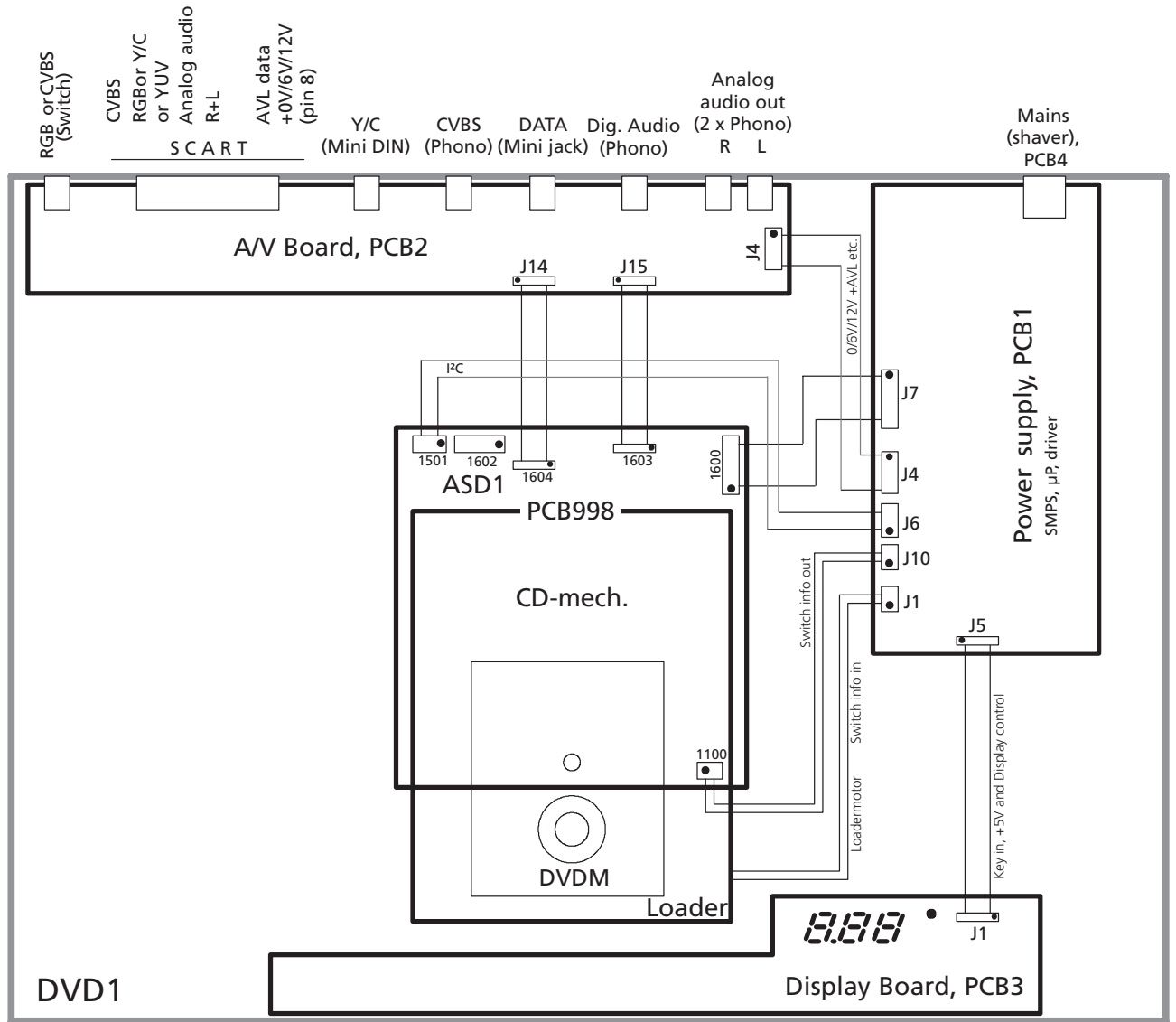
English, German, French, Italian, Spanish



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Survey of modules



**How to service**

It is possible that service of DVD 1 can be carried out in the customers home, but is more convenient at the dealers place. A Back-up suitcase is available which contains the DVD mechanism with ASD1 module and additional modules.

**Durchführung von Reparaturen**

Reparaturen am DVD 1 können zu Hause beim Kunden durchgeführt werden; sie lassen sich allerdings bequemer in der Werkstatt des Händlers erledigen. Es ist ein Reparaturkoffer lieferbar mit DVD-Mechanismus, inklusive ASD1-Modul und zusätzlichen Modulen.

**Comment effectuer la maintenance**

Il est possible d'effectuer la maintenance du DVD 1 chez le client mais il est plus pratique de le faire chez le revendeur. Une valise de sauvegarde contenant le mécanisme du DVD avec le module ASD1 et des modules supplémentaires est disponible.

**Come effettuare l'assistenza tecnica**

È possibile che sia necessario eseguire gli interventi di assistenza tecnica di DVD 1 presso il cliente, tuttavia sarebbe preferibile effettuarli presso la sede dei rivenditori. È disponibile una valigetta di Back-up che contiene il meccanismo DVD con il modulo ASD1 nonché i moduli supplementari.

**Cómo realizar el servicio**

Se puede realizar el servicio del DVD 1 en el hogar del cliente, pero es más conveniente en los locales del distribuidor. Está disponible una maleta auxiliar que contiene el mecanismo del DVD con el módulo ASD1 y módulos adicionales.

SPECIFICATION GUIDELINES FOR SERVICE USE		DVD 1		
Type	4620			
Cabinet finish	Black, Blue, White, Silver, Red, Green			
Operation	Close-up operation			
	Beo 4 remote control via BeoVison recommended			
Disc size	12 cm. - 8 cm			
Audio frequency response	4 -20,000 Hz			
Playback the following	DVD-Video, Video CD, CD-A, CD-R, CD-RW			
	Multistandard PAL/NTSC			
Signal/noise ratio Audio	≥ 110 dB, A weighted			
DVD Zone	According to Region			
Dimensions W x H x D/Weight	38 x 9.7 x 28 cm/4.0 kg			
Power supply	100-240 volts/50/60 Hz			
Power consumption	Typical 13 watts / st-by < 1 watt			
<b>Accessories</b>				
Shelf	4134	DVD 1 and V8000 with a MX TV		
Shelf	4132	DVD 1 or V8000 with a MX TV		
<b>Connections</b>				
<b>AV</b>	Pin 1	Audio R out	1.8V RMS 1k ohm	
	Pin 2	Not used		
	Pin 3	Audio L out	1.8V RMS 1k ohm	
	Pin 4	Audio GND		
	Pin 5	Blue GND		
	Pin 6	Not used		
	Pin 7	Blue out	0.7 Vpp 75 ohms	
		U out	0.7 Vpp 75 ohms	
	Pin 8	Data in	0V/6V/12V	
	Pin 9	Green GND		
	Pin 10	Not used		
	Pin 11	Green out	0.7 Vpp 75 ohms	
		V out	0.7 Vpp 75 ohms	
	Pin 12	Not used		
	Pin 13	Red GND		
	Pin 14	Blanking GND		
	Pin 15	Red out	0.7 Vpp 75 ohms	
		C out	0.3 Vpp 75 ohms	
	Pin 16	Blanking out	75 ohms	Logic 0 = 0V to 0.4V Logic 1 = 1V to 3V
	Pin 17	Video out GND		
	Pin 18	Video in GND		
Pin 19	Composite video out	1 Vpp 75 ohms	Y out 1 Vpp 75 ohms	
Pin 20	Not used			
Pin 21	Shield			
<b>Y/C</b>	Pin 1	Y GND		
	Pin 2	C GND		
	Pin 3	Y out 1 Vpp 75 ohms		
	Pin 4	C out 0.3 Vpp 75 ohms		
<b>CVBS</b>	Composite video out 1 Vpp 75 ohms			
<b>DATA</b>	AVL data input			
<b>AUDIO L &amp; R</b>	Audio L & R out 2 V RMS 1 kohm			
<b>DIGITAL OUTPUT</b>	Digital audio output			

V.TAPE & AV	Pin 1	Audio R out 1V RMS 150 ohms		
	Pin 2	Audio R in 1V RMS 40k ohms		
	Pin 3	Audio L out 1V RMS 150 ohms		
	Pin 4	Audio GND		
	Pin 5	Blue GND		
	Pin 6	Audio L in 1V RMS 40k ohms		
	Pin 7	Blue in 0.7 Vpp 75 ohms		
	Pin 8	Play voltage:	Logic 0 = 0V to 2V Logic 1 = 9.5V to 12V (4:3 info) 5V to 7V = 16:9 info V.TAPE Data in/out AV Data out	
	Pin 9	Green GND		
	Pin 10	Not used		
	Pin 11	Green in 0.7 Vpp 75 ohms		
	Pin 12	Not used		
	Pin 13	Red GND		
	Pin 14	Blanking GND		
	Pin 15	Red in 0.7 Vpp 75 ohms	(note 1)	
	Pin 16	Blanking in	Logic 0 = 0V to 0.4V Logic 1 = 1V to 3V R in 75 ohms	
	Pin 17	Video out GND		
	Pin 18	Video in GND		
	Pin 19	Composite video out 1 Vpp 75 ohms		
	Pin 20	Composite video in 1 Vpp 75 ohms	(note 2)	
	Pin 21	Shield		

Note 1: Pin 15 is also used for C in.  
Note 2: Pin 20 is also used for Y in.

VIDEO	Composite video in 1Vpp 75 ohms	
L & R	Audio L & R in 0.2V - 2 V RMS >10k ohms	

Caution

The use of any controls, adjustments or procedures other than those specified herein may result in hazardous radiation exposure.



The black and yellow label on the unit serves as a warning that the apparatus contains a laser system and is classified as a class 1 laser product. The apparatus must be opened by qualified service person only.

This product incorporates copyright protection technology that is protected by claims of certain US patents and other intellectual property rights owned by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.



Static electricity may destroy the product!

A static-protective field service kit must always be used when replacement of the modules takes place.

*Please note:*

When mains voltage on the TV is required, remove the connection from the TV to the ESD mat.

## Brief operation guide

### Buttons on DVD 1

- **EJECT**. Press to open or close the loader.
- **◀▶**. Press to cue forward or backward during playback.
- **PLAY**. Press to start playback. Press again to pause playback.
- **●**. Press to switch DVD 1 to standby.

### Playback of DVD

- Load the disc in DVD 1. Press **PLAY** to start playback.

### DVD disc menu

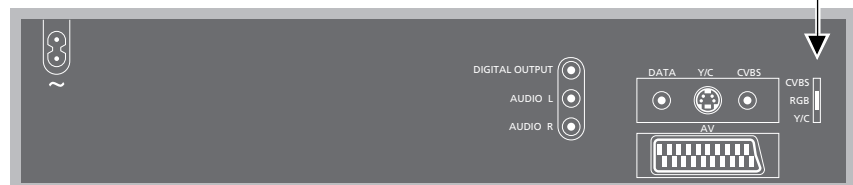
- Not available on all DVD discs. Press and hold **GO** (Beo1/Beo4) or press the yellow button on Beo4 to gain access to special features such as information about the making of a film, interviews or specially edited scenes.

### On-screen tool bar

- Press **DISPLAY** on Beo1 or the blue button on Beo4 to gain access to the main functions of DVD 1.  
Use **◀▶** to select function. Use **▲▼** to view setting choices for the function.  
Press **GO** to store the choice and resume playback.

### Connections to DVD1

- Set switch according to the connected TV. *Please note that: If connection is made without a 21-pin AV cable set the switch for RGB.*
  - CVBS if BeoVision AV9000, BeoVision LX/MS/MX.
  - Y/C if BeoVision Avant 50Hz, BeoCenter AV5.
  - RGB if any other Bang & Olufsen TV.



- **DIGITAL OUTPUT, AUDIO L, AUDIO R.**  
Used if connecting to a TV without using a 21-pin AV cable. Audio signals.
- **DATA, Y/C, CVBS.**  
Used if connecting to a TV without using a 21-pin AV cable. Data and video signals.
- **AV.**  
Used if connecting to a TV using a 21-pin AV cable. Data, audio and video signals.

### Further information regarding daily use

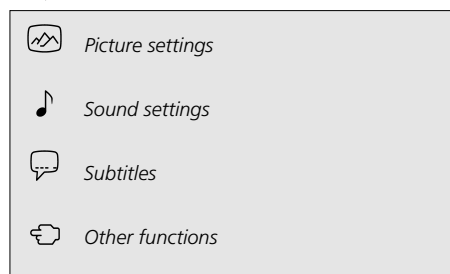
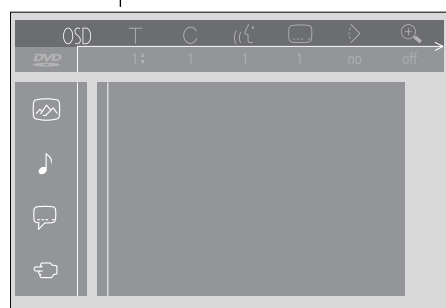
- Please refer to the DVD 1 Guide for further information regarding daily use.



Overview of On-screen tool bar

- T Title number**  
Change to another title by pressing ▲ or ▼.
  - C Chapter number**  
Change tracks during playback by pressing ▲ or ▼.
  - Playback language\***  
Choose from the languages available on your particular disc.  
Press the red button on Beo4 to be able to change playback language during playback.
  - Subtitle language\***  
Choose a subtitle language available on your disc, or choose not to view subtitles. Press the green button on Beo4 to be able to change subtitles during playback.
  - Camera angle\***  
It is possible on some DVD discs to change to a different camera angle.
  - Zoom**  
Choose the magnification, press GO to enter your choice and use the arrow keys to pan back and forth. Press GO to resume playback.
- \*NOTE! If a function is inactive for your player setup, or if the disc does not contain a particular option (such as camera angle on some DVD discs), the function symbol and current setting will not be highlighted, and ▼ or ▲ for changing settings will not appear.

- Favourite Track Selection (FTS)**  
Allows you to identify favourite tracks on a particular DVD disc and store them in the player's memory.
- Sound settings**  
Choose between Stereo and Dolby Surround Sound.
- Pause**  
Press ▼ to pause playback on a particular frame. Press ◀ and ▶ to move between frames, and press GO to resume playback.
- Slow motion**  
Press ▼ to pause playback and ◀ or ▶ to start slow motion.  
Press ◀ or ▶ to adjust speed and press GO to resume playback.
- Fast motion**  
Press ▼ to pause playback and ◀ or ▶ to start fast motion.  
Press ◀ or ▶ to adjust speed and press GO to resume playback.
- Time search**  
Use the numeric key pad on Beo4 to enter the desired start time.



Picture settings

- TV SHAPE. Options are: 4:3 LETTERBOX, 4:3 PAN SCAN and 16:9.
- BLACK LEVEL SHIFT. Options are: ON and OFF.
- VIDEO SHIFT. Center picture horizontally with ◀▶.

Sound settings

- DIGITAL OUTPUT. Options are: OFF, PCM only and ALL.
- ANALOG OUTPUT. Options are: STEREO and DOLBY SURROUND.
- NIGHT MODE. Options are: ON and OFF.
- KARAOKE VOCAL. Options are: ON and OFF.

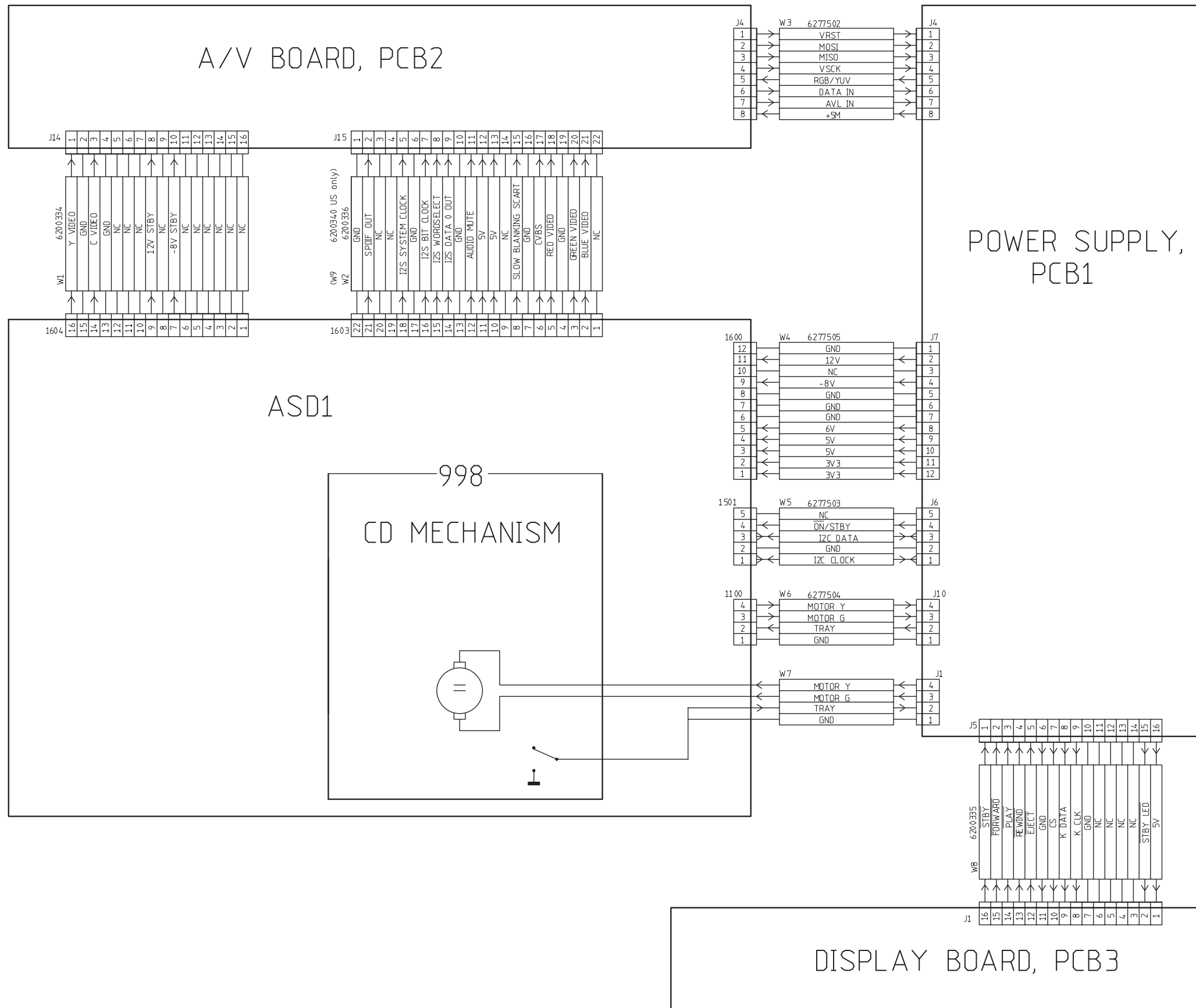
Subtitles

- AUDIO LANGUAGE. Choose between the 16 shown.
- SUBTITLE LANGUAGE. Choose between the 16 shown.
- MENU LANGUAGE. Choose between the 8 shown.

Other functions

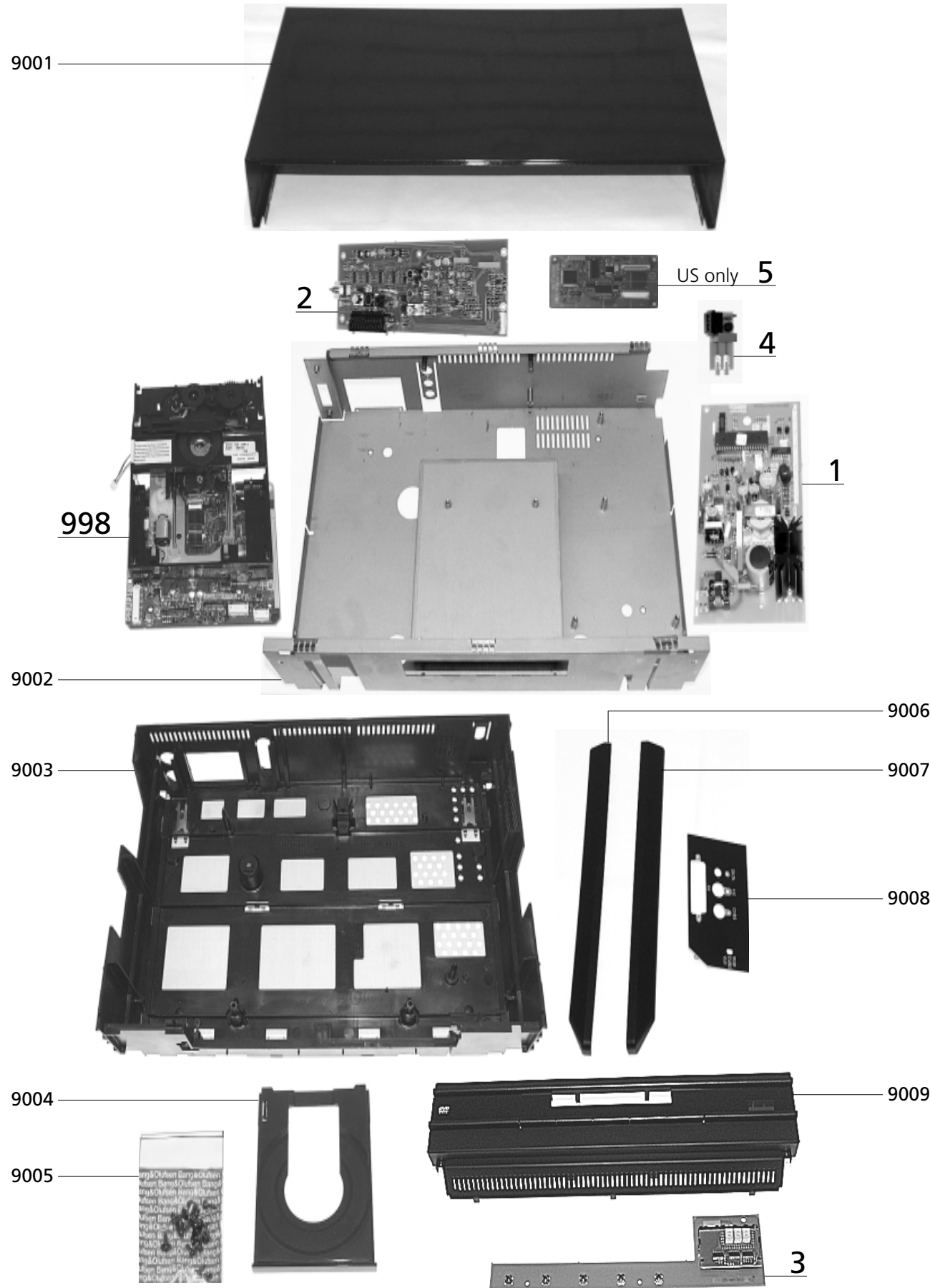
- ACCESS CONTROL. Child Lock, Parental Control and Country settings.
- STATUS WINDOW. Options are: ON and OFF.
- LOW POWER STANDBY. Options are: ON and OFF.
- PBC. Menu for playback of SVCD. Options are: ON and OFF.

Wiring diagram



AVAILABLE PARTS

DVD 1



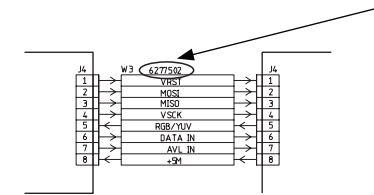
DVD 1

9001	3400482	Top cover, black
	3400483	Top cover, green
	3400484	Top cover, red
	3400485	Top cover, white
	3400486	Top cover, blue
	3400487	Top cover, grey
9002	3358412	Iron chassis
9003	3414327	Bottom
9004	3456239	Load plate
9005	3375258	Bag w/screws and washers
9006	3470256	Side panel, left
9007	3470257	Side panel, right
9008	3452712	Cover f/sockets
9009	3451730	Front panel w/buttons

1Module	8006951	PCB1, Power Supply & Microcomputer
2Module	8006952	PCB2, A/V Board
3Module	8006956	PCB3, Display
4Module	8006957	PCB4, AC Inlet
5Module	8000511	PCB5, Sound Correction (US only)
998Module	8006960	ASD1/DVD Mechanism
	8000520	ASD1/DVD Mechanism, US

Wire bundles

See wiring diagram page 3.1.  
The part no. is printed on the diagram above the wire bundle, as shown.



Parts not shown

6100245	Mains lead EU
6100328	Mains lead GB
6100248	Mains lead AUS
6100306	Mains lead US
6270803	AV cable
6270804	Data cable 10cm w. mini jack
3395149	Back-up suitcase
3395183	Back-up suitcase, US

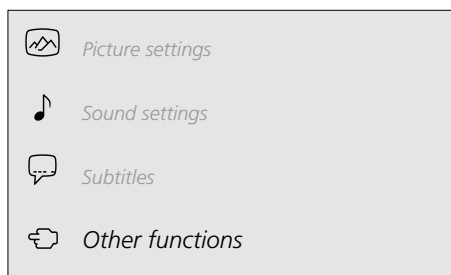
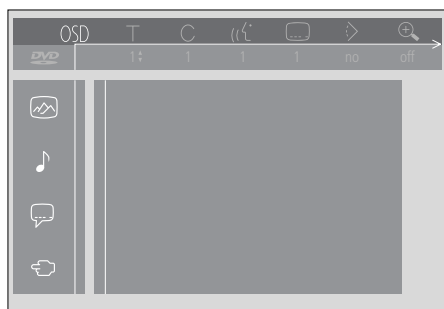
Packing

3396135	Set of foam
3392509	Outer carton

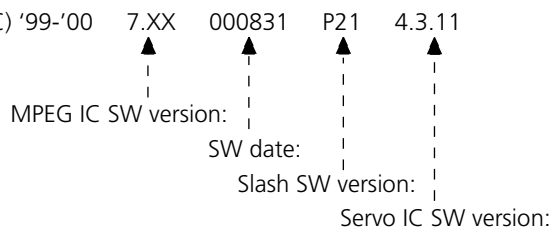
Available documentation

3508476	User's Guide, Danish
3508477	User's Guide, Swedish
3508479	User's Guide, English
3508480	User's Guide, German
3508481	User's Guide, Dutch
3508482	User's Guide, French
3508483	User's Guide, Italian
3508484	User's Guide, Spanish
3508478	User's Guide, Finnish
3508485	User's Guide, Portuguese
3508486	User's Guide, Taiwanese

Service mode



- - - ACCESS CONTROL.
- STATUS WINDOW.
- LOW POWER STANDBY.
- ▼ - PBC.
- (C) '99-'00 7.XX 000831 P21 4.3.11



Applikations SW version (1IC1)

- Use the buttons on DVD 1. Remove CD if such is loaded. Then disconnect DVD 1 from the mains. Press and hold **PLAY** and **◀** and then reconnect DVD 1 to the mains. The SW version will appear in the display.

Region setup

- Use the buttons on DVD 1. Remove CD if such is loaded. Then disconnect DVD 1 from the mains. Press and hold **◀** and **▶** and then reconnect DVD 1 to the mains. The current setting will appear in the display. Use **◀▶** to change Region number. Press **PLAY** to store the desired number. Wait approx. 15 sec. until the screen goes blue.  
*Please note: The number of times Region setting can be changed is limited. If this limit is exceeded DVD 1 will cease to function.*

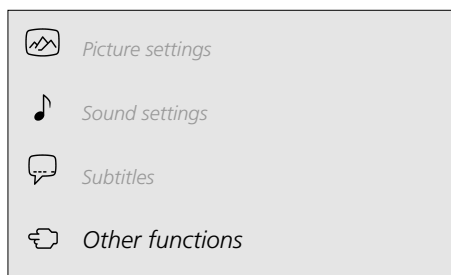
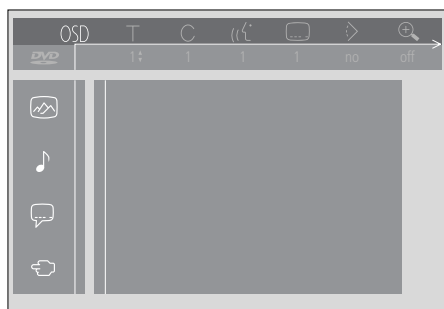
Country and Region setting:  
 Australia - 4; Canada - 1; Estonia - 5; Ghana - 5; Hong Kong - 3; Indonesia - 3;  
 Latvia - 5; Lithuania - 5; Malaysia - 3; Morocco - 5; Nigeria - 5; Singapore - 3;  
 Taiwan - 8; Thailand - 3; USA - 1

## Repair tips

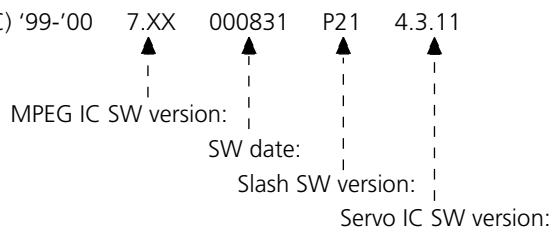
There is a problem with:

- Picture.  
Analog video signals can be measured from PCB71.  
For RGB or CVBS measure on 71-1603 or 2J15.  
For Y/C measure on 71-1604 or 2J14.  
If video signals are OK from PCB71, the fault may be located on PCB2.
  
- Sound.  
Only digital audio signals can be measured from PCB71.  
Try playback of an Audio CD. If OK, the fault may be located on PCB71 or PCB94.  
If not OK, the fault may be located on PCB2.
  
- Both picture and sound.  
Ensure that all voltages from PCB1 to PCB71 and to PCB2 are OK.  
Measure if there is any activity on I2C DATA and I2C CLOCK on 1J6.
  
- Playback of DVD/CD.  
Ensure that all voltages from PCB1 to PCB71 and PCB2 are OK.  
Measure if there is any activity on MOTOR and TRAY on 1J1 and 1J10.
  
- Loader/tray.  
Check for any mechanical failures on PCB94.  
Measure if there is any activity on MOTOR and TRAY on 1J1 and 1J10.
  
- Display/Keyboard.  
Measure voltage on 1J5. Measure if there is any activity on CS, K DATA and K CLOCK on 1J5.  
Ensure that voltage on key-pins 1J5 pin1-5 is pulled down when pressed.

Service-Modus



- - - ACCESS CONTROL.
- STATUS WINDOW.
- LOW POWER STANDBY.
- ▼ - PBC.
- (C) '99-'00 7.XX 000831 P21 4.3.11



Anwendungen Version SW (1IC1)

- Benutzen Sie die Tasten am DVD 1! Entnehmen Sie die CD (sofern eingelegt)! Dann DVD 1 vom Netz trennen. Drücken Sie die **PLAY**-Taste und **◀** und halten Sie sie fest, und schließen Sie DVD 1 dann wieder an das Stromnetz an! Auf dem Display wird nun die SW-Version angezeigt.

Regionale Einstellung

- Benutzen Sie die Tasten am DVD 1! Entnehmen Sie die CD (sofern eingelegt)! Dann DVD 1 vom Netz trennen. Drücken Sie die **◀** und **▶**-Tasten und halten Sie sie fest, und schließen Sie DVD 1 dann wieder an das Stromnetz an! Auf dem Display erscheint nun die aktuelle Einstellung. Drücken Sie **◀▶**, um die Regionale Nummer zu ändern. Durch Drücken von **PLAY** wird die gewünschte Nummer gespeichert. Warten Sie etwa 15 Sek., bis der Bildschirm blau wird.  
*Bitte beachten: Die Anzahl der möglichen Veränderungen bei der Regionalen Einstellung ist begrenzt. Bei Überschreitung der Maximalzahl funktioniert der DVD 1-Player nicht mehr!*

Country and Region setting:  
 Australia - 4; Canada - 1; Estonia - 5; Ghana - 5; Hong Kong - 3; Indonesia - 3;  
 Latvia - 5; Lithuania - 5; Malaysia - 3; Morocco - 5; Nigeria - 5; Singapore - 3;  
 Taiwan - 8; Thailand - 3; USA - 1

## Reparaturhinweise

- Bei Problemen mit ...
- Bild.  
Analoge Videosignale können von PCB71 gemessen werden.  
Für RGB bzw. CVBS erfolgt die Messung an 71-1603 bzw. 2J15.  
Für Y/C erfolgt die Messung an 71-1604 bzw. 2J14.  
Falls die Videosignale von PCB71 i.O. sind, kann der Fehler vielleicht bei PCB2 liegen.
  
  - Tonwiedergabe.  
Von PCB71 können ausschließlich digitale Audiosignale gemessen werden.  
Versuchen Sie, eine Audio-CD wiederzugeben! Falls dies in Ordnung ist, liegt der Fehler möglicherweise bei PCB71 oder PCB94.  
Falls nicht i.O., liegt der Fehler vielleicht bei PCB2.
  
  - Bild und Ton.  
Vergewissern Sie sich, dass alle Spannungen von PCB1 zu PCB71 und zu PCB2 i.O. sind!  
Messen Sie, ob eine Aktivität bei I2C DATA und I2C CLOCK an 1J6 feststellbar ist!
  
  - Wiedergabe von DVD/CD.  
Vergewissern Sie sich, dass alle Spannungen von PCB1 zu PCB71 und PCB2 i.O. sind!  
Messen Sie, ob eine Aktivität bei MOTOR und TRAY an 1J1 und 1J10 feststellbar ist!
  
  - Ladevorrichtung/Schub.  
Prüfen Sie auf mechanische Störungen an PCB94.  
Messen Sie, ob eine Aktivität bei MOTOR und TRAY an 1J1 und 1J10 feststellbar ist!
  
  - Display/Tastatur.  
Messen Sie die Spannung an 1J5! Messen Sie, ob eine Aktivität bei CS, K DATA und K CLOCK an 1J5 vorliegt!  
Vergewissern Sie sich, dass an den Schlüsselstiften 1J5 Stift 1-5 beim Niederdrücken Spannung abgezogen wird!



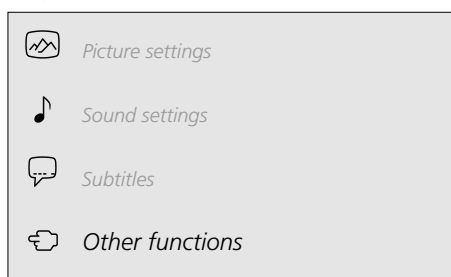
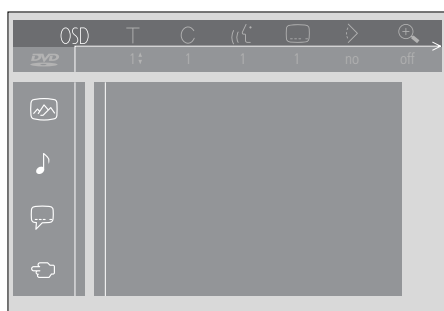


## Astuces de réparation

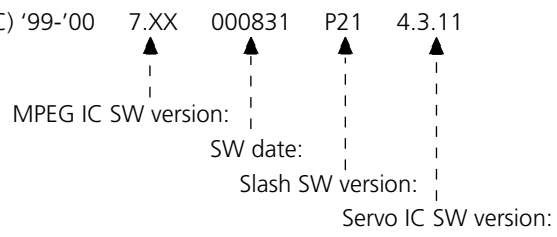
Il y a un problème avec :

- l'image  
Les signaux vidéo analogiques peuvent être mesurés à partir de la PCB71.  
Pour RGB ou CVBS, mesurez sur 71-1603 ou 2J15.  
Pour Y/C, mesurez sur 71-1604 ou 2J14.  
Si les signaux vidéo sont corrects à partir de la PCB71, le défaut peut se trouver sur la PCB2.
  
- le son  
Seuls les signaux audio numériques peuvent être mesurés à partir de la PCB71.  
Essayez la lecture d'un CD audio. Si elle est correcte, le défaut peut se trouver sur la PCB71 ou la PCB94.  
Si elle n'est pas correcte, le défaut peut se situer sur la PCB2.
  
- l'image et le son  
Vérifiez que toutes les tensions à partir de la PCB1 à la PCB71 et la PCB2 sont correctes.  
Mesurez l'activité éventuelle sur I2C DATA et I2C CLOCK sur 1J6.
  
- la lecture d'un DVD/CD  
Vérifiez que toutes les tensions à partir de la PCB1 à la PCB71 et la PCB2 sont correctes.  
Mesurez l'activité éventuelle sur MOTOR et TRAY sur 1J1 et 1J10.
  
- le chargeur/le plateau  
Vérifiez la présence éventuelle de défauts mécaniques sur la PCB94.  
Mesurez l'activité éventuelle sur MOTOR et TRAY sur 1J1 et 1J10.
  
- l'afficheur/le clavier  
Mesurez la tension sur 1J5. Mesurez l'activité éventuelle sur CS, K DATA et K CLOCK sur 1J5.  
Vérifiez que la tension sur les broches des touches 1J5 broche1-5 est intermittente, en appuyant dessus.

Modalità di manutenzione



- - - ACCESS CONTROL.
- STATUS WINDOW.
- LOW POWER STANDBY.
- ▼ - PBC.
- (C) '99-'00 7.XX 000831 P21 4.3.11



Versione software (SW) delle applicazioni (1IC1)

- Uso dei pulsanti di DVD 1. Rimuovere il CD, se inserito. Quindi scollegare DVD 1 dall'alimentazione di rete. Premere senza rilasciare **PLAY** e **◀▶**, quindi ricollegare DVD 1 all'alimentazione di rete. La versione software (SW) verrà visualizzata sul display.

Impostazione regione

- Uso dei pulsanti di DVD 1. Rimuovere il CD, se inserito. Quindi scollegare DVD 1 dall'alimentazione di rete. Premere senza rilasciare **◀▶** e **▶▶**, quindi ricollegare DVD 1 all'alimentazione di rete. L'impostazione attuale viene visualizzata sul display. Utilizzare **◀▶▶** per modificare il codice della regione. Premere **PLAY** per memorizzare il numero desiderato. Aspettate ca. 15 sec. finché lo schermo diventi blu. *Notare che: il numero di volte in cui è possibile modificare l'impostazione della regione è limitato. Se si supera questo limite, DVD 1 cessa di funzionare.*

Country and Region setting:  
 Australia - 4; Canada - 1; Estonia - 5; Ghana - 5; Hong Kong - 3; Indonesia - 3;  
 Latvia - 5; Lithuania - 5; Malaysia - 3; Morocco - 5; Nigeria - 5; Singapore - 3;  
 Taiwan - 8; Thailand - 3; USA - 1

## Suggerimenti di riparazione

Se si verifica un'anomalia con:

- Immagine.  
I segnali video analogici possono essere misurati dalla PCB71.  
I segnali RGB o CVBS devono essere misurati su 71-1603 o 2J15.  
Il segnale Y/C deve essere misurato su 71-1604 o 2J14.  
Se i segnali video dalla PCB71 sono regolari, il guasto può essere localizzato sulla PCB2.
  
- Audio.  
Soltanto i segnali audio digitali possono essere misurati dalla PCB71.  
Provare la riproduzione di un CD audio. Se è regolare, il guasto può essere localizzato sulla PCB71 o PCB94.  
Se non è regolare, il guasto può essere localizzato sulla PCB2.
  
- Immagine ed audio.  
Accertarsi che tutte le tensioni dalla PCB1 alla PCB71 ed alla PCB2 siano corrette.  
Misurare eventuali attività di I2C DATA e I2C CLOCK su 1J6.
  
- Riproduzione di un DVD/CD.  
Accertarsi che tutte le tensioni dalla PCB1 alla PCB71 ed alla PCB2 siano corrette.  
Misurare eventuali attività di MOTOR e TRAY su 1J1 e 1J10.
  
- Comparto caricatore.  
Controllare eventuali guasti meccanici sulla PCB94.  
Misurare eventuali attività di MOTOR e TRAY su 1J1 e 1J10.
  
- Display/tastiera.  
Misurare la tensione di 1J5. Misurare eventuali attività di CS, K DATA e K CLOCK su 1J5.  
Accertarsi che la tensione sui key pin 1J5 da 1-5 pin sia abbassata quando vengono premuti.

Modo de servicio



Aplicaciones SW versión (1IC1)

- Utilice los botones del DVD 1. Retire el CD si estuviere cargado. Luego desconecte el DVD 1 de la corriente. Pulse y mantenga pulsado **PLAY** y **◀** y luego reconecte el DVD 1 a la corriente. La versión SW aparecerá en la pantalla.

Configuración de la región

- Utilice los botones del DVD 1. Retire el CD si estuviere cargado. Luego desconecte el DVD 1 de la corriente. Pulse y mantenga pulsado **◀** y **▶** y luego reconecte el DVD 1 a la corriente. La configuración actual aparecerá en la pantalla. Utilice **◀▶** para cambiar el número de la Región. Pulse **PLAY** para guardar el número deseado. Espere aprox. 15 seg. hasta que la pantalla se vuelva azul. *Atención: La cantidad de veces que puede cambiar el número de la Región es limitada. Cuando se supera este límite, el DVD 1 deja de funcionar.*

Country and Region setting:  
 Australia - 4; Canada - 1; Estonia - 5; Ghana - 5; Hong Kong - 3; Indonesia - 3;  
 Latvia - 5; Lithuania - 5; Malaysia - 3; Morocco - 5; Nigeria - 5; Singapore - 3;  
 Taiwan - 8; Thailand - 3; USA - 1

## Consejos de reparación

Hay un problema con:

- La imagen.

Las señales de vídeo analógico se pueden medir desde el PCB71.

Para la medición RGB o CVBS en el 71-1603 ó 2J15.

Para la medición Y/C en el 71-1604 ó 2J14.

Si las señales de vídeo son correctas desde el PCB71, el fallo puede estar ubicado en el PCB2.

- El sonido.

Sólo las señales de audio digital se pueden medir desde el PCB71.

Pruebe reproducir un CD de audio. Si es correcto, el fallo puede estar ubicado en el PCB71 o PCB94.

Si no es CORRECTO, el fallo puede estar ubicado en el PCB2.

- Tanto la imagen como el sonido.

Cerciórese de que todos los voltajes del PCB1 al PCB71 y al PCB2 sean correctos.

Mida si hay alguna actividad en I2C DATA y I2C CLOCK en 1J6.

- Reproducción de DVD/CD.

Cerciórese de que todos los voltajes del PCB1 al PCB71 y PCB2 sean correctos.

Mida si hay alguna actividad en MOTOR y TRAY en 1J1 y 1J10.

- Cargador/bandeja.

Verifique la existencia de cualquier fallo mecánico en el PCB94.

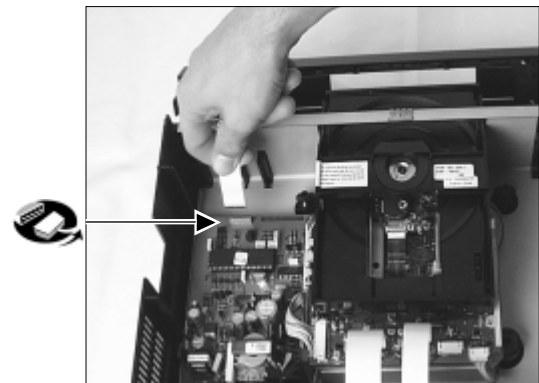
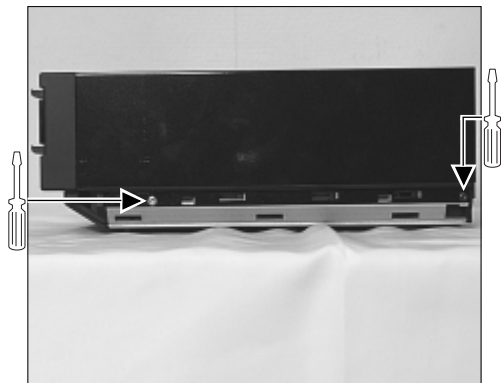
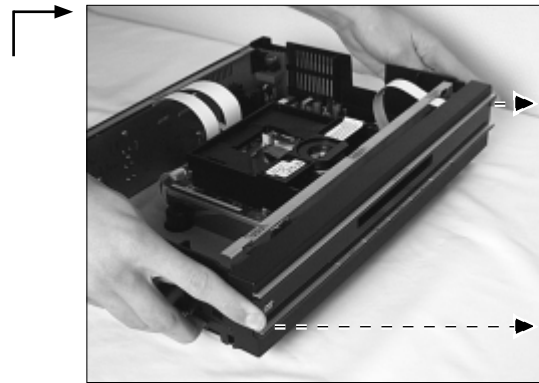
Mida si hay alguna actividad en MOTOR y TRAY en 1J1 y 1J10.

- Pantalla/Teclado.

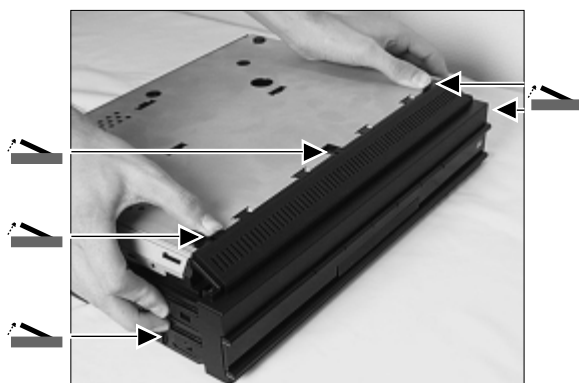
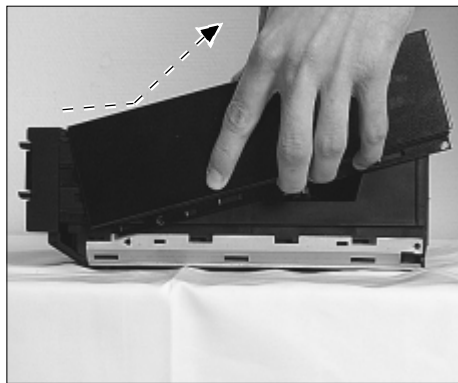
Mida el voltaje en el 1J5. Mida si hay cualquier actividad en CS, K DATA y K CLOCK en 1J5.

Cerciórese de que el voltaje en las patillas de las teclas 1J5 patilla 1-5 cae cuando se pulsa.

Disassembly



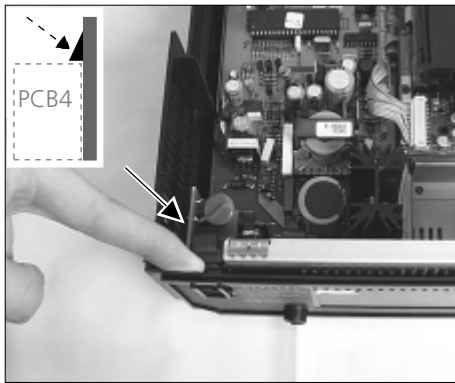
Both sides of DVD1



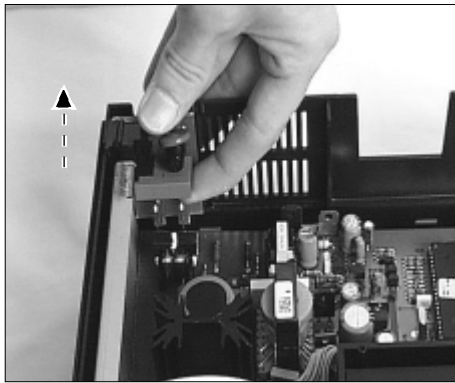
Push to "unlock" front



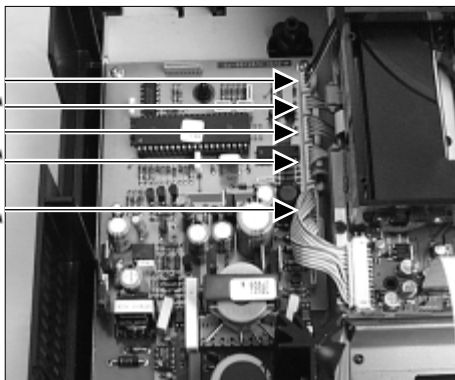
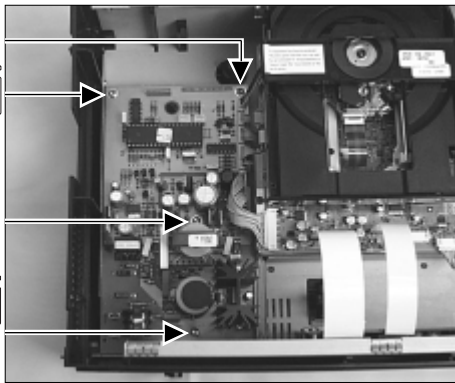
PCB1 Power supply & Microcomputer



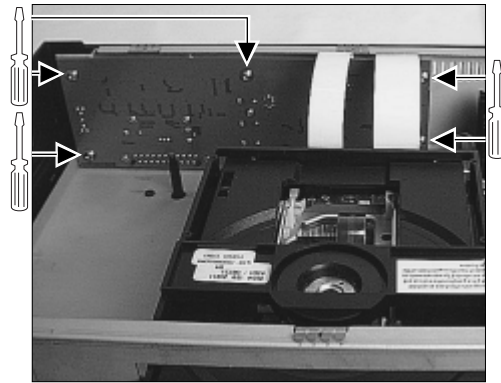
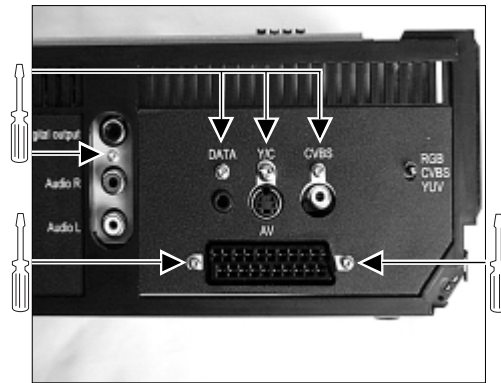
Push "lock"



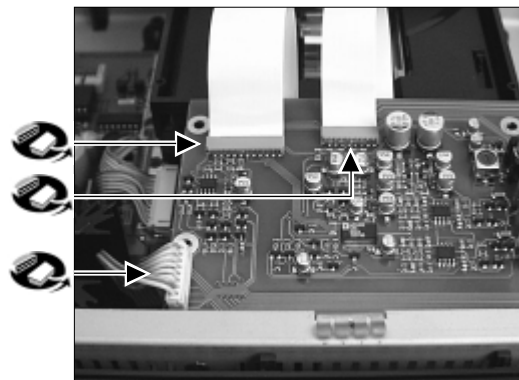
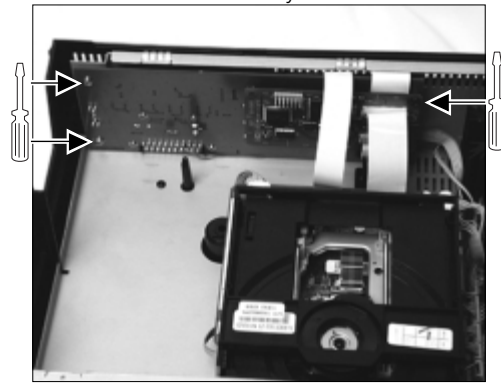
Pull upwards to remove PCB4



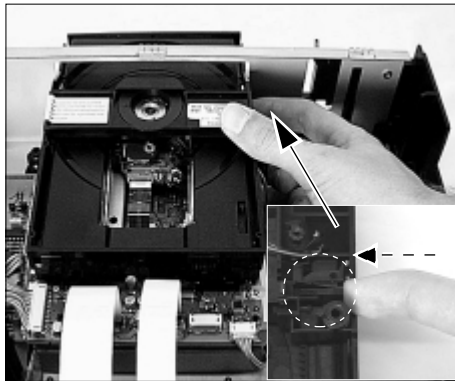
PCB2 AV Board



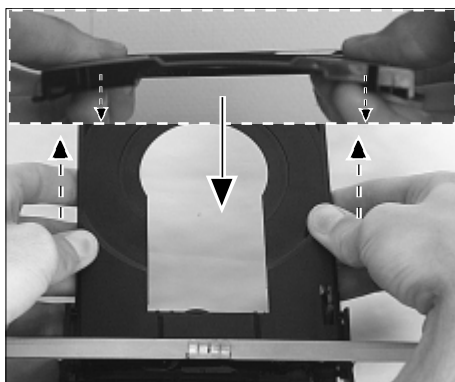
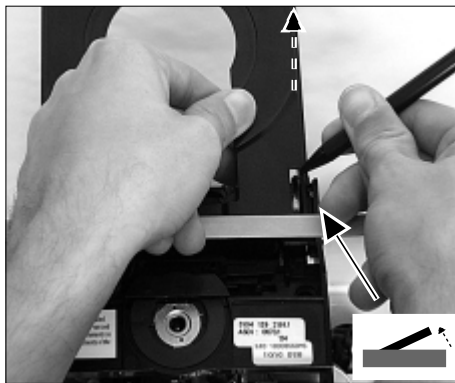
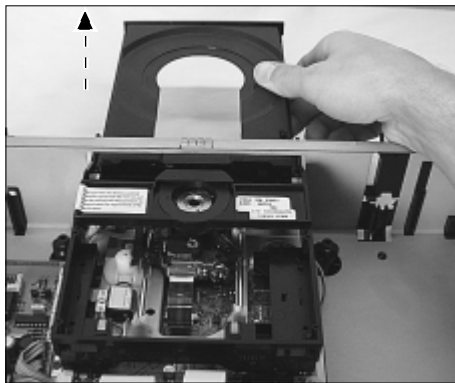
US only



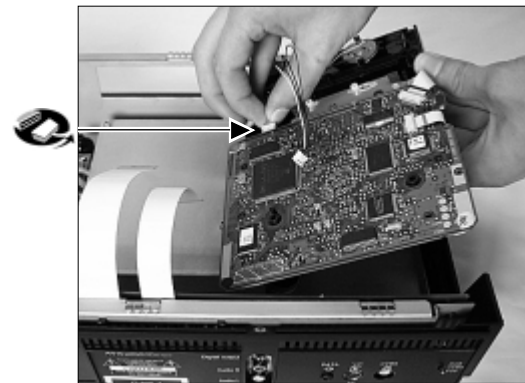
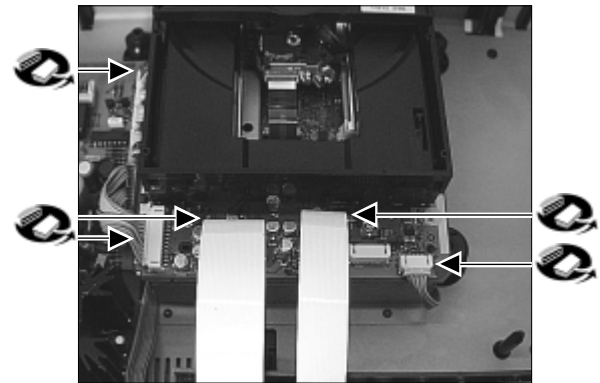
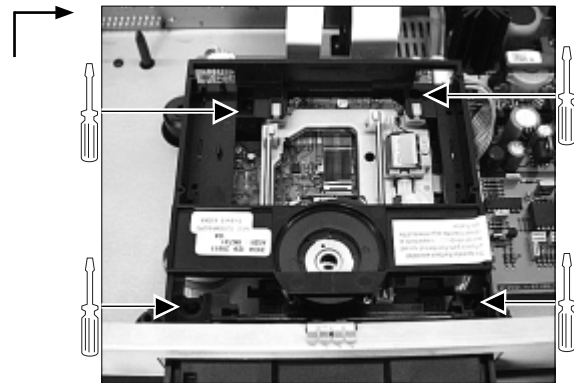
PCB998 ASD1/DVD Mechanism



Push to open loader

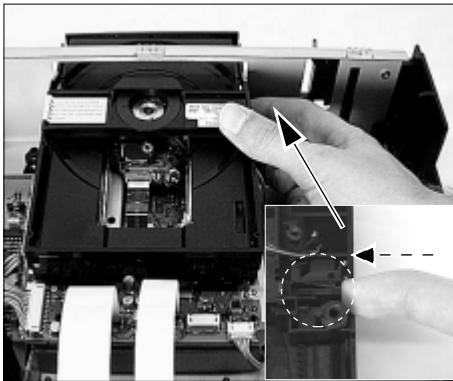


Pull out to remove plate

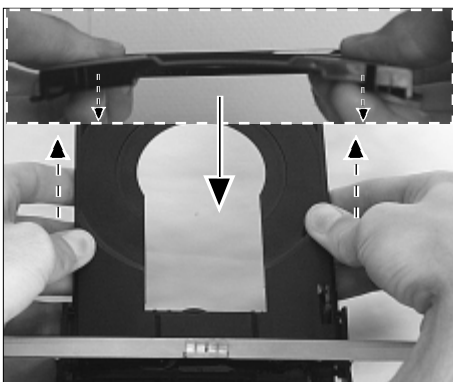
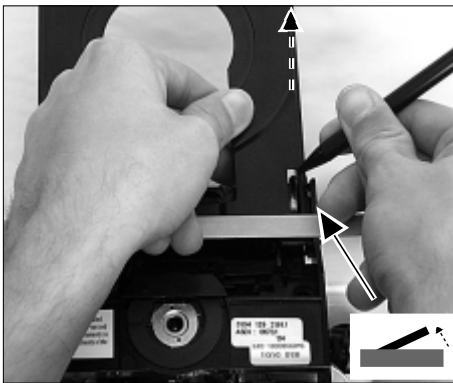
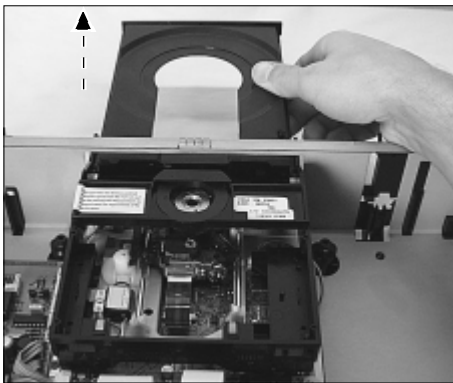




Loader plate



Push to open loader



Pull out to remove plate

**Insulation test**

DVD 1 must be insulation tested if it has been dismantled.

Make the test when the DVD 1 is reassembled and is ready to be returned to the customer.

**Insulation test at the Service center**

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the Insulation tester. Connect the other terminal of the insulation tester to ground on the DIGITAL OUTPUT socket.

To avoid damaging the DVD 1, it is essential to ensure that both terminals of the insulation tester have good contact.

Slowly turn up the voltage control of the insulation tester until a voltage of 2.5kV(ac) is obtained.

Maintain that voltage level for one second, then slowly turn it down again.

During the testing the current must not exceed 10mA.

**Insulation test at the customer**

Remove the mains cable from the wall outlet.

Place a jumper across the two AC plug prongs.

Use a multi-meter, set for measurements in the Ohm-area.

Place one lead from the multi-meter on the AC plug and place the other lead on ground at the DIGITAL OUTPUT socket.

The resistance during this measurement must be of 1 Mega Ohm or more.

Resistance measured below 1 Mega Ohm indicates an abnormal situation and corrective action must be taken.

**Please note:**

Avoid all skin contact with the AC plug and all other metal parts while performing the test, as this contact may influence the measurement.

## Isolationsprüfung

Die Isolation des DVD 1 muss geprüft werden, wenn er demontiert wurde. Prüfung vornehmen, wenn der DVD 1 zusammengebaut und zur Rückgabe an den Kunden bereit ist.

### Isolationsprüfung im Servicezentrum

Beide Stifte des Netzsteckers kurzschließen und mit einer der Klemmen des Isolationsprüfers verbinden. Die andere Klemme des Isolationsprüfers mit Masse an der DIGITAL OUTPUT-Buchse verbinden.

Um Beschädigungen des DVD 1 zu vermeiden, unbedingt auf guten Kontakt beider Klemmen des Isolationsprüfers achten.

Spannungsregler des Isolationsprüfers langsam drehen, bis ein Wechselspannungswert von 2,5 kV erreicht ist.

Diese Spannung eine Sekunde beibehalten, anschließend langsam verringern.

Während der Prüfung darf der Strom 10 mA nicht überschreiten.

### Isolationsprüfung beim Kunden

Netzkabel von der Netzdose trennen.

Eine Brücke über den beiden Netzsteckerstiften anbringen.

Ein Multimeter auf den Widerstandsmessbereich einstellen.

Ein Messkabel des Multimeters mit dem Netzstecker und das andere Messkabel mit Masse an der DIGITAL OUTPUT-Buchse verbinden.

Der Messwert bei dieser Messung muss 1 Megaohm oder mehr betragen.

Ein Widerstand unter 1 Megaohm zeigt einen Fehler an, der beseitigt werden muss.

### Bitte beachten:

Jeden Hautkontakt mit dem Netzstecker und allen anderen Metallteilen während der Prüfung vermeiden, da dies die Messung beeinflussen kann.

## Test d'isolement

Il faut effectuer un test d'isolement du DVD 1 s'il a été démonté.  
Ce test est effectué après avoir réassemblé l'appareil et avant de le remettre au client.

### Test d'isolement dans le centre de service

Court-circuiter les deux broches de la fiche secteur et les raccorder à l'une des bornes du testeur d'isolement. Connecter l'autre borne du testeur d'isolement à la terre sur la prise DIGITAL OUTPUT.

Afin d'éviter d'endommager le DVD 1, il est essentiel de s'assurer du bon contact des deux bornes du testeur d'isolement.

Augmenter lentement la tension du testeur d'isolement jusqu'à la tension de 2,5 kV(CA).

Maintenir cette tension pendant une seconde, puis la diminuer lentement.

Au cours du test, le courant ne doit pas dépasser 10mA.

### Test d'isolement chez le client

Retirer le câble secteur de la prise murale.

Poser un cavalier sur les deux broches de la prise secteur CA.

Utiliser un multimètre en mode ohmmètre.

Placer un fil conducteur du multimètre sur la prise CA et l'autre fil conducteur sur la terre de la prise DIGITAL OUTPUT.

La résistance mesurée ne doit pas être inférieure à un mégohm.

Une résistance mesurée inférieure à un mégohm indique une situation anormale et il convient de prendre des mesures correctives.

### N.B. :

Évitez tout contact entre la peau et la prise CA ainsi que toutes les autres parties métalliques en effectuant le test, car ce contact peut avoir une influence sur les mesures.

## Test dell'isolamento

Se DVD 1 è stato smontato, è necessario sottoporlo a un test per verificarne l'isolamento.

Eeguire la prova dopo aver rimontato l'apparecchio prima di riconsegnarlo al cliente.

### Test dell'isolamento presso il centro di assistenza

Cortocircuitare i due pin della spina dell'alimentazione e collegarli ad uno dei morsetti del tester di isolamento. Collegare l'altro morsetto del tester di isolamento alla massa della presa di DIGITAL OUTPUT.

Per evitare di danneggiare DVD 1, è essenziale accertarsi che entrambi i morsetti del tester siano in grado di garantire un contatto sufficiente.

Aumentare lentamente il comando della tensione del tester fino a raggiungere una tensione di 2,5 kV(CA).

Mantenere questa tensione per un secondo, quindi ridurla di nuovo ruotando lentamente.

Durante la prova, la corrente non deve superare 10 mA.

### Test dell'isolamento presso il cliente

Rimuovere il cavo dell'alimentazione della presa murale.

Posizionare un jumper fra i due poli della spina CA.

Usare un multimetro impostato per eseguire misure nell'area Ohm.

Inserire un cavo del multimetro nella spina CA e l'altro sulla massa della presa DIGITAL OUTPUT.

La resistenza durante questa misura deve essere di 1 Mega Ohm o più.

La rilevazione di una resistenza inferiore a 1 Mega Ohm è indice di una situazione anomala che richiede un intervento correttivo.

### Si prega di notare:

Durante il test, evitare qualsiasi contatto della spina CA e di tutte le altre parti metalliche con la cute, in quanto ciò potrebbe influire sulla rilevazione.

**Prueba de aislamiento**

Siempre que se desmonte el DVD 1, debe realizarse una prueba de aislamiento. Realice la prueba cuando el DVD 1 vuelva a estar montado y listo para ser devuelto al cliente.

**Prueba de aislamiento en el Centro de servicio**

Cortocircuite las dos clavijas del enchufe de red y conéctelas a uno de los terminales del comprobador de aislamiento. Conecte el otro terminal del comprobador de aislamiento a tierra en el conector DIGITAL OUTPUT.

Para evitar que el DVD 1 sufra daños, es esencial que se asegure de que los terminales del comprobador de aislamiento hacen buen contacto.

Gire lentamente el control de tensión del comprobador de aislamiento hasta que obtenga una tensión de 2,5 kV (c.a.).

Mantenga el nivel de tensión durante un segundo y gire lentamente hacia atrás el comprobador.

Durante la prueba, la corriente no debe sobrepasar de 10 mA.

**Prueba de aislamiento en casa del cliente**

Desenchufe el cable de red de la toma de pared.

Haga un puente a través de las dos clavijas del enchufe de CA.

Utilice un multímetro; prepárelo para medidas en la zona de ohmios.

Coloque una de las puntas de prueba del multímetro en el enchufe de CA y la otra a tierra en el conector DIGITAL OUTPUT.

La resistencia durante esta medida debe ser de 1 Megohmio o superior.

Una resistencia inferior a 1 Megohmio indica una situación anormal y deben tomarse medidas correctoras.

**Atención:**

Evite cualquier contacto de la piel con el enchufe de CA o piezas metálicas mientras realiza la prueba, ya que puede influir en la medida.