



Xenaro

GDP 4200

GMJ8300
GMJ8400

GDP 4204

GMJ8500

NUR FÜR INTERNEN GEBRAUCH
FOR INTERNAL USE ONLY

Zusätzlich erforderliche Unterlagen für den Komplettservice
Additionally required Service Documents for the Complete Service

**Service
Manual**

**Sicherheit
Safety**

Materialnr./Part No.
720108000000

Grundig Service

Hotline Deutschland...
...Mo.-Fr. 8.00-18.00 Uhr

Technik:

TV	0180/52318-41
TV	0180/52318-49
SAT	0180/52318-48
VCR/LiveCam	0180/52318-42
HiFi/Audio	0180/52318-43
Car Audio	0180/52318-44
Telekommunikation	0180/52318-45
Fax:	0180/52318-51

Planatron (8.00-22.00 Uhr) 0180/52318-99

Ersatzteil-Verkauf: Mo.-Fr. 8.00-19.00 Uhr

Telefon: 0180/52318-40
Fax: 0180/52318-50

Kundendienst/Werkstätten: Mo.-Fr. 8.00-18.00 Uhr

Telefon: 0180/52318-52
Fax: 0180/52318-46

gebührenpflichtig

Dieses Service Manual ist nur in Datenform verfügbar / This Service Manual is only available as data

Änderungen vorbehalten / Subject to alteration

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Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Materialnummer 720108000000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000000, as well as the respective national deviations.

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Allgemeiner Teil

Messgeräte / Messmittel

Regeltrenntrafo
Zweikanaloszilloskop
Digitalmultimeter

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General Section

Test Equipment / Jigs

Variable isolating transformer
Dual channel oscilloscope
Digital multimeter

Technische Daten

Netzspannung:	220V-240V~, 50/60Hz
Leistungsaufnahme:	ca. 20W
Standby:	< 4W
Umgebungstemperatur:	+10°C ... +35°C
Wiedergabe-Norm:	PAL, 50Hz, 625 Zeilen/4,43MHz NTSC, 60Hz, 525 Zeilen/3,58MHz
Norm-Konverter:	PAL – NTSC / NTSC – PAL
Wiedergabe-System:	DVD-Video, DVD-R, DVD+RW, DVD-RW, VCD, SVCD, Audio-CD, CD-R, CD-RW, CD-ROM, MP3-CD
DVD Disk Format:	Durchmesser 8cm und 12cm

Video Format

Signal:	Digital	
Digital-Kompression:	MPEG2 für DVD / SVCD MPEG1 für VCD	
DVD	50Hz	60Hz
Horiz. Auflösung:	720 Pixel	720 Pixel
Vert. Auflösung:	576 Zeilen	480 Zeilen
VCD	50Hz	60Hz
Horiz. Auflösung:	352 Pixel	352 Pixel
Vert. Auflösung:	288 Zeilen	240 Zeilen
SVCD	50Hz	60Hz
Horiz. Auflösung:	480 Pixel	480 Pixel
Vert. Auflösung:	576 Zeilen	480 Zeilen
VCD-Standbilder (VCD 2.0)	50Hz	60Hz
Horiz. Auflösung:	704 Pixel	704 Pixel
Vert. Auflösung:	576 Zeilen	480 Zeilen

Audio-Format

Digital:	MPEG/Dolby Digital DTS PCM	16, 20, 24 bit 48 / 96kHz
Analog:	Stereo, Dolby Pro Logic	

Audio-Performance

Signal:	Analog	
DVD:	fs 96kHz	4Hz ... 44kHz
	fs 48kHz	4Hz ... 22kHz
VCD:	fs 44,1kHz	4Hz ... 20kHz
CD:	fs 44,1kHz	4Hz ... 20kHz
Rauschabstand (1kHz):	>90dB	
Dynamik (1kHz):	>90dB	
Übersprechdämpfung (1kHz):	>95dB	

Anschlussbuchsen/Umschalter

Digital-Audio-Buchsen:	1 Cinch 1 Optisch
Audio-Buchsen:	2 Cinch
Euro-AV-Buchse: mit RGB-Ausgang	21-polig (IR Steuerung über Pin 8) 0,7V _{pp} / 75Ω
Video-Buchsen:	1 Cinch 1 Hosiden (Y/C)

Specifications

Supply Voltage:	220V-240V~, 50/60Hz
Power Requirement:	ca. 20W
Standby:	< 4W
Ambient Temperature:	+10°C ... +35°C
Playback Norm:	PAL, 50Hz, 625 lines/4.43MHz NTSC, 60Hz, 525 lines/3.58MHz
Norm Converter:	PAL – NTSC / NTSC – PAL
Playback System:	DVD-Video, DVD-R, DVD+RW, DVD-RW, VCD, SVCD, Audio-CD, CD-R, CD-RW, CD-ROM, MP3-CD
DVD Disc Format:	Diameter 8cm and 12cm

Video Format

Signal:	Digital	
Digital compression:	MPEG2 for DVD / SVCD MPEG1 for VCD	
DVD	50Hz	60Hz
Horiz. resolution:	720 pixel	720 pixel
Vert. resolution:	576 lines	480 lines
VCD	50Hz	60Hz
Horiz. resolution:	352 pixel	352 pixel
Vert. resolution:	288 lines	240 lines
SVCD	50Hz	60Hz
Horiz. resolution:	480 pixel	480 pixel
Vert. resolution:	576 lines	480 lines
VCD still picture (VCD 2.0)	50Hz	60Hz
Horiz. resolution:	704 pixel	704 pixel
Vert. resolution:	576 lines	480 lines

Audio Format

Digital:	MPEG/Dolby Digital DTS PCM	16, 20, 24 bit 48 / 96kHz
Analog:	Stereo sound, Dolby Pro Logic	

Audio Performance

Signal:	Analog	
DVD:	fs 96kHz	4Hz ... 44kHz
	fs 48kHz	4Hz ... 22kHz
VCD:	fs 44.1kHz	4Hz ... 20kHz
CD:	fs 44.1kHz	4Hz ... 20kHz
Signal-to-noise ratio (1kHz):	>90dB	
Dynamic range (1kHz):	>90dB	
Crosstalk damping (1kHz):	>95dB	

Connection Sockets/Switches

Digital Audio Sockets:	1 cinch 1 optical
Audio Sockets:	2 cinch
Euro-AV Socket: with RGB output	21 pin (IR control via Pin 8) 0.7V _{pp} / 75Ω
Video Sockets:	1 cinch 1 hosiden (Y/C)

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Servicehinweise

Achtung: ESD-Vorschriften beachten 

Vor Öffnen des Gehäuses Netzstecker ziehen.

Leitungsverlegung

Bevor Sie die Leitungen und insbesondere die Masseleitungen lösen, muss die Leitungsverlegung zu den einzelnen Baugruppen beachtet werden.

Nach erfolgter Reparatur ist es notwendig, die Leitungsführung wieder in den werkseitigen Zustand zu versetzen um evtl. spätere Ausfälle oder Störungen zu vermeiden.

Wichtige Masseverbindungen!

Beim Zusammenbau des Gerätes ist darauf zu achten, dass die Masseverbindungen zwischen den einzelnen Platinen und dem Rahmen sowie dem Laufwerk und dem Rahmen gewährleistet sind.

Durchführen von Messungen





Bei Messungen mit dem Oszilloskop an Halbleitern sollten Sie nur Tastköpfe mit 10:1 - Teiler verwenden. Außerdem ist zu beachten, dass nach vorheriger Messung mit AC-Kopplung der Koppelkondensator des Oszilloskops aufgeladen sein kann. Durch die Entladung über das Messobjekt können diese Bauteile beschädigt werden.

Messwerte und Oszillogramme


Bei den in den Schaltplänen und Oszillogrammen angegebenen Messwerten handelt es sich um Näherungswerte!

Ausbauhinweise

1. DVD/CD aus defektem Laufwerk entfernen

- Gehäuseoberteil abnehmen (Punkt 2).
- Rastnasen  (Fig. 7) zum Laufwerk drücken, Zentrierscheibe  anheben und Halter  nach hinten schieben.
- Halter  (Fig. 7) anheben und DVD/CD aus defektem Laufwerk entnehmen.




2. Gehäuseoberteil

- 7 Schrauben  (Fig. 1) herausdrehen.
- Gehäuseoberteil leicht in der Mitte durchbiegen, nach hinten schieben und abnehmen.




Montagehinweis:

- Gehäuseoberteil über die Vertiefungen  (Fig. 2) aufsetzen.



3. Frontblende

- 2 Schrauben  (Fig. 2) herausdrehen.
- 4 Rastnasen  (Fig. 2) /  (Fig. 3) lösen und Frontblende abnehmen.
- Gegebenenfalls Steckverbindungen lösen.




4. Bedieneinheiten

- Frontblende abnehmen (Punkt 3).
- 2 Schrauben  (Fig. 5) herausdrehen und Blech abnehmen
- 10 Schrauben  /  (Fig. 6) herausdrehen.
- Bedieneinheiten herausnehmen.
- Gegebenenfalls Steckverbindung lösen.

5. Netzteil

- 2 Schrauben  (Fig. 2) und Schraube  (Fig. 4) herausdrehen.
- Netzteil herausnehmen.
- Gegebenenfalls Steckverbindungen lösen.


6. Hauptplatte

- 3 Schrauben  (Fig. 2), Schraube  (Fig. 2) und 3 Schrauben  (Fig. 4) herausdrehen.
- Hauptplatte herausnehmen.
- Gegebenenfalls Steckverbindungen lösen.

Achtung:

Nach dem Tausch der Hauptplatte, des EEPROMs (U7) oder des FLASH (U17) muss ein Software-Upgrade (Seite 1-6) durchgeführt werden.

7. Laufwerk

- 2 Schrauben  (Fig. 2) herausdrehen.
- Laufwerk hinten anheben, nach hinten schieben und herausnehmen.
- Gegebenenfalls Steckverbindungen lösen.

Service Instructions

Attention: Observe the ESD safety regulations 

Disconnect the mains plug before opening the set.

Wiring

Before disconnecting any leads and especially the earth connecting leads observe the way they are routed to the individual assemblies. On completion of the repairs the leads must be laid out as originally fitted at the factory to avoid later failures or disturbances.

Important: Ground Connections!

When reassembling the set it is essential to observe that the ground connections between the individual circuit boards and the frame as well as between the Drive Mechanism and the frame are in good order.

Carrying out Measurements





When making measurements on semi-conductors with an oscilloscope, ensure that the test probe is set to 10:1 dividing factor. Further, please note that if the previous measurement is made on AC input, the coupling capacitor in the oscilloscope will be charged. Discharge via the item being checked can damage components.

Measured Values and Oscillograms


The measured values given in the circuit diagrams and oscillograms are approximates!

Disassembly Instructions

1. Opening the Tray when the Drive is Defective

- Remove the Cabinet Upper Part (Point 2).
- Press the locking lugs  (Fig. 7) against the drive, lift the centring washer  then slide the holder  to the rear.
- Lift the holder  (Fig. 7) then remove the DVD/CD from the defective drive unit.




2. Cabinet Upper Part

- Undo the 7 screws  (Fig. 1).
- Bend the upper part of the cabinet at its centre, slide it to the rear then remove it.




Reassembly Hint:

- Place the upper part of the cabinet on the recesses  (Fig. 2).



3. Front Panel

- Undo the 2 screws  (Fig. 2).
- Undo the 4 locking lugs  (Fig. 2) /  (Fig. 3) then remove the front panel.
- Unplug the connectors if necessary.




4. Keyboard Control Units

- Remove the front trim (Point 3).
- Undo the 2 screws  (Fig. 5) and remove the sheet metal.
- Undo the 10 screws  /  (Fig. 6).
- Remove the keyboard control units.
- Unplug the connectors if necessary.

5. Power Supply

- Undo the 2 screws  (Fig. 2) and the screw  (Fig. 4).
- Remove the power supply from the unit.
- Unplug the connectors if necessary.


6. Main Board

- Undo the 3 screws  (Fig. 2), the screw  (Fig. 2) and the 3 screws  (Fig. 4).
- Remove the main board.
- Unplug the connectors if necessary.

Attention:

After replacing the main board, the EEPROM (U7), or the FLASH (U17), a software upgrade must be carried out (page 1-6).

7. Drive Mechanism

- Undo the 2 screws  (Fig. 2).
- Lift the drive mechanism at its back part, slide it to the rear, and then remove it.
- Unplug the connectors if necessary.

8. Schublade öffnen bei defektem Gerät

- Zahnrad **T** (Fig. 7/8) herausschneiden und auf einen Schraubendreher stecken.
- Zahnrad mit Schraubendreher von unten in das Loch **S** (Fig. 3) in der Bodenplatte stecken.
- Schraubendreher gegen den Uhrzeigersinn drehen bis sich die Schublade bewegt und diese dann komplett herausziehen.

8. Opening the Tray of a Defective Unit

- Cut out the toothed wheel **T** (Fig. 7/8) then fit it on a screw driver.
- Fit the toothed wheel with the help of the screw driver from below into the opening **S** (Fig. 3) in the base plate.
- Turn the screw driver counterclockwise until the tray makes a movement, and then pull out the tray completely.



Fig. 1

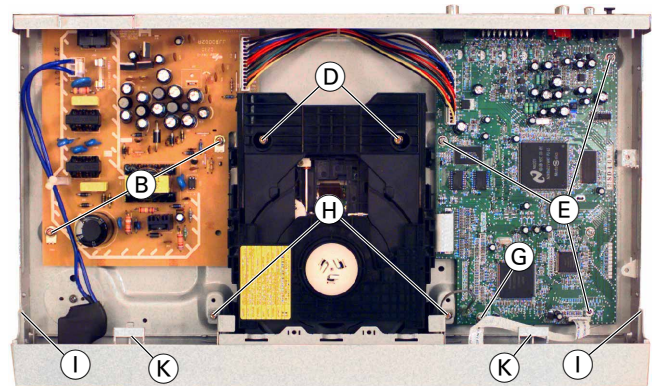


Fig. 2

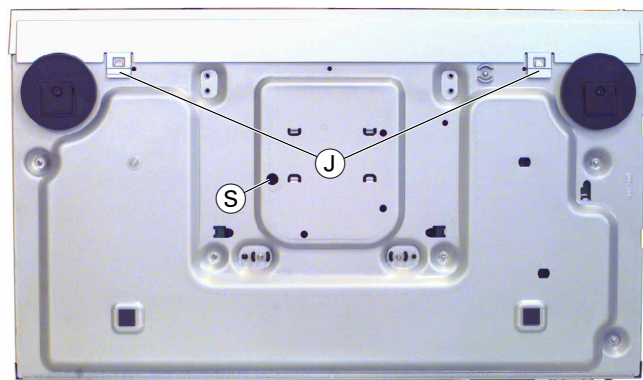


Fig. 3



Fig. 4

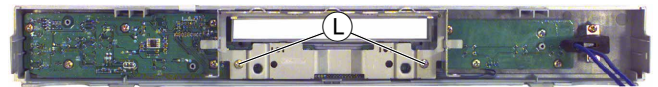


Fig. 5

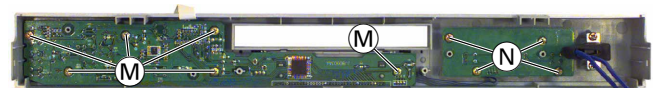


Fig. 6

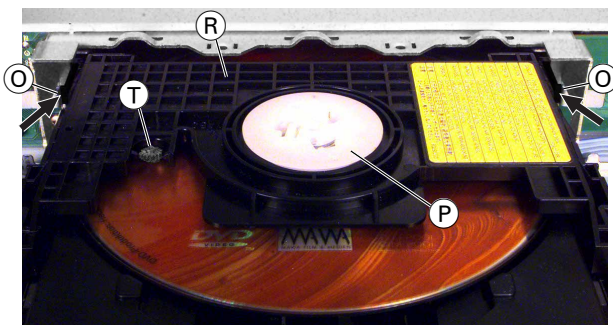


Fig. 7

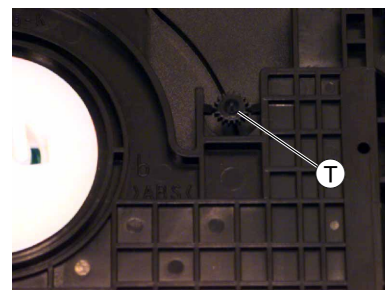


Fig. 8

Software-Upgrade

Das Software-Upgrade können Sie mit einem Internet-Browser über das P@rtnerWeb (<https://partnerweb.grundig.de>) downloaden.

- Selbstentpackendes Programm z.B. "Vx_xx.exe" auf ein Laufwerk Ihres PCs kopieren.
- Selbstentpackendes Programm "Vx_xx.exe" starten.
- Software-Upgrade-CD erstellen.
 - Verwenden Sie nur eine neue beschreibbare CD-R / CD-RW (keine gelöschte).
 - CD-Name ist frei wählbar (z.B. Versionsstand und Gerät).
 - Entpackten Ordner "be_firm" auf die CD-R / CD-RW brennen.
 - In der Ordner-Struktur "Be_firm/GR_4200/Sample/du5fd1s" der Software-Upgrade-CD müssen folgende Dokumente enthalten sein:
appcat~1.bin, upgrade.bin

Achtung: Sollte während dem Software-Upgrade eine Störung (z.B. Stromausfall) auftreten, so sind eventuell die Gerätefunktionen und ein Neustart der Upgrade-Funktion nicht mehr gewährleistet. In diesem Fall müssen Sie die eingebauten FLASH-ICs (U17) durch vorprogrammierte ersetzen (siehe entsprechende Ersatzteilliste).

- Software-Upgrade-CD einlegen und die Hinweise am Display und am Bildschirm des Fernsehgerätes beachten.
- Initialisierung des Gerätes durchführen.

Gewährleistung

Wir weisen ausdrücklich darauf hin, dass nur von GRUNDIG freigegebene System-Software zulässig ist. Wurde als Fehlerursache festgestellt, dass eine aus nicht legitimierten Quellen gleich welcher Herkunft stammende oder eine veränderte System-Software in die Geräte geladen wurde, so ist dies ein Fremdeingriff. Ein Fremdeingriff führt zum Erlöschen jeglicher Gewährleistungsansprüche. GRUNDIG muss daher alle aus diesen Gründen resultierenden Kostenerstattungen generell ablehnen. Instandsetzungskosten, auch innerhalb der Gewährleistungszeit, gehen in diesen Fällen zu Lasten des Händlers bzw. des Endkunden.

Initialisierung des Gerätes

Am Gerät gleichzeitig die Tasten **◀ / ▶** drücken und das Gerät einschalten. Dadurch wird das Gerät softwaremäßig in den Auslieferungszustand zurück gesetzt. Dabei werden Grundeinstellungen geladen und die kundenspezifischen Daten gelöscht.

Software Upgrade

You can download the software upgrade from the P@rtnerWeb (<https://partnerweb.grundig.de>) using an Internet browser.

- Copy a self-extracting programme, e.g. "Vx_xx.exe", on a drive of your PC.
- Run the self-extracting programme "Vx_xx.exe".
- Creating a software upgrade CD.
 - Use only a new CD-R / CD-RW (not an erased one).
 - Give the CD a name of your choice (e.g. version and unit name).
 - Burn the unpacked folder "be_firm" on the CD-R / CD-RW.
 - The subfolder "Be_firm/GR_4200/Sample/du5fd1s" of the software upgrade CD must contain the following documents:
appcat~1.bin, upgrade.bin

Attention: if a failure should occur during the software upgrade (e.g. a mains failure), it may happen that the units function and a restart of the upgrade function are no longer possible. If this should be the case, you must replace the integrated FLASH ICs (U17) with preprogrammed ICs (see corresponding spare parts list).

- Insert the upgrade CD (see corresponding spare parts list) and observe the hints on the display and on the screen of the TV set.
- Carry out an initialization of the set.

Warranty / costs

We expressly point out that only operating software authorized by GRUNDIG is allowed. If a failure is caused by an operating software which has been downloaded from not authorized sources, independent of its origin, or a modified software, this represents an outside interference. An outside interference leads to the expiration of any warranty claims. For this reason, GRUNDIG is obliged to generally refuse any payment due to such infringements. In such cases, the repair costs are at the charge of the retailer or the final customer, even within the period of warranty.

Initialization of the Set

Press the **◀ / ▶** buttons on the set at the same time and switch the set on. This resets the software of the set to the factory presettings. The basic settings are loaded and the customer-specific data is cleared.

Service- und Sonder-Funktionen

Servicemenü

Das Servicemenü gliedert sich in das frei zugängliche Menü "Systeminformation" und das passwort-geschützte "Händler Servicemenü".

1. Tastenfunktionen

Die Bedienung des Servicemenü erfolgt über die Fernbedienung.

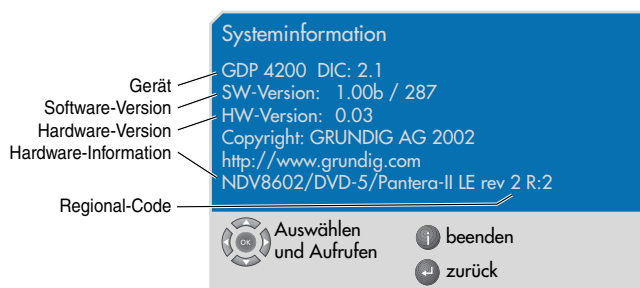
- i** Player Menü aufrufen / Menü-Funktionen beenden.
- ▼ / ▲** Menü-Funktion wählen.
- ◀** übergeordnete Menü-Funktion wählen.
- ▶** Menü-Funktion aktivieren / nächste Seite bei Diagnose.
- OK** Menü-Funktion aktivieren.
- ↶** übergeordnete Menü-Funktion wählen.
- ①...⑨** Menü-Funktion direkt aktivieren.

2. Aufruf des Servicemenü

- "Player Menü" mit der Taste »i« aufrufen.
 - "Installation" anwählen mit der Taste ⑤, oder mit den Tasten ▼ / ▲ und der Taste »OK« bestätigen.
 - "Zusatzfunktionen" anwählen mit der Taste ⑥, oder mit den Tasten ▼ / ▲ und der Taste »OK« bestätigen.
 - "Servicemenü" anwählen mit der Taste ③, oder mit den Tasten ▼ / ▲ und der Taste »OK« bestätigen.
- Das Servicemenü gliedert sich gemäß der Menü-Übersicht (Punkt 3) in die einzelnen Untermenüs.

2.1 Systeminformation

- Servicemenü aufrufen (Punkt 2).
 - "Systeminformation" anwählen mit der Taste ①, oder mit den Tasten ▼ / ▲ und der Taste »OK« bestätigen.
- Auf dem Bildschirm erscheint die Systeminformation.



2.2 Händler Servicemenü

- Servicemenü aufrufen (Punkt 2).
 - "Händler Servicemenü" anwählen mit der Taste ②, oder mit den Tasten ▼ / ▲ und der Taste »OK« bestätigen.
 - Zahlenfolge "8 5 0 0" eingeben.
- Hinweis: Die weiteren Menü's sind entsprechend der Menü-Übersicht aufrufbar (Punkt 3).

2.2.1 System Einstellungen

– Systemmeldungen

Das System gibt bei Funktionswahl und bei auftretenden Fehlern (z.B. Disc-, Bedien- oder Gerätefehler) Meldungen aus, die im unteren Bereich des Bildschirms kurzzeitig angezeigt werden.

– Diagnose

Die Diagnose ist auf mehrere Seiten aufgeteilt.

Zur Auswahl der gewünschten Seite ist die Nummer der Seite einzugeben (z.B. 2 für State) und mit »OK« zu bestätigen.

Folgende Bedien-Funktionen sind bei der Diagnose möglich:

- Taste ▶ wählt nächste Diagnosesseite bzw. beendet die Diagnose nach der letzten Seite.
- Taste »i« beendet vorzeitig die Diagnose.

Folgende Diagnose-Seiten sind aufrufbar:

- | | |
|----------------|-------------------------------|
| (1) Brief | Disc- und Player-Status |
| (2) State | Player-Status und Fehler |
| (3) Tray | Schubladen-Information |
| (4) Disc | Disc-Informationen |
| (5) DVD | DVD-Informationen |
| (6) DVD-V | DVD-Video-Informationen |
| (7) DVD-A | DVD-Audio-Informationen |
| (8) VCD | VCD-Informationen |
| (9) CD | Audio-CD-Informationen |
| (10) File | MP3-Status |
| (11) File Info | MP3-Informationen |
| (12) Video | Video-Status |
| (13) Aud 1 | Audio-Informationen, Seite 1 |
| (14) Aud 2 | Audio-Informationen, Seite 2 |
| (15) SP | Subpicture-Informationen |
| (16) Angle | Blickwinkel-Informationen |
| (17) Title | Titel-Informationen |
| (18) Track | Track-Informationen |
| (19) Chptr | Kapitel-Informationen |
| (20) Index | Index-Status |
| (21) Group | DVD-Audio-Gruppen-Information |
| (22) Dlist | DVD-Audio ASVU-Liste |
| (23) Repeat | Repeat-Status |
| (24) Btns | Tasten-Informationen |
| (25) Spd | Wiedergabegeschwindigkeit |
| (26) Bitrt | Bitrate |

– Demo

Bei eingeschalteter Demo-Funktion ist die Eject-Taste gesperrt. Beenden der Demo-Funktion: Ein/Aus-Schalter drücken.

2.2.2 Video Spezial

– Format conversion

Folgende Formatumwandlungen sind möglich:

- Zentrum
- Auto
- nur 525 Zeilen
- nur 625 Zeilen

– Video Signal

• DAC enable

Folgende Digital-Analog-Konverter sind ein-/ausschaltbar:

- DAC1 = Grün- / Y-Signal
- DAC2 = Blau- / C-Signal
- DAC3 = Rot-Signal (Anzeige des aktiven Schaltzustandes)

• NTSC Format (60Hz-Format)

Folgende 60Hz-Formate sind wählbar:

- 525 Zeilen, Norm NTSC
- 525 Zeilen, Norm M-PAL

• NTSC Composit

Folgende NTSC-FBAS-Signal-Formate sind einstellbar:

- NTSC USA
- NTSC Japan
- NTSC Other

• PAL Format

Folgende PAL-Formate sind einstellbar:

- PAL BDGHI
- PAL N
- PAL N-Combo

3. Servicemenü-Übersicht

Servicemenü

- 1 Systeminformation
- 2 Händler Servicemenü *****

Auswählen und Aufrufen beenden zurück

Systeminformation

GDP 4200 DIC: 2.1
 SW-Version: 1.00b / 287
 HW-Version: 0.03
 Copyright: GRUNDIG AG 2002
 http://www.grundig.com
 NDV8602/DVD-5/Pantera-II LE rev 1 R:0

Auswählen und Aufrufen beenden zurück

System Einstellungen

- 1 Systemmeldungen
- 2 Diagnose
- 3 Demo
- 4 Video Spezial

Auswählen und Aufrufen beenden zurück

Systemmeldungen

- AUS
- EIN

Auswählen und Aufrufen

Diagnose

- AUS
- EIN

Auswählen und Aufrufen

Demo

- AUS
- EIN

Auswählen und Aufrufen

Video Spezial

- 1 Format conversion Auto
- 2 Video Signal

Auswählen und Aufrufen beenden zurück

Format conversion

- Centre
- Auto
- 525 Only
- 625 Only

Auswählen und Aufrufen

DAC enable

- 1 DAC1 enable EIN
- 2 DAC2 enable EIN
- 3 DAC3 enable EIN

Auswählen und Aufrufen beenden zurück

DAC... enable

- AUS
- EIN

Auswählen und Aufrufen

Video Signal

- 1 DAC enable
- 2 NTSC Format 525 lines NTSC
- 3 NTSC Format NTSC USA
- 4 PAL Format PAL BDGHI

Auswählen und Aufrufen beenden zurück

NTSC Format

- 525 lines NTSC
- 525 lines M-PAL

Auswählen und Aufrufen

NTSC Composit

- NTSC USA
- NTSC Japan
- NTSC Other

Auswählen und Aufrufen

PAL Format

- PAL BDGHI
- PAL N
- PAL N-Combo

Auswählen und Aufrufen

Service and Special Functions

Service Menu

The Service menu is subdivided into the freely accessible "System information" menu and the password-protected "Dealer service menu".

1. Functions of the buttons

For navigating in the Service menu, the buttons on the remote control are used.

- i Call up the Player menu / End the menu functions.
- ▼ / ▲ Select menu functions.
- ◀ Select higher menu function.
- ▶ Activate menu function / next diagnostic page.
- OK Activate menu function.
- ◀ Select higher menu function.
- ①...⑨ Activate menu function directly.

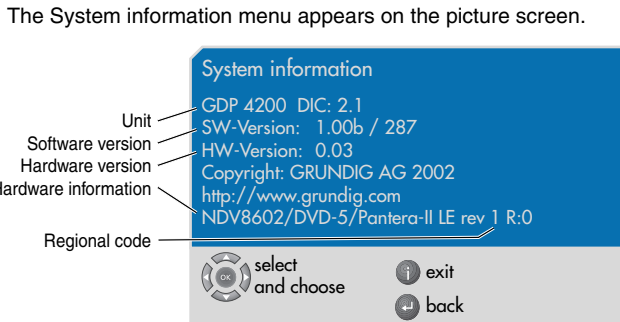
2. Calling up the Service menu

- Call up the "Player Menu" using the »i« button.
- Select "Installation" using the ⑤ button, or use the ▼ / ▲ buttons and confirm with the »OK« button.
- Select "Additional functions" using the ⑤ button, or use the ▼ / ▲ buttons and confirm with the »OK« button.
- Select the "Service Menu" using the ③ button, or use the ▼ / ▲ buttons and confirm with the »OK« button.

The Service menu is subdivided in sub-menus according to the menu overview (Point 3).

2.1 System information

- Call up the "Service menu" (Point 2).
- Select "System information" using the ① button, or use the ▼ / ▲ buttons and confirm with the »OK« button.



2.2 Dealer service menu

- Call up the "Service menu" (Point 2).
- Call up the "Dealer Service" menu using the ② button, or use the ▼ / ▲ buttons and confirm with the »OK« button.
- Enter the digits "8 5 0 0".

Note: the further menus can be called up according to the menu overview (Point 3).

2.2.1 System settings

– System messages

When selecting a function or in the case of an error (e.g. disc, handling or unit error), the system emits messages which are briefly displayed in the bottom area of the picture screen.

– Diagnostic

The diagnostic functions are subdivided on several pages.

To select the desired page, enter its number (e.g. 2 for State) then confirm with »OK«.

In diagnostic mode, the following functions are possible:

- Use the ▶ button to select the next diagnostic page or to end the diagnostic mode after the last page.
- Use the »i« to exit the diagnostic mode early.

The following diagnostic pages can be called up:

- | | |
|----------------|-----------------------------|
| (1) Brief | Disc and player state |
| (2) State | Player state and error |
| (3) Tray | Tray information |
| (4) Disc | Disc information |
| (5) DVD | DVD information |
| (6) DVD-V | DVD video information |
| (7) DVD-A | DVD audio information |
| (8) VCD | VCD information |
| (9) CD | Audio CD information |
| (10) File | MP3 state |
| (11) File Info | MP3 information |
| (12) Video | Video state |
| (13) Aud 1 | Audio information, page 1 |
| (14) Aud 2 | Audio information, page 2 |
| (15) SP | Subpicture information |
| (16) Angle | Viewing angle information |
| (17) Title | Titel information |
| (18) Track | Track information |
| (19) Chptr | Chapter information |
| (20) Index | Index state |
| (21) Group | DVD audio group information |
| (22) Dlist | DVD audio ASVU list |
| (23) Repeat | Repeat state |
| (24) Btms | Buttons information |
| (25) Spd | Playing speed |
| (26) Bitrt | Bitrate |

– Demo

When the demo function is activated, the eject button are locked. Ending the demo function: press the.

2.2.4 Video special

– Format conversion

The following format conversions are possible:

- Centre
- Auto
- 525 lines only
- 625 lines only

– Video signal

• DAC enable

The following digital-to-analog converters can be activated/deactivated:

- DAC1 = Green/Y signal
- DAC2 = Blue/C signal
- DAC3 = Red signal (indication of the active switching state)

• NTSC format (60Hz format)

The following 60Hz formats can be selected:

- 525 lines, NTSC standard
- 525 lines, M-PAL standard

• NTSC composite signal

The following NTSC composite signal formats can be selected:

- NTSC USA
- NTSC Japan
- NTSC Other

• PAL format

The following PAL formats can be selected:

- PAL BDGHI
- PAL N
- PAL N-Combo

3. Service menu overview

Service menu

- 1 System information
- 2 Dealer service menu *****

select and choose | exit | back

System information

GDP 4200 DIC: 2.1
 SW-Version: 1.00b / 287
 HW-Version: 0.03
 Copyright: GRUNDIG AG 2002
 http://www.grundig.com
 NDV8602/DVD-5/Pantera-II LE rev 1 R:0

select and choose | exit | back

System settings

- 1 System messages
- 2 Diagnostic mode
- 3 Demo
- 4 Video special

select and choose | exit | back

System message

Off
On

select and choose

Diagnostic mode

Off
On

select and choose

Demo

Off
On

select and choose

Video special

- 1 Format conversion Auto
- 2 Video signal

select and choose | exit | back

Format conversion

Centre
 Auto
 525 Only
 625 Only

select and choose

DAC enable

- 1 DAC1 enable On
- 2 DAC2 enable On
- 3 DAC3 enable On

select and choose | exit | back

DAC... enable

Off
On

select and choose

Video Signal

- 1 DAC enable
- 2 NTSC Format 525 lines NTSC
- 3 NTSC Format NTSC USA
- 4 PAL Format PAL BDGHI

select and choose | exit | back

NTSC Format

525 lines NTSC
 525 lines M-PAL

select and choose

NTSC Composit

NTSC USA
 NTSC Japan
 NTSC Other

select and choose

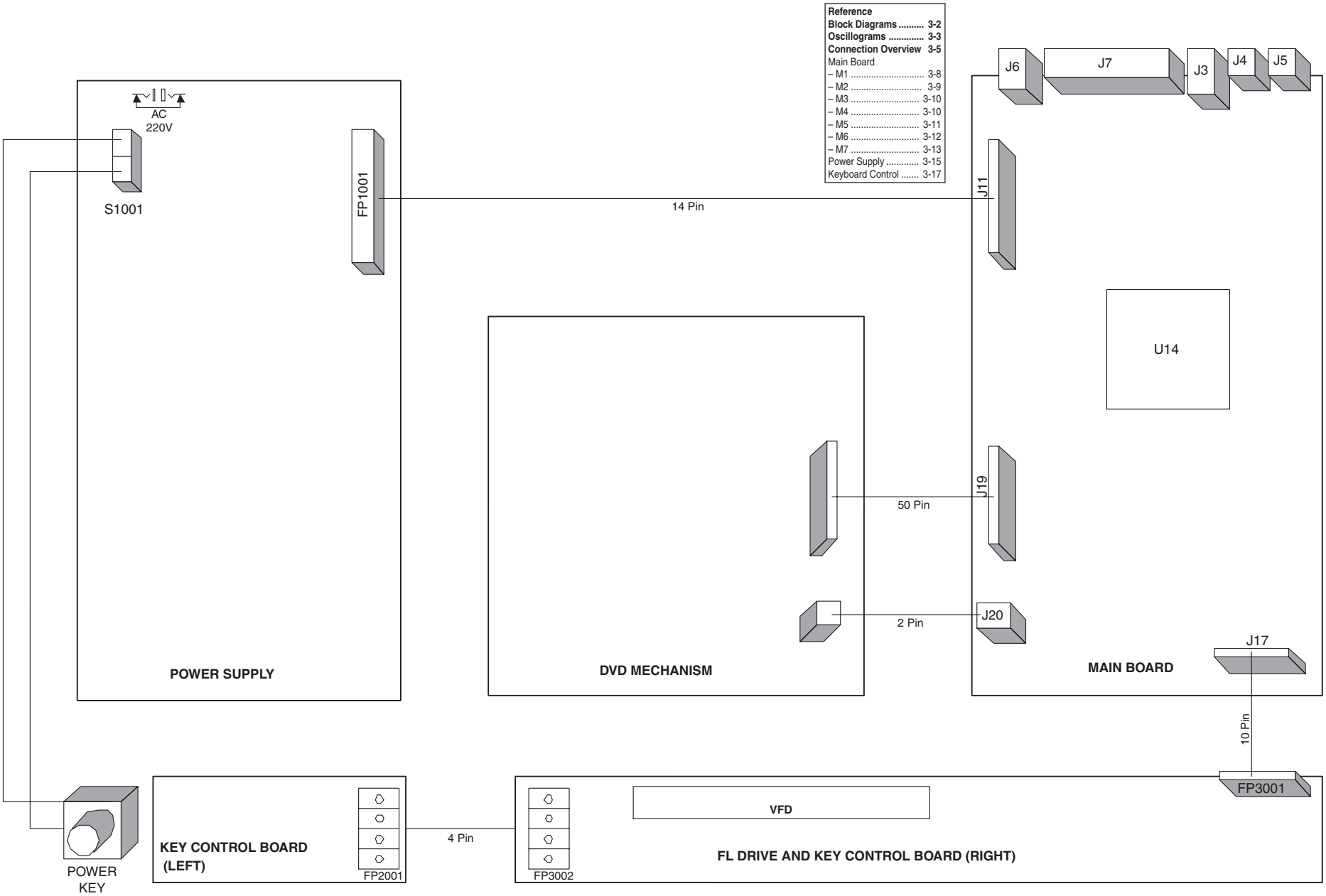
PAL Format

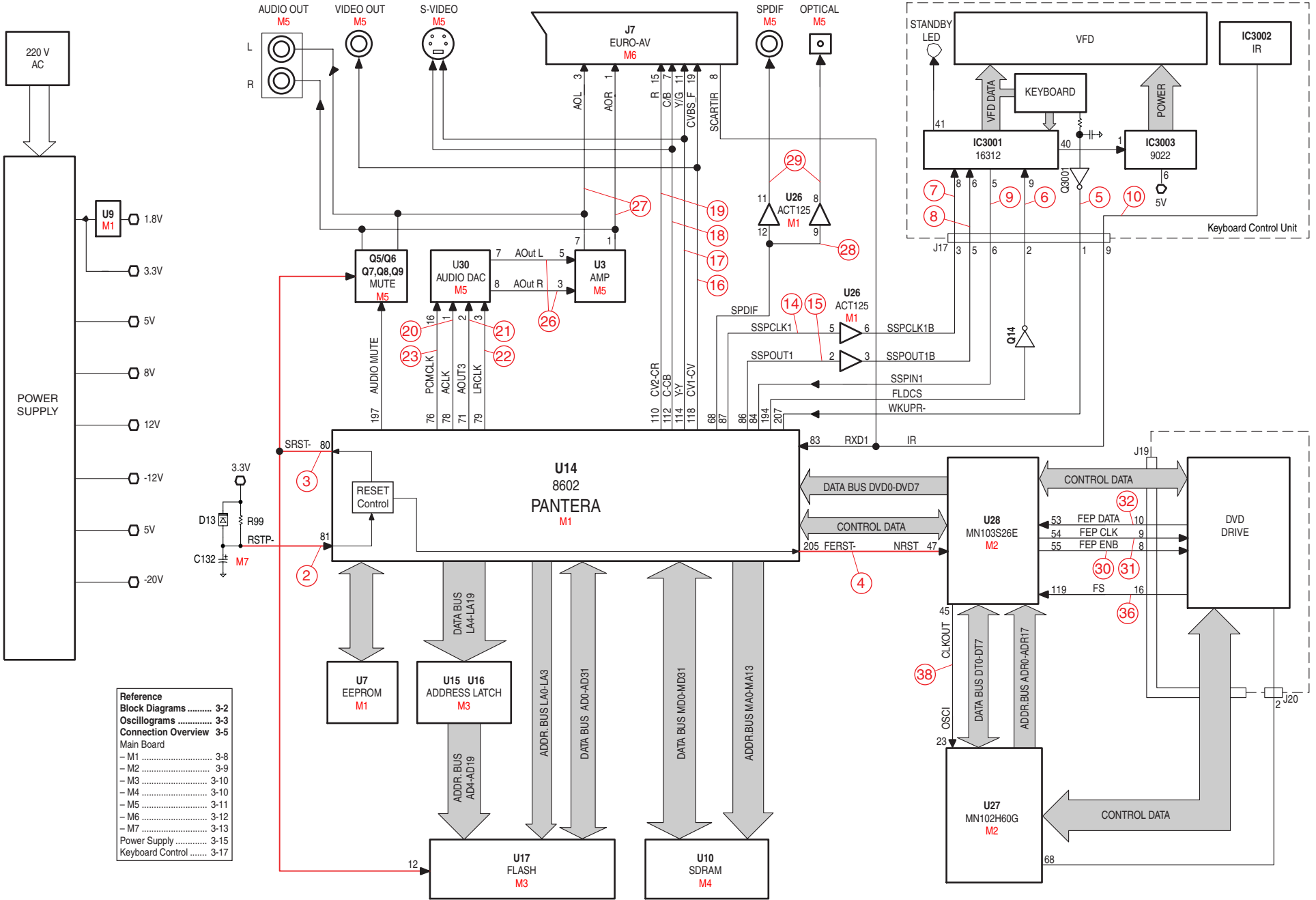
PAL BDGHI
 PAL N
 PAL N-Combo

select and choose

Platinenabbildungen und Schaltpläne / Layout of PCBs and Circuit Diagrams

Verdrahtungsplan / Wiring Diagram

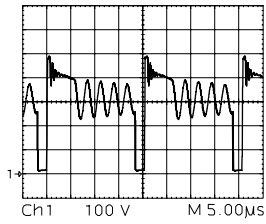




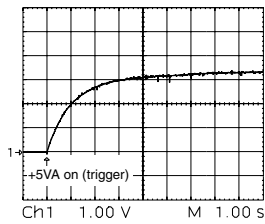
Reference	
Block Diagrams	3-2
Oscillograms	3-3
Connection Overview	3-5
Main Board	
- M1	3-8
- M2	3-9
- M3	3-10
- M4	3-10
- M5	3-11
- M6	3-12
- M7	3-13
Power Supply	3-15
Keyboard Control	3-17

Blockschaltplan / Block Circuit Diagram

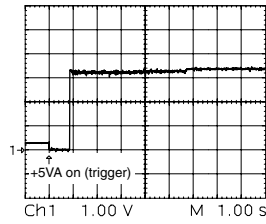
Oszillogramme / Oscillograms



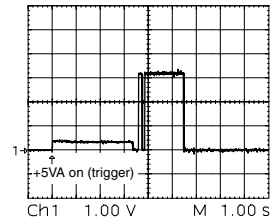
① Mode: DVD playback



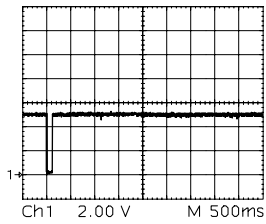
② Mode: switch power on



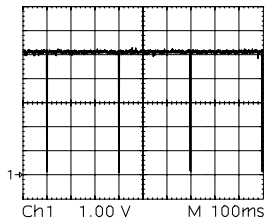
③ Mode: switch power on



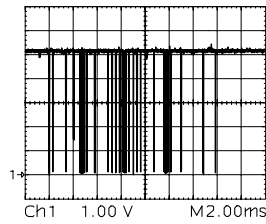
④ Mode: switch power on



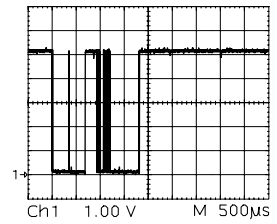
⑤ Mode: press any button



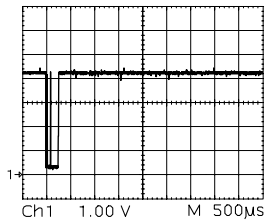
⑥ Mode: DVD playback



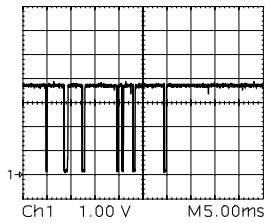
⑦ Mode: DVD playback



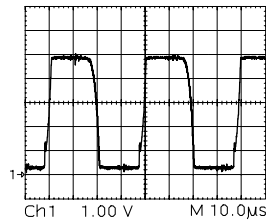
⑧ Mode: DVD playback



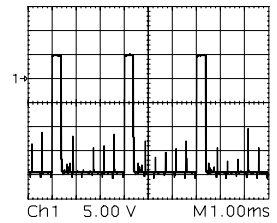
⑨ Mode: press any button



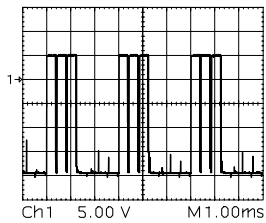
⑩ Mode: remote control



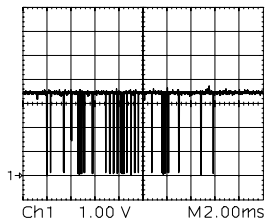
⑪ Mode: DVD playback



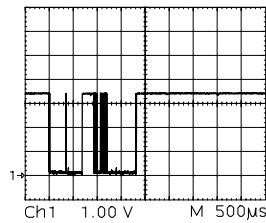
⑫ Mode: DVD playback



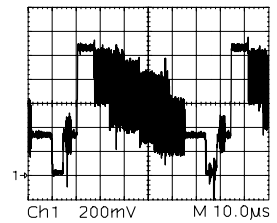
⑬ Mode: DVD playback



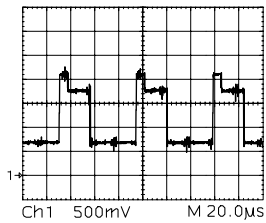
⑭ Mode: DVD playback



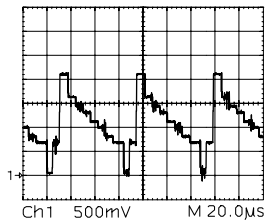
⑮ Mode: DVD playback



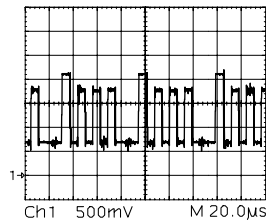
⑯ Mode: DVD playback



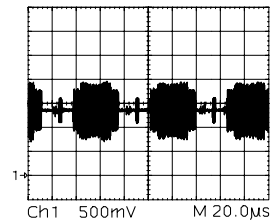
⑰ Mode: DVD playback (RGB)



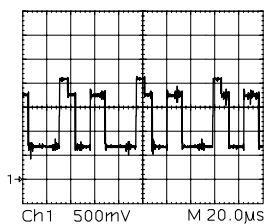
⑰ Mode: DVD playback (YC)



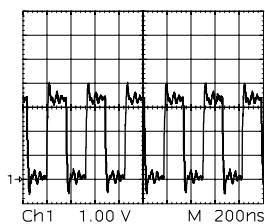
⑱ Mode: DVD playback (RGB)



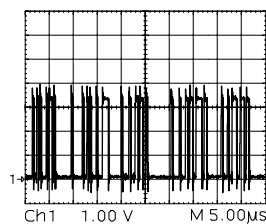
⑱ Mode: DVD playback (YC)



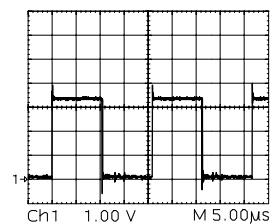
⑲ Mode: DVD playback (RGB)



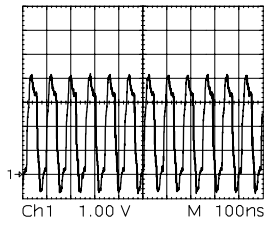
⑳ Mode: DVD playback 1kHz/0dB



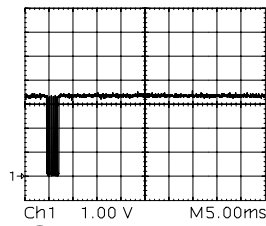
㉑ Mode: DVD playback 1kHz/0dB



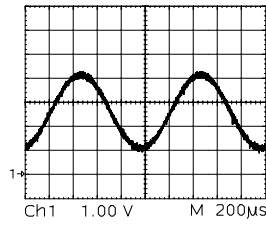
㉒ Mode: DVD playback 1kHz/0dB



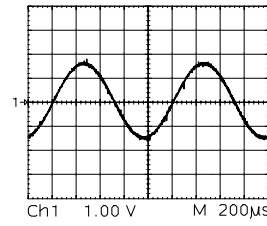
23 Mode: DVD playback 1kHz/0dB



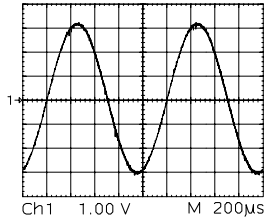
24 Mode: DVD playback start



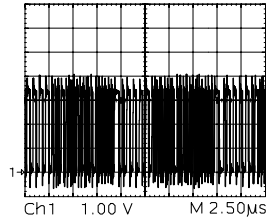
25 Mode: DVD playback 1kHz/0dB



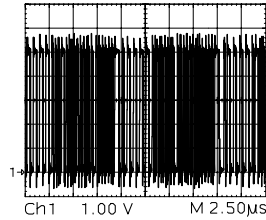
26 Mode: DVD playback 1kHz/0dB



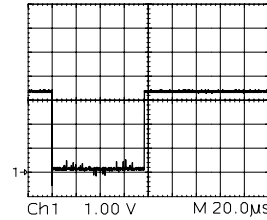
27 Mode: DVD playback 1kHz/0dB



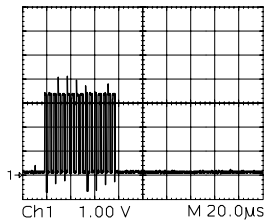
28 Mode: DVD playback 1kHz/0dB



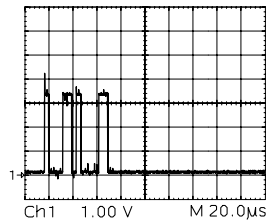
29 Mode: DVD playback 1kHz/0dB



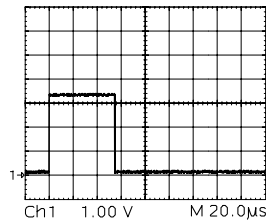
30 Mode: DVD playback



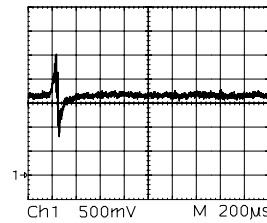
31 Mode: DVD playback



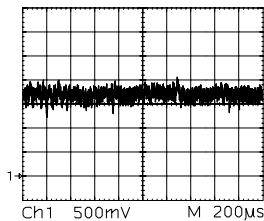
32 Mode: DVD playback



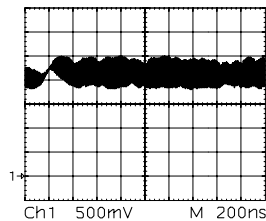
33 Mode: DVD playback



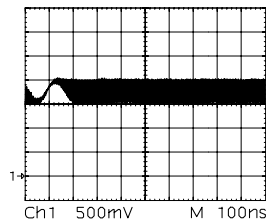
34 Mode: DVD playback



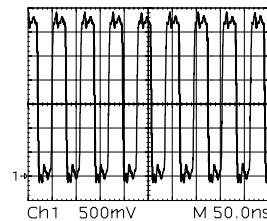
35 Mode: DVD playback



36 Mode: CD playback



37 Mode: DVD playback



38 Mode: DVD playback

Steckerübersicht / Connection Overview

1. Main Board

1.1 Socket J11 to Power Supply

Pin	Lever (ca.)	Name	Description
1	+5V	+5V	Analogue +5 Volts out
2	0V	AGND	Analogue Ground
3	+12V	+12V	Analogue +12 Volts out
4	0V	AGND	Analogue Ground
5	-12V	-12V	Analogue -12 Volts out
6	0V	GND	Analogue Ground
7	+3.3V	+3.3V	+3.3 Volts out
8	+3.3V	+3.3V	+3.3 Volts out
9	0V	GND	Digital Ground
10	0V	GND	Digital Ground
11	+5V	+5V	+5 Volts out
12	M+8V	M+8V	M+8 Volts out
13	0V	GND	Digital Ground
14	-20V	-20V	-20 Volts out

1.2 Socket J17 to FP3001 Key Control Board (R)

Pin	Lever (ca.)	Name	Description
1	+5V	WAKEUP	WAKEUP
2	+5V	CS	Chip select
3	+5V	CLK	Clock
4	0V	GND	Ground
5	+5V	DATAOUT	Data out
6	+3.3V	DATAIN	Data in
7	0V	GND	Ground
8	+5V	+5V	+5 Volts out
9	IR	IR	Remote Control data in
10	-20V	-20V	-20 Volts out

1.3 Socket J19 to DVD Drive

Pin	Lever (ca.)	Name	Description
	Play DVD/CD no Disc		
1	0V	0V	Analogue Ground
2	0V (DVD) 3.3V (CD)	3.3V	Dual Laser Control
3	0V	0V	GAINH-L Laser Beam Control
4	0V	0V	AGND Analogue Ground
5	1.2V	1.65V	FBAL Focus Balance
6	1.6V	1.65V	TBAL Tracking Balance
7	0V	0V	AGND Analogue Ground
8	3.3V	3.3V	FEPENB Frontend Enable
9	0V	2.7V	FEPCLK Frontend Clock
10	0V	2.7V	FEPDATA Frontend Data
11	0V	3.3V	OFTR Out of Track
12	0V	0V	BDO Drop Out Signal
13	0V	0V	AGND Analogue Ground
14	1.65V	1.65V	TE Tracking Error
15	1.65V	1.65V	FE Focus Error
16	2.2V	1.65V	FS RF Amplifier Signal
17	1.65V	1.65V	VHALF Reference Voltage
18	3.3V	3.3V	A+3.3V Analogue +3.3V
19	3.3V	3.3V	A+3.3V Analogue +3.3V
20	0V	0V	AGND Analogue Ground
21	1.8V	1.8V	ARF RF Amplifier Signal
22	1.8V	1.8V	NARF RF Amplifier Signal
23	1V	1V	TSTSG Test Signal
24	1V	1.6V	RFENV RF Envelope
25	5V	5V	A+5V Analogue +5V
26	2.2V	2.2V	VREF2 Reference Voltage
27	2.2V	2.5V	LDCUR Loader Current
28	3.3V	3.3V	IN-SW Tray End Position Switch
29	3.3V	3.3V	TRAY-TRV Motor Control Sledge/Tray
30	3.3V	2.7V	MUTE3 Motor Control Disc
31	1.65V	1.65V	TRVSIN Motor Control Sledge/Tray
32	1.65V	1.65V	TRAYREF Motor Reference Sledge/Tray
33	1.65V	1.65V	TRAYIN Motor Control Sledge/Tray
34	1.65V	1.65V	SPDIN Motor Disc Speed Control
35	1.65V	1.65V	TRIN Tracking Control
36	1.65V	1.65V	FOIN Focus Control
37	2V	1.65V	DMV Disc Motor Voltage
38	0V	2.4V	MUTE4 Motor Control Sledge/Tray
39	3.3V	0V	MUTE12 Focus/Track Control
40	0V	0V	MGND Motor Ground
41	0V	0V	MGND Motor Ground
42	0V	0V	MGND Motor Ground
43	0V	0V	MGND Motor Ground
44	9V	9V	M+9V Motor +9V
45	9V	9V	M+9V Motor +9V
46	9V	9V	M+9V Motor +9V
47	5V	5V	D+5V Digital +5V
48	5V	5V	D+5V Digital +5V
49	0V	0V	DGND Digital Ground
50	0V	0V	DGND Digital Ground

1.4 Socket J7 (TV SCART)

Pin	Lever (ca.)	Name	Description
1	2Vrms/10KΩ	TV_AOR	Audio Out Right
2			
3	2Vrms/10KΩ	TV_AOL	Audio out Left
4	0V	GND	Ground
5	0V	GND	Ground
6			
7	700mVpp	TV_BLUE_O	BLUE Out
8	+6V/+12V	TV_PIN8	Control
9	0V	GND	Ground
10			
11	700mVpp	TV_GREEN_O	GREEN Out
12			
13	0V	GND	Ground
14	0V	GND	Ground
15	700mVpp	TV_RED_O	RED Out
16	3.3V	TV_PIN16_O	Blank
17	0V	GND	Ground
18	0V	GND	Ground
19	1.0Vpp	TV_CVBS_O	Composite Video Out
20			
21	0V	GND	Ground

1.5 Socket J3 (AUDIO OUT)

Pin	Lever (ca.)	Name	Description
1	2Vrms/10KΩ	TV_AOL	Audio Out Left
2	2Vrms/10KΩ	TV_AOR	Audio out Right
3	0V	GND	Ground

1.6 Socket J4 (Electrical SPDIF)

Pin	Lever (ca.)	Name	Description
1	1.8V	SPDIF_COAX_O	Digital Audio Out
2	0V	GND	Ground

1.7 Socket J5 (Optical SPDIF)

Pin	Lever (ca.)	Name	Description
1	1.8V	SPDIF_OPTIC_O	Digital Audio Out
2	5V	5V	VCC
3	0V	GND	Ground

1.8 Socket J6 (CVBS+S Video)

Pin	Lever (ca.)	Name	Description
1	0V	GND	Ground
2	0V	GND	Ground
3	0V	GND	Ground
4	1 Vpp	Y	
5	0.6Vpp	C	
6	0V	GND	
7	1Vpp	TV_CVBS_O	Composite Video Out
8	0V	GND	Ground
9	0V	GND	Ground

Hinweis:

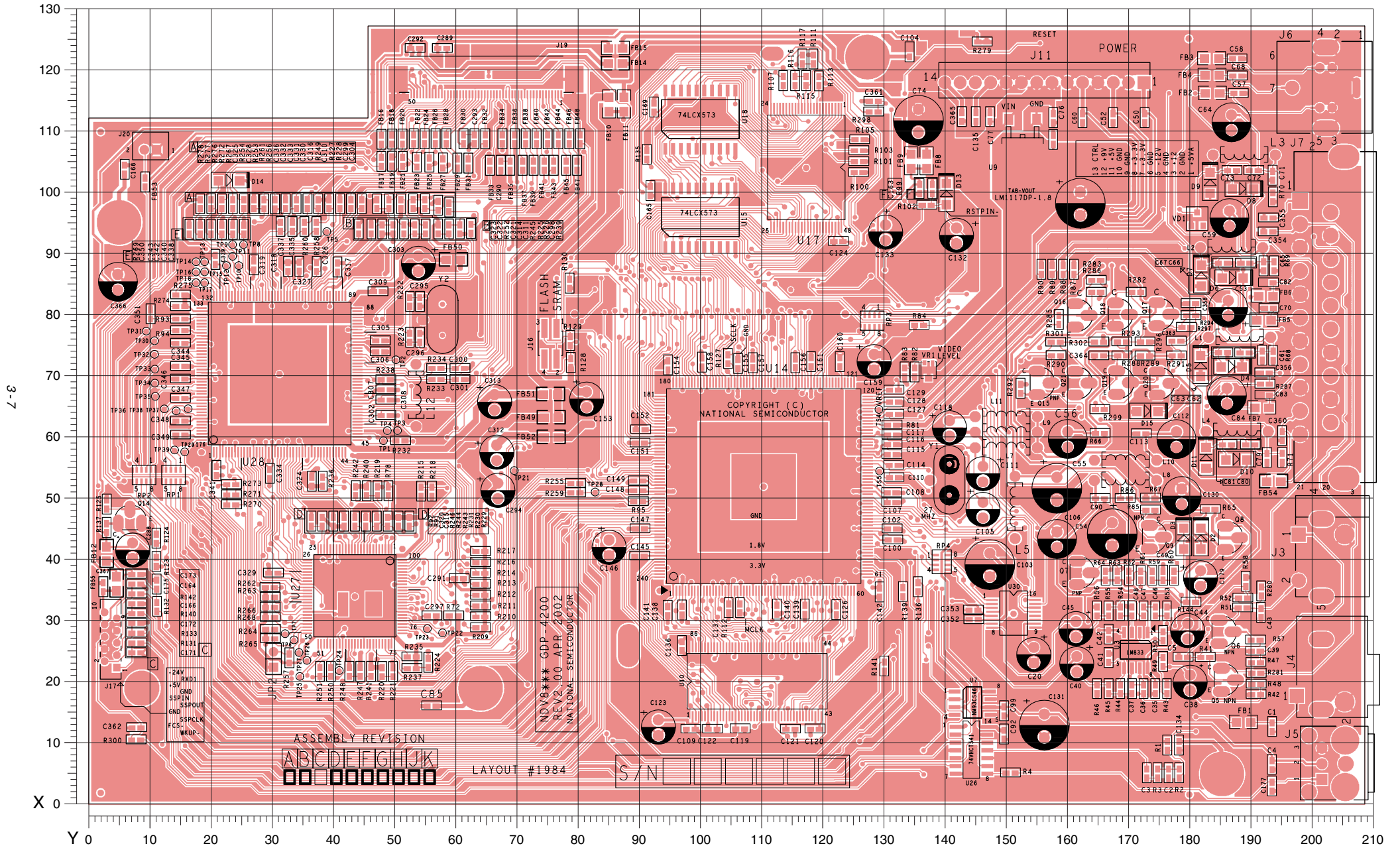
1. Audio-Signal: 1KHz, 0dB.
2. Video-Signal: 100% Farbbalken
3. Video-Signale sind mit Oszilloskop gemesse (Spitze-Spitze-Werte); Audio-Signale sind mit Millivoltmeter gemessen (Effektiv-Werte) Restliche Pegel sind mit Digital-Voltmeter gemessen.
4. Die angegebenen Werte sind Annäherungswerte.

Note:

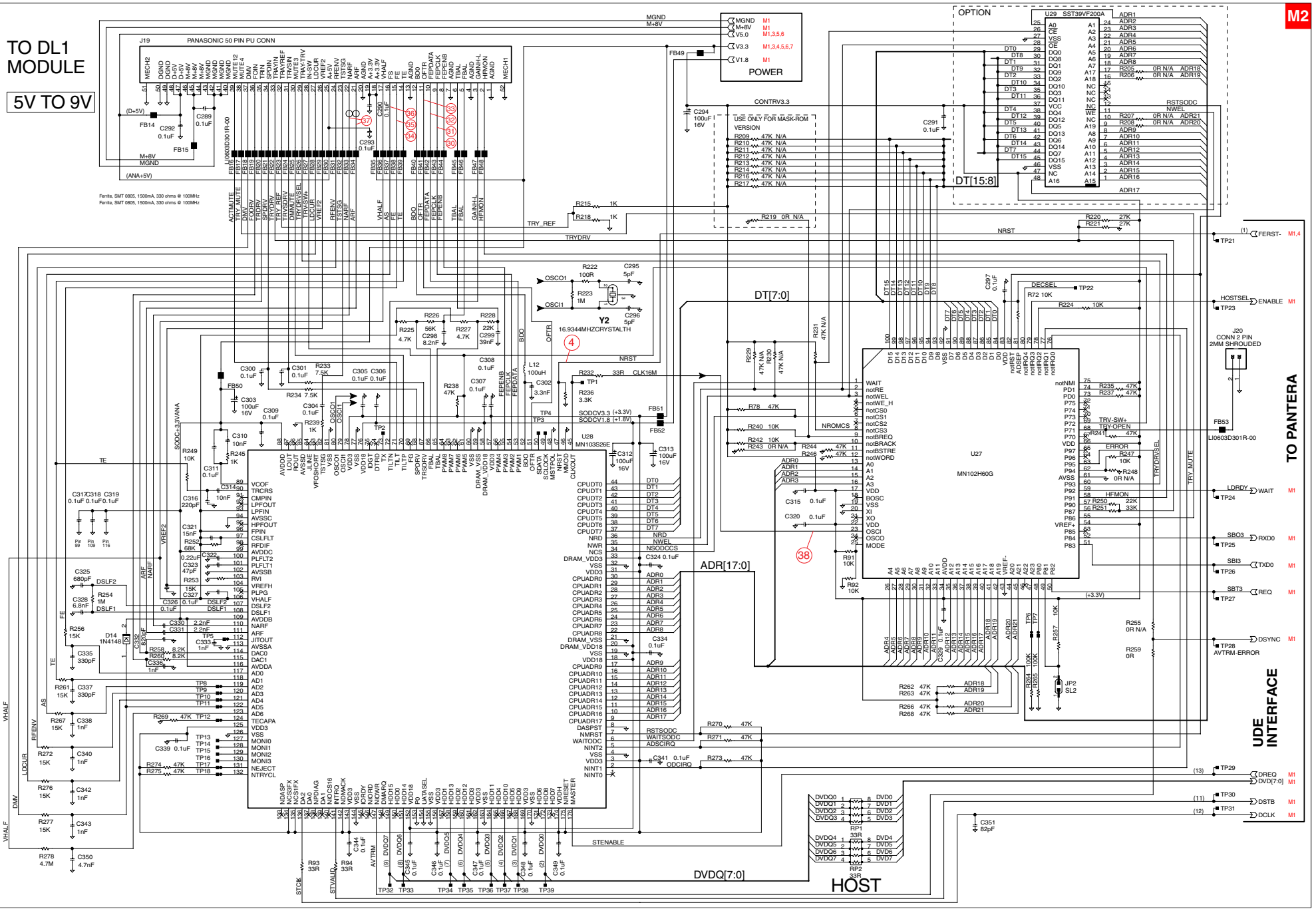
1. Audio test signal is 1KHz, 0dB.
2. Video test signal is 100% color bar signal.
3. Video signal's measuring equipment (peak-to-peak value) is oscilloscope; Audio signal's measuring equipment (rms value) is millivoltmeter; Other signal's measuring equipment is digital multimeter.
4. The measured values given in the above forms are approximates!

Hauptplatte / Main Board

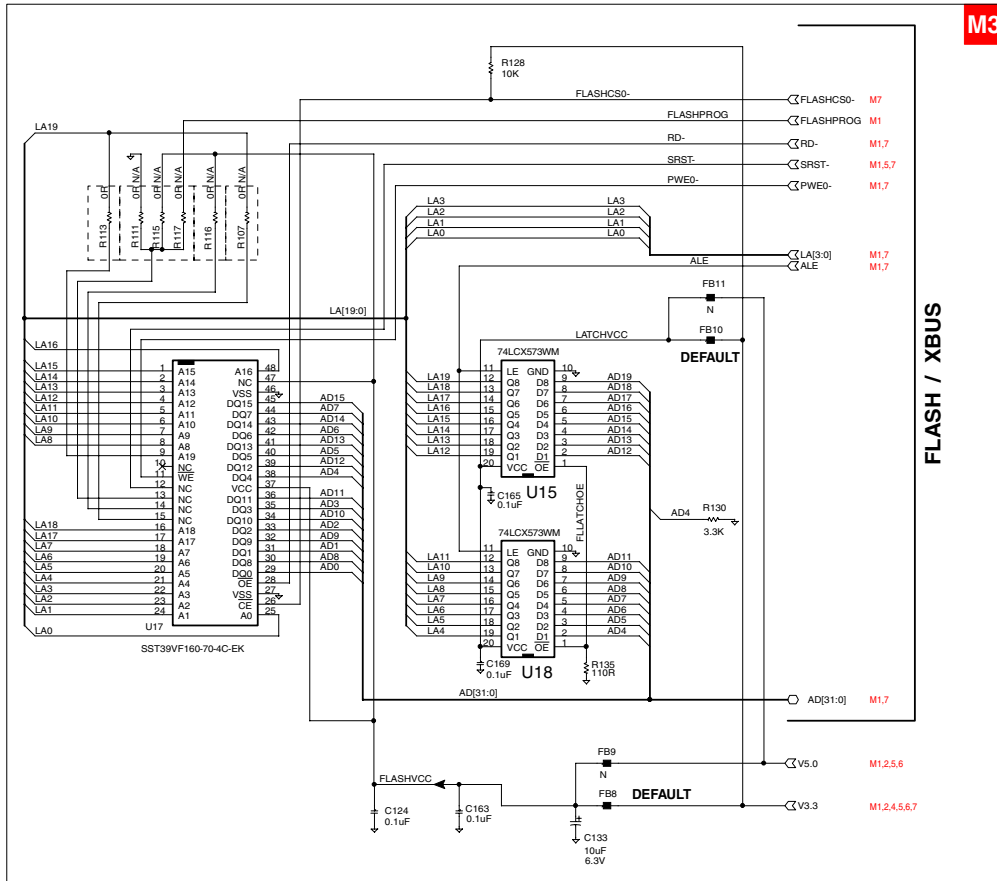
Ansicht von der Bestückungsseite / View of Component Side



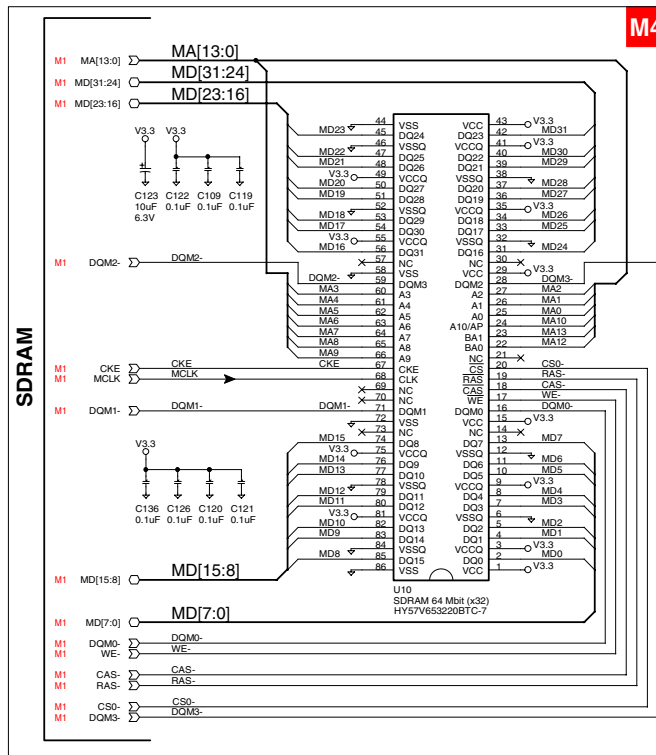
M2



Hauptplatte / Main Board – Flash (M3)

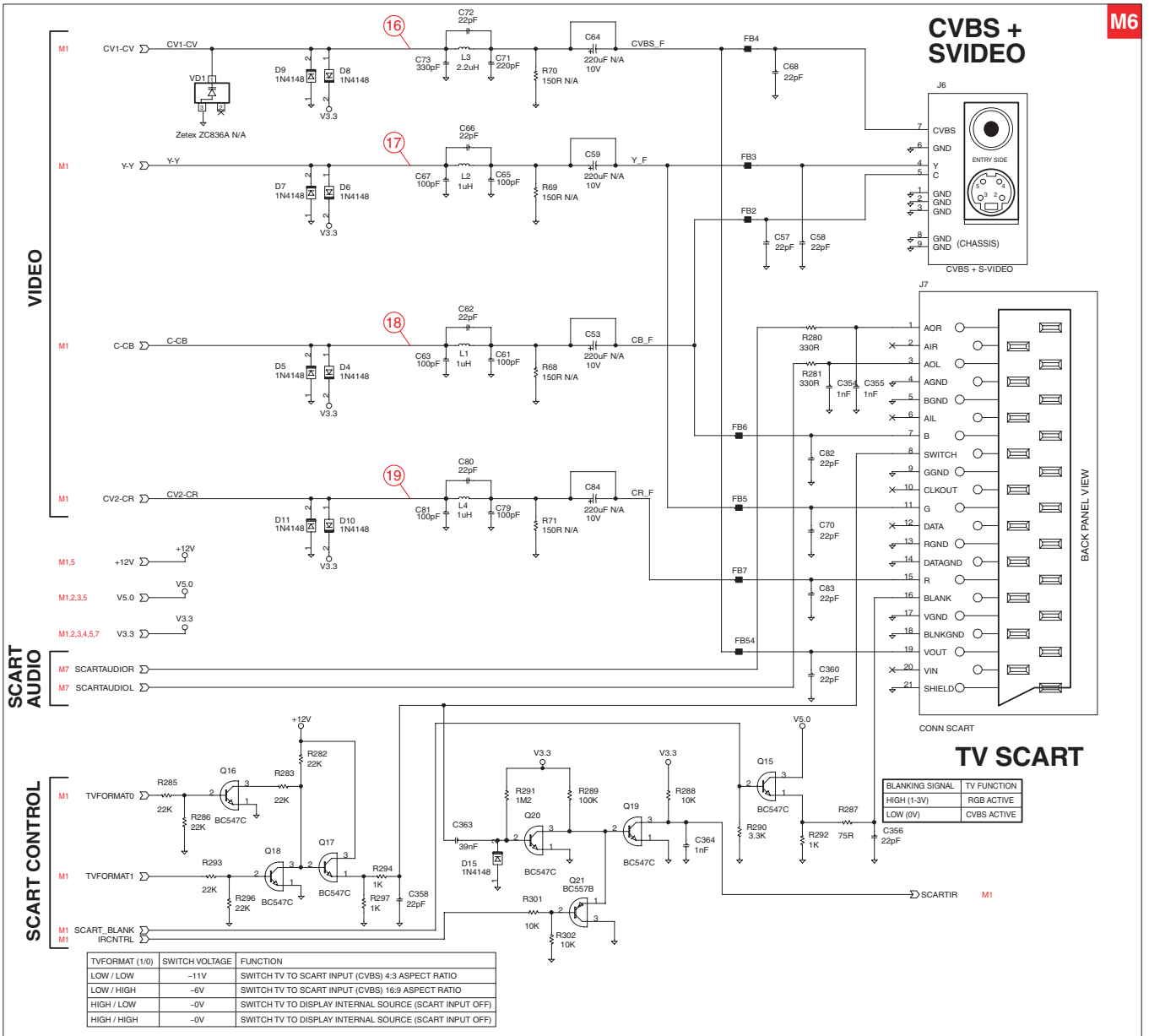


Hauptplatte / Main Board – SDRAM (M4)



Reference	
Block Diagrams	3-2
Oscillograms	3-3
Connection Overview	3-5
Main Board	
- M1	3-8
- M2	3-9
- M3	3-10
- M4	3-10
- M5	3-11
- M6	3-12
- M7	3-13
Power Supply	3-15
Keyboard Control	3-17

Hauptplatte / Main Board – Video (M6)



Reference

Block Diagrams 3-2

Oscillograms 3-3

Connection Overview 3-5

Main Board

- M1 3-8

- M2 3-9

- M3 3-10

- M4 3-10

- M5 3-11

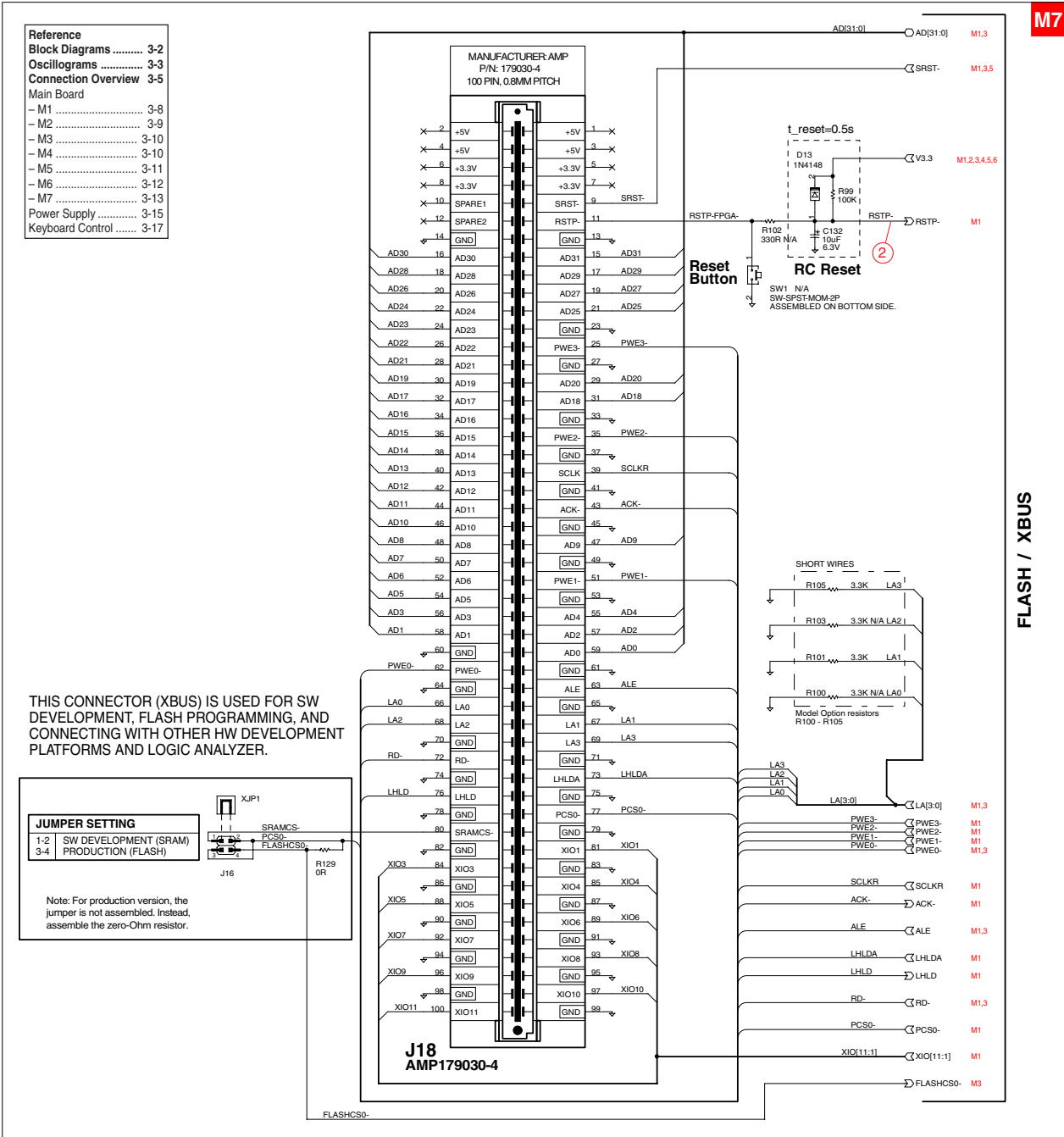
- M6 3-12

- M7 3-13

Power Supply 3-15

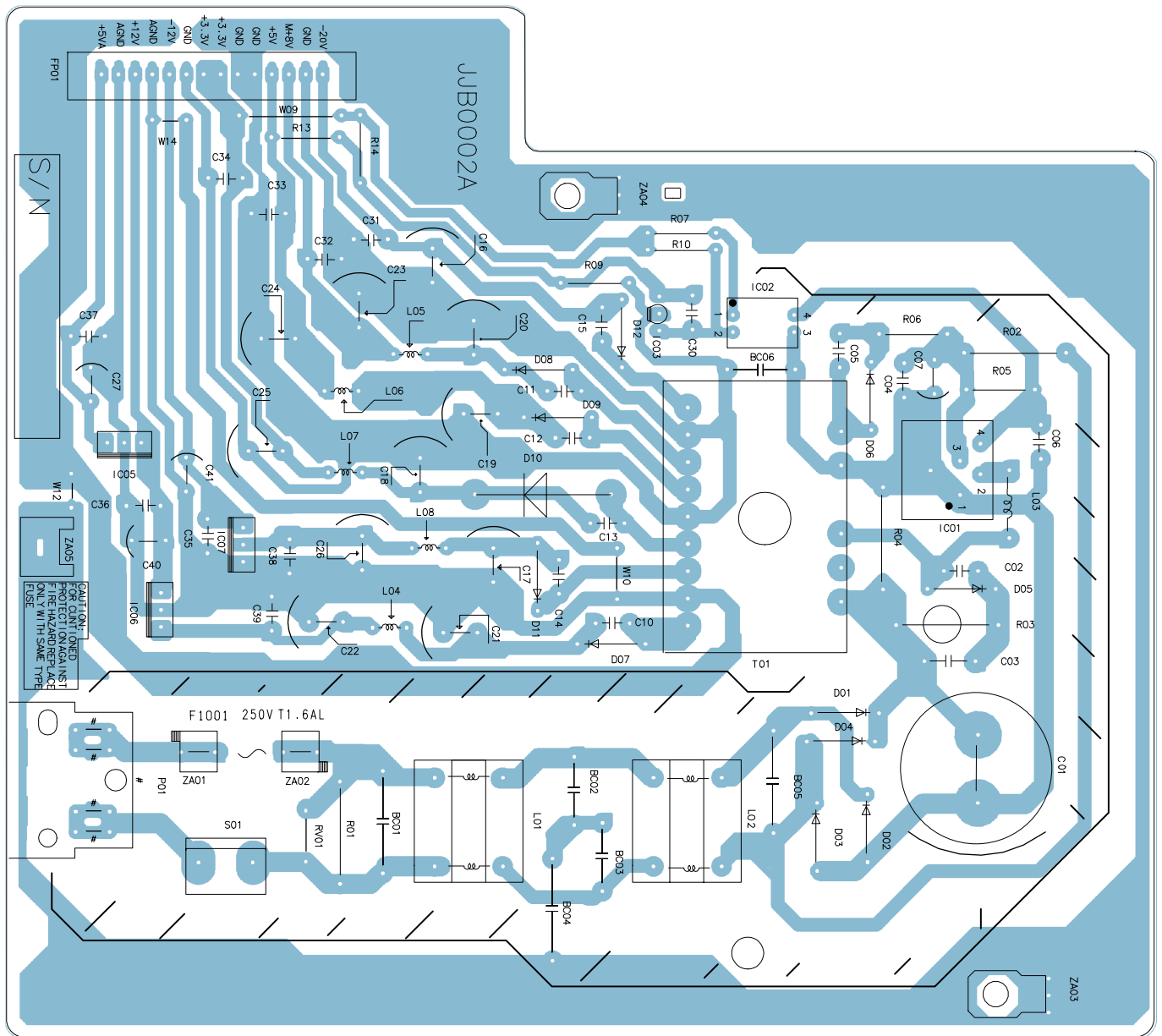
Keyboard Control 3-17

Hauptplatte / Main Board – Interface (M7)



Netzteil / Power Supply

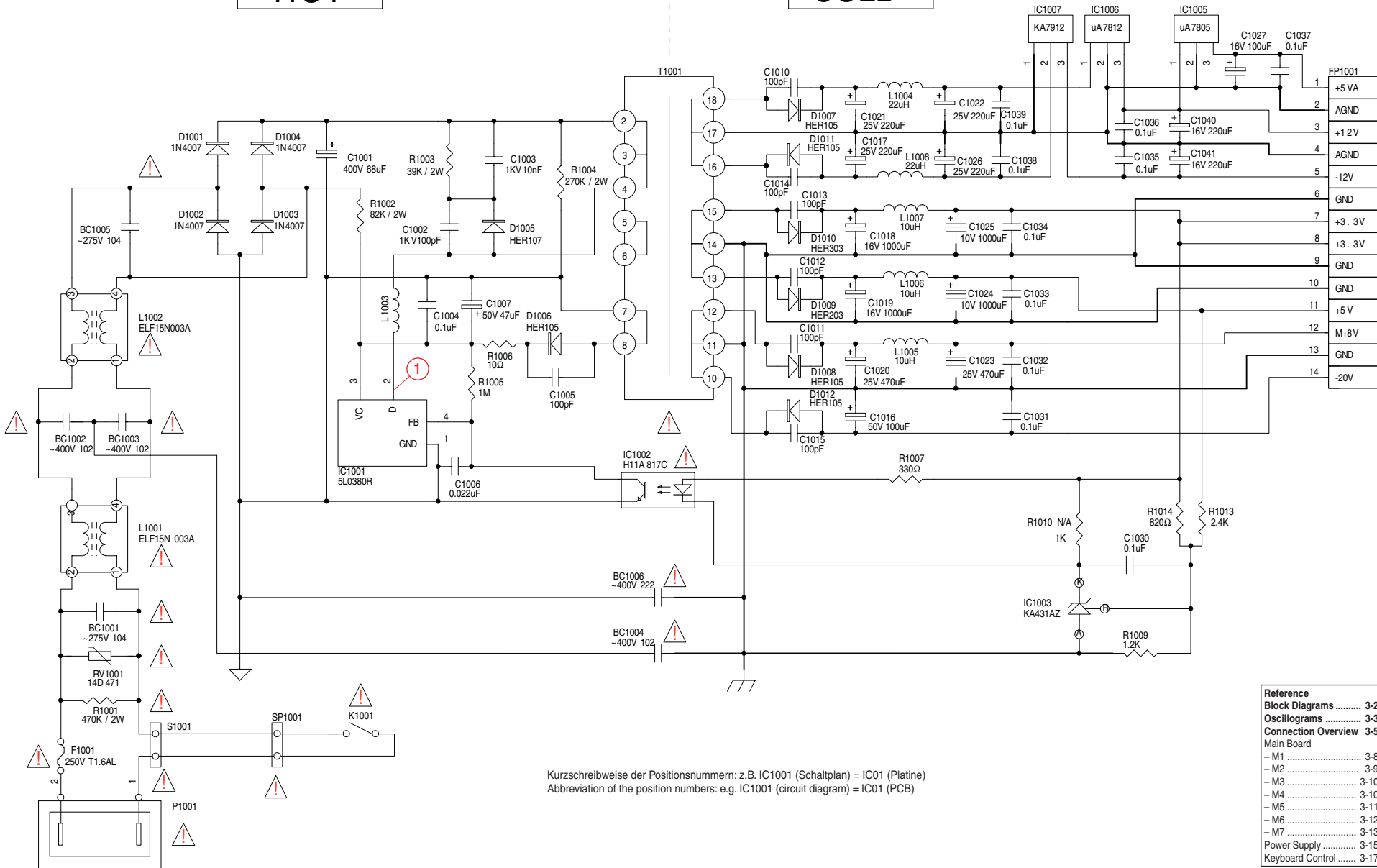
Ansicht von der Bestückungsseite / View of Component Side



Kurzschreibweise der Positionsnummern: z.B. IC1001 (Schaltplan) = IC01 (Platine)
 Abbreviation of the position numbers: e.g. IC1001 (circuit diagram) = IC01 (PCB)

HOT

COLD



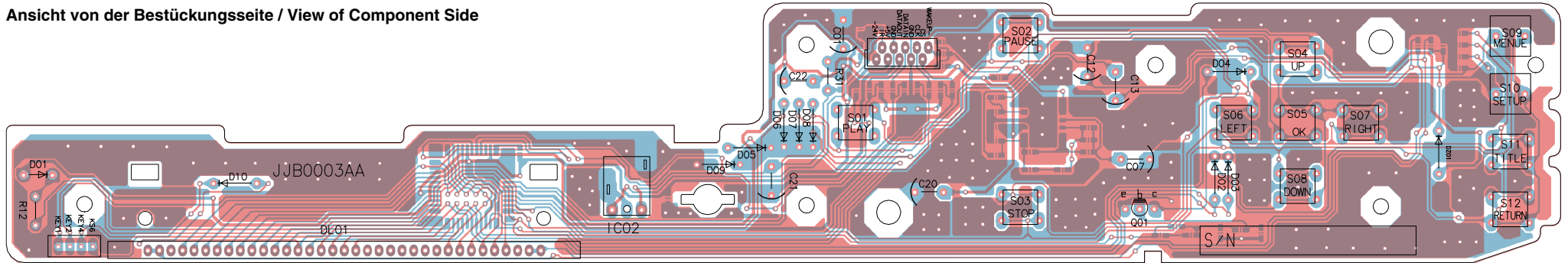
Reference

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Connection Overview	3-5
Main Board	
- M1	3-8
- M2	3-9
- M3	3-10
- M4	3-10
- M5	3-11
- M6	3-12
- M7	3-13
Power Supply	3-15
Keyboard Control	3-17

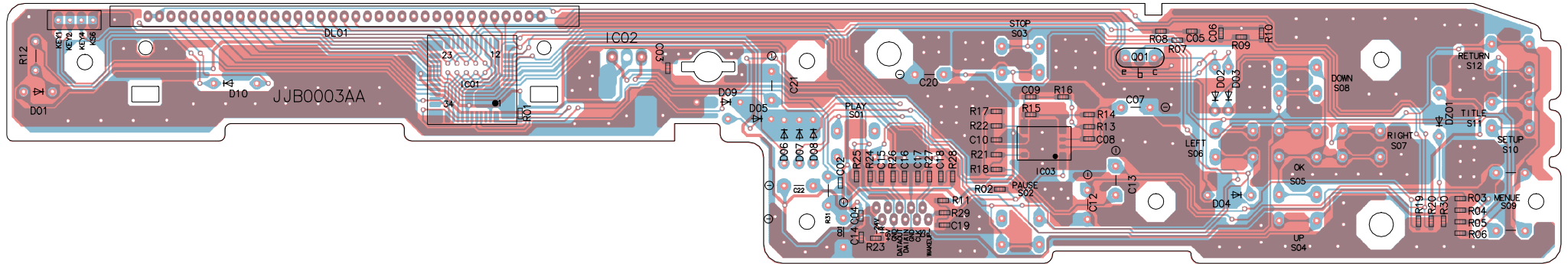
Kurzschreibweise der Positionsnummern: z.B. IC1001 (Schaltplan) = IC01 (Platine)
 Abbreviation of the position numbers: e.g. IC1001 (circuit diagram) = IC01 (PCB)

Bedieneinheit rechts / Keyboard Control Unit right

Ansicht von der Bestückungsseite / View of Component Side



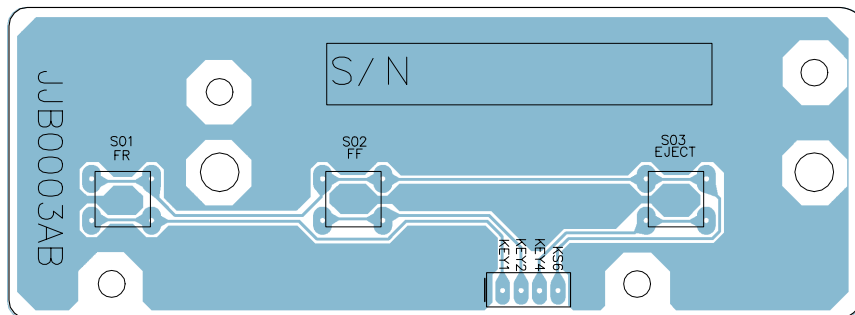
Ansicht von der Lötseite / View of Solder Side



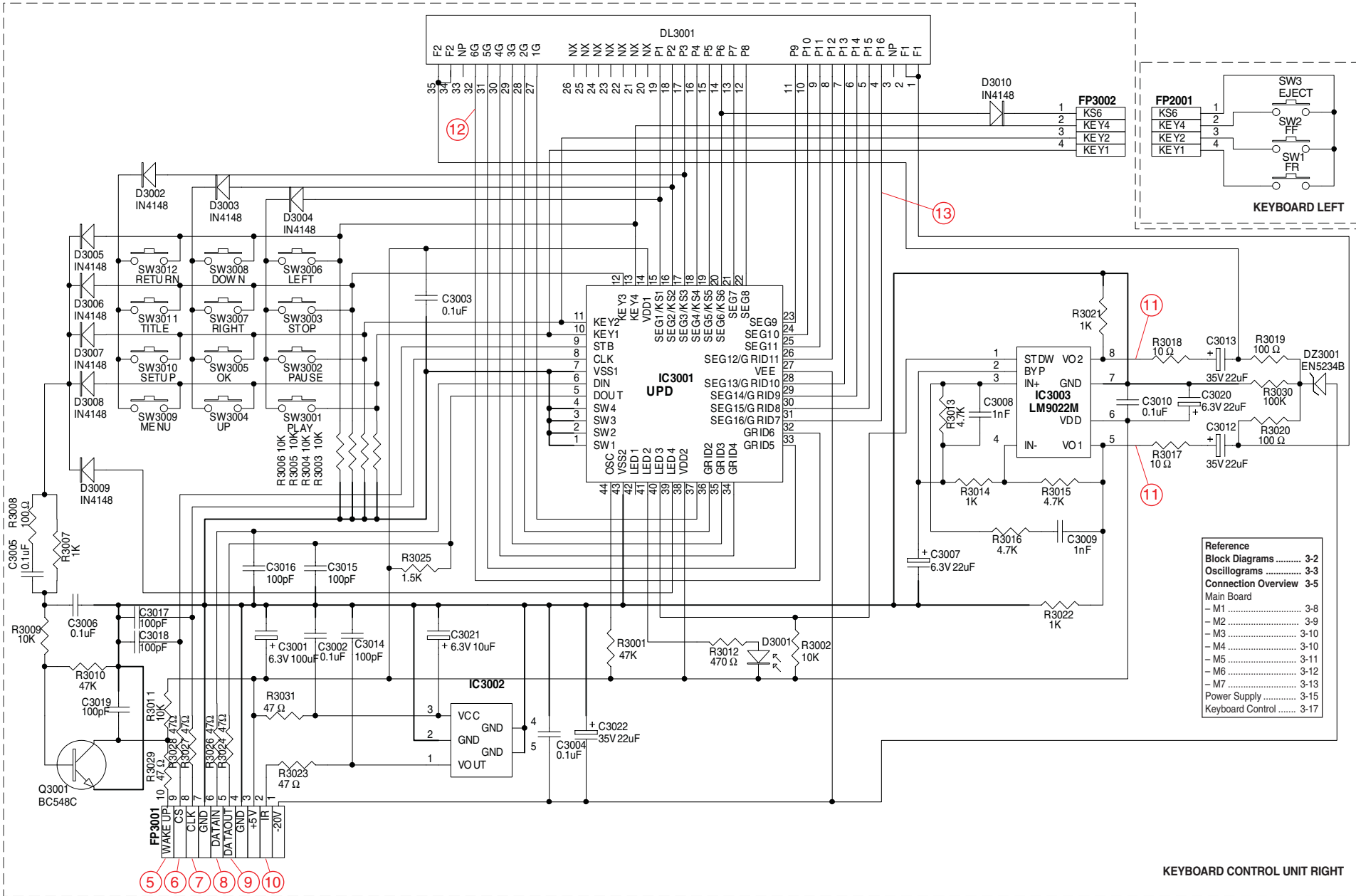
3 - 16

Keyboard links / left

Ansicht von der Bestückungsseite / View of Component Side

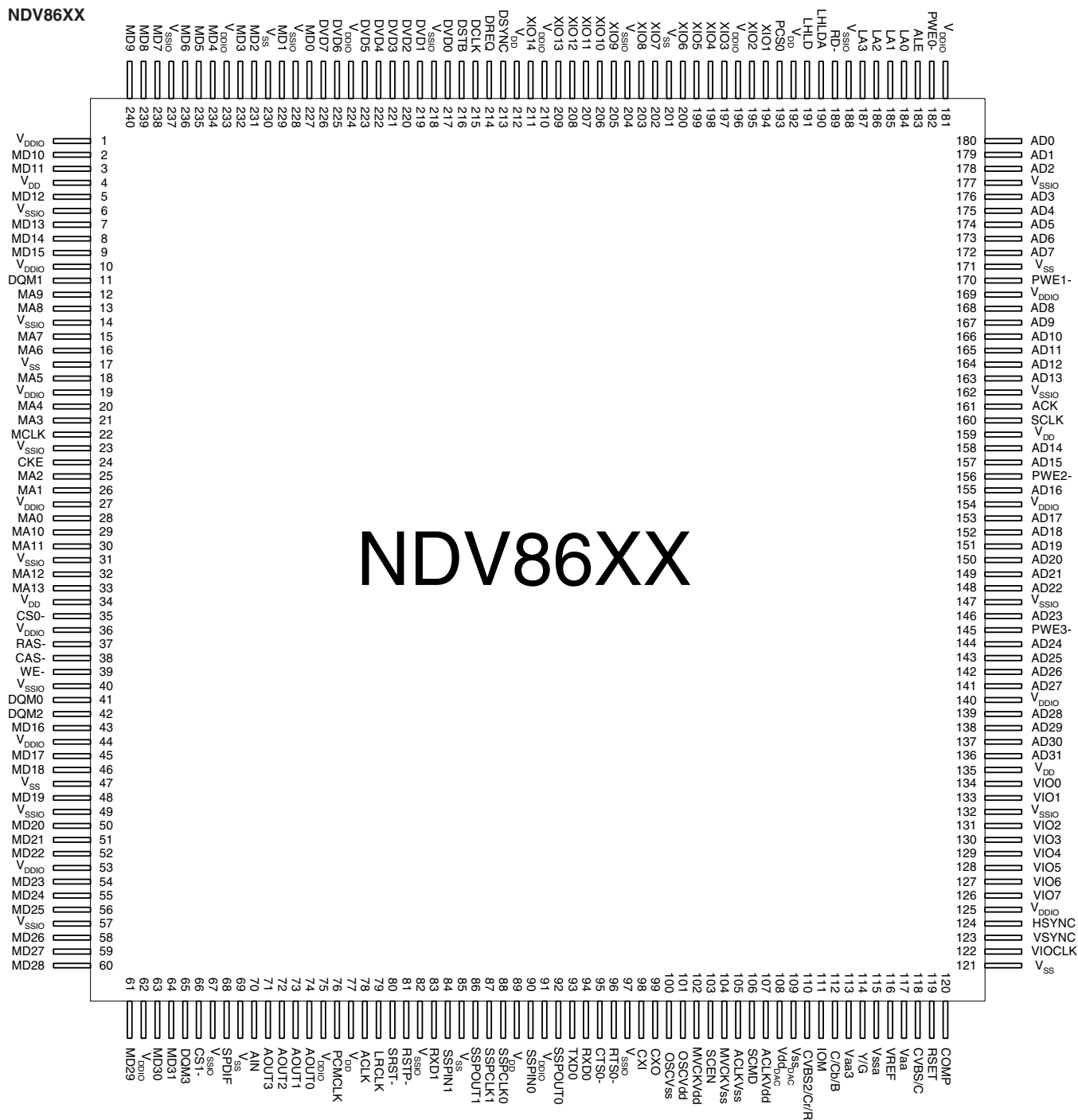


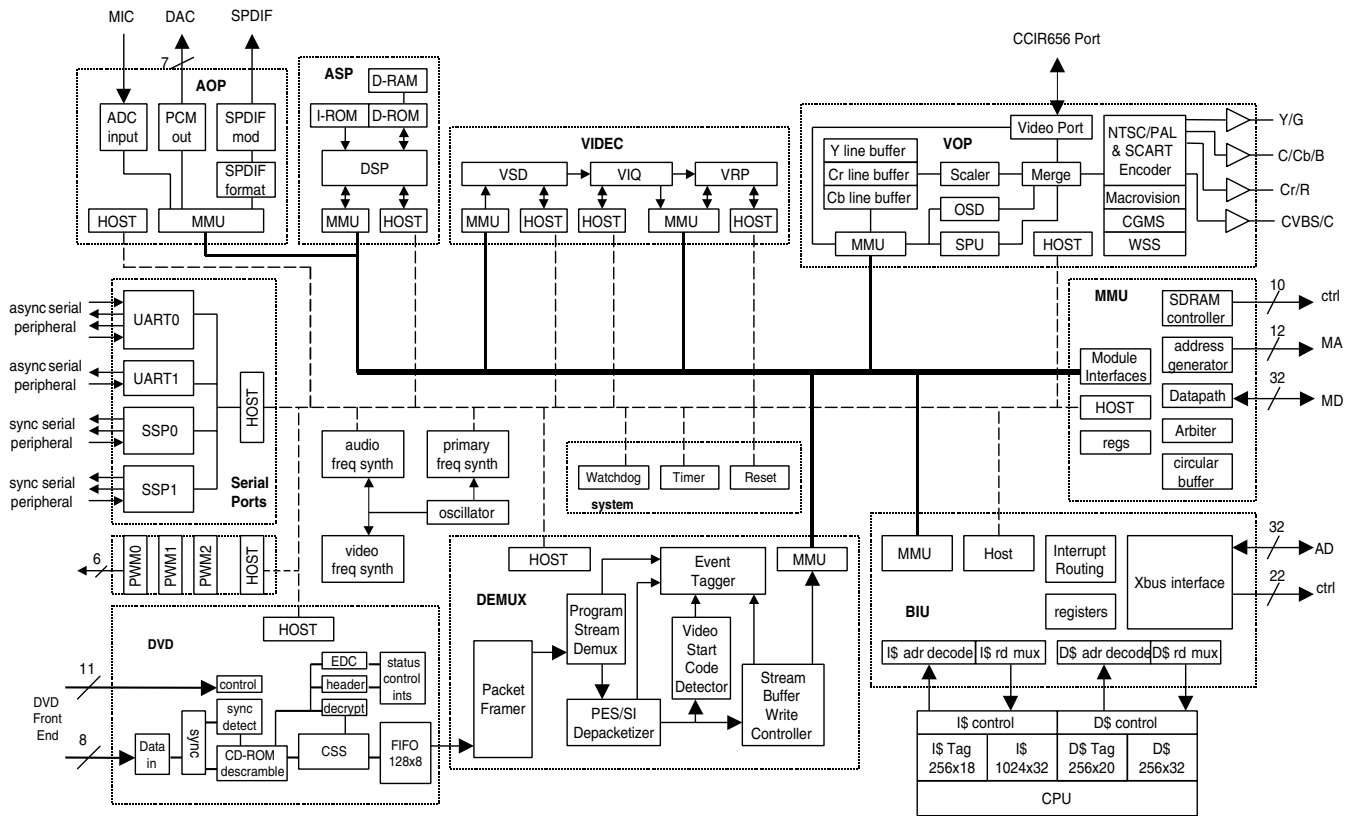
Bedieneinheiten / Keyboard Control Units



IC-Blockdiagramme / IC Block Diagrams

NDV86XX

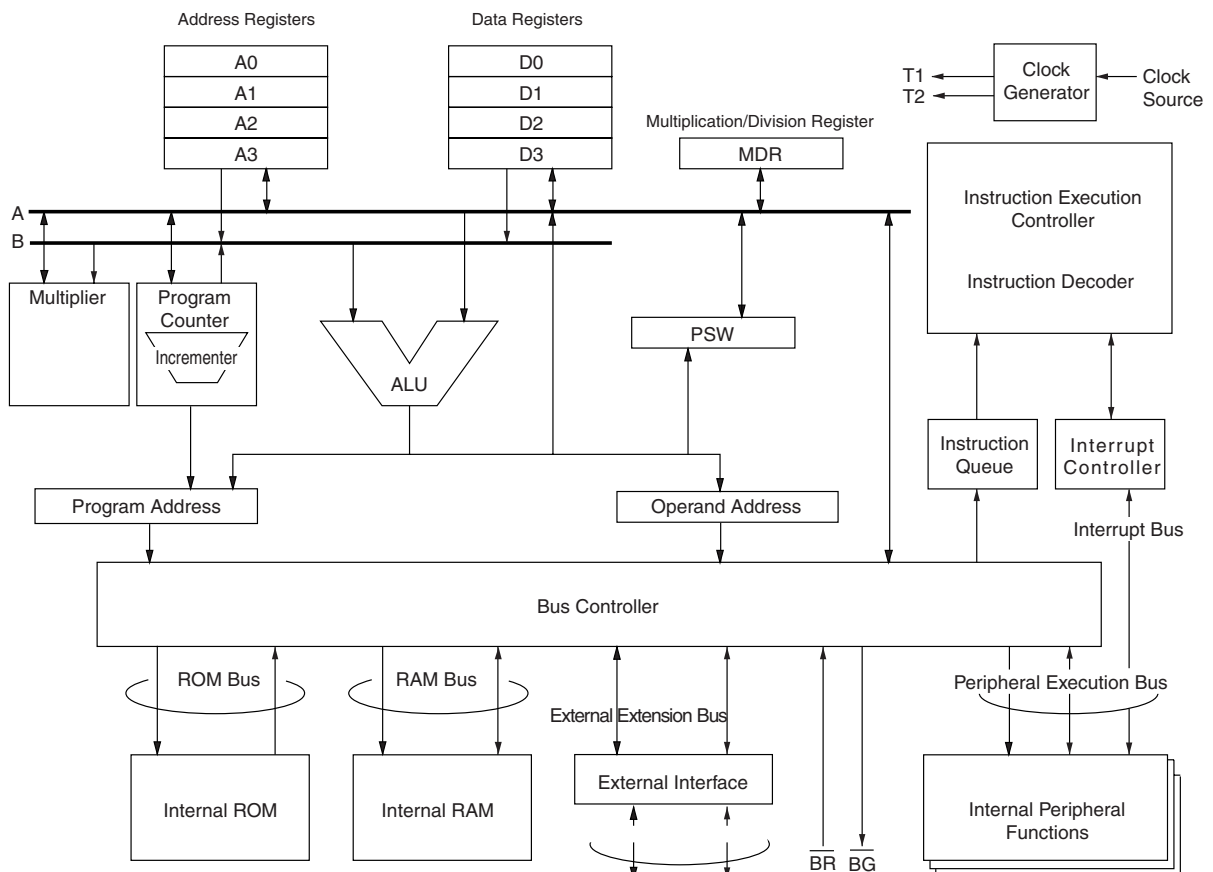
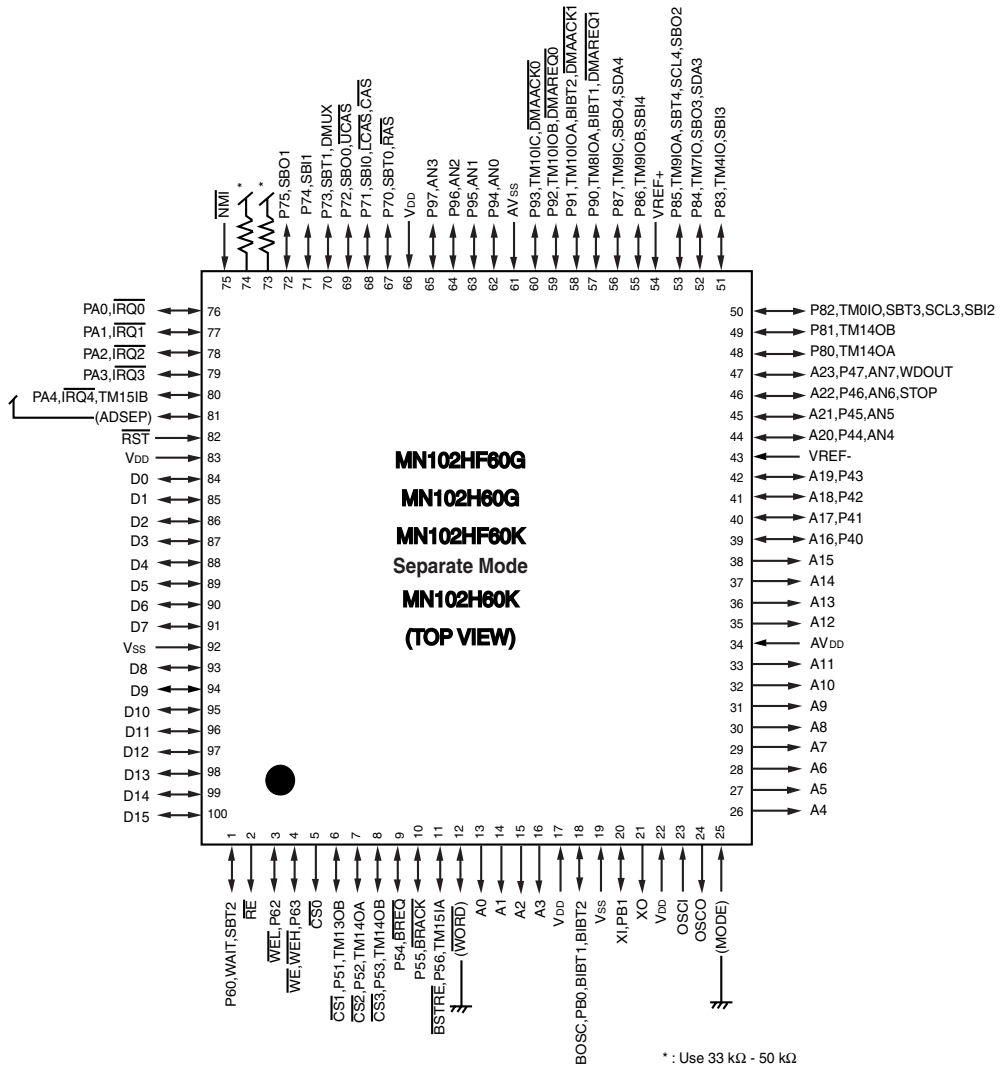




Name	Type	Pin	Description
Front End			
DSYNC	I	213	DVD parallel mode Sector Sync
DREQ	O	214	DVD parallel mode Data Request
DCLK	I	215	Data sampling clock
DSTB	I	216	Parallel mode Data Valid, serial mode Left/Right Clock
DVD[7:0]	I	*	DVD drive parallel data port, pins: 217, 219-223, 225, 226
External I/O			
PCS0	O	193	Peripheral chip select 0, generally used for enabling the program store ROM/FLASH
XIO[14:1]	B	*	Programmable general purpose I/O also used as peripheral chip select, interrupt, PWM output and other system signals, pins: 195, 197-200, 202-203, 205-209, 211
SDRAM			
MD[31:0]	B	*	SDRAM data bus, pins: 227, 229, 231, 232, 234, 235, 236, 238, 239, 240, 2, 3, 5, 7, 8, 9, 43, 45, 46, 48, 50, 51, 52, 54, 55, 56, 58, 59, 60, 61, 63, 64
MA[11:0]	O	*	SDRAM address bus, pins: 12, 13, 15, 16, 18, 20, 21, 25, 26, 28, 29, 30
MA[13:12]	O	32-33	SDRAM address bus, reserved for pin compatibility with 64Mbit SDRAM
MCLK	O	22	SDRAM clock
CKE	O	24	SDRAM Clock Enable
CS0-	O	35	SDRAM primary bank chip select
CS1-	O	66	SDRAM extension bank chip select
RAS-	O	37	SDRAM command bit
CAS-	O	38	SDRAM command bit
WE-	O	39	SDRAM command bit
DQM[3:0]-	O	11, 41, 42, 65	SDRAM data byte enables
Host Interface			
AD[31:0]	B	*	mP multiplexed address/data bus, pins 136-139, 141-144, 146, 148-153, 155, 157, 158, 163-168, 172-176, 178-180
LA[3:0]	B	184-187	Latched Address [3:0]
ALE	B	183	Address Latch Enable
RD-	B	189	Read
ACK-	B	161	Programmable WAIT-/ACK-/RDY- control
SCLK	O	160	External bus clock used for programmable host bus peripherals
PWE[3:0]-	B	*	Byte write enable for FLASH, EEPROM, SRAM or peripherals, pins: 145, 156, 170, 182
Slave Mode			
LHLD	I	191	Bus Hold Request from external master in slave mode
LHLDA	O	190	Bus Hold Acknowledge in slave mode
Comm Ports			
UART1			
RXD1	I	83	UART1 serial data input from external serial device, used for IR receive
SSP1			
SSPCLK1/CTS1-	B	87	SSP1 clock or UART1 Clear to Send signal
SSPOUT1/DTR1-	B	86	SSP1 data out or UART1 Data Terminal Ready signal
SSPIN1/BAUD1	B	84	SSP1 data in or 16X clock for USART function in UART1

Name	Type	Pin	Description
UART0			
RXD0	I	94	UART0 serial data input from external serial device
TXD0	B	93	UART0 serial data output to an external serial device
RTS0	B	96	UART0 request to send
CTS0	B	95	UART0 Clear to Send signal
SSP0			
SSP0OUT0/DTR0	B	92	SSP0 data out or UART0 Data Terminal Ready signal
SSPIN0/BAUD0	B	90	SSP0 data in or 16X clock for USART function in UART0
SSPCLK0/RTS1	B	88	SSP0 clock or Request To Send function in UART1
System Interface			
RSTP-	I	81	RESET_Power- from system, used to reset frequency synthesizer & rest of chip
SRST-	O	80	Active low RESET signal for peripheral reset
Video Interface			
CVBS/C	O	118	Composite video output for NTSC/PAL or Chrominance output for S-Video
Y/G	O	114	Luminance for NTSC/PAL S-Video and component output, G output for SCART
C/Cb/B	O	112	Chrominance output for NTSC/PAL S-Video, Cb output for component, Blue output for
SCART			
CVBS2/Cr/R	O	110	A second CVBS output for composite, Cr output for component, Red output for SCART
IOM	O	111	Cascaded DAC differential output used to dump current into external resistor for power
VREF	I	116	Input voltage reference (1.2V typ) for output DACs
RSET	O	119	Current setting resistor of output DACs
COMP	O	120	Compensation capacitor connection
VddDAC	P	108	DAC Digital Power/1.8V
VssDAC	P	109	DAC Digital Ground
Vaa3	P	113	DAC Analog Power/3.3V
NC (Vaa)	-	117	Unused (DAC Analog Power/2.5V)
Vssa	P	115	DAC Analog Ground
Video Port			
VIO[7:0]	B	126-131, 133-134	Bidirectional digital video port data bus
HSYNC	B	124	Bidirectional HSYNC signal for devices that do not use EAV/SAV codes
VSYN	B	123	Bidirectional VSYN signal for devices that do not use EAV/SAV codes
VIOCLK	B	122	VCLK input/output for Video I/O Port function
Audio Interface			
AOUT0	O	74	Serial audio output data to audio DAC for Left & Right channels
AOUT1	O	73	Serial audio output data to audio DAC for Center & LFE channels
AOUT2	O	72	Serial audio output data to audio DAC for Surround Left & Right channels
AOUT3	O	71	Serial audio output data to audio DAC for Left & Right channels for down-mixed stereo
SPDIF	O	68	S/PDIF digital audio output
ACLK	O	78	Audio interface serial data clock, common clock for DACs & ADC
PCMCLK	O	76	Audio DAC PCM sampling clock frequency, common clock for DACs & ADC
LRCLK	O	79	Left/Right Channel clock, common clock for DACs & ADC
AIN	I	70	Digital audio input for digital micro
Clock Signals			
CXI	I	98	Crystal Input pin for on-chip oscillator or system input clock
CXO	O	99	Crystal Output pin for on-chip oscillator
OSCVdd	P	101	Oscillator Power (2.5V)
OSCVss	P	100	Oscillator Ground
MVCKVdd	P	102	Main & Video Clock PLL Power (3.3V)
MVCKVss	P	104	Main & Video Clock PLL Ground
ACLKVdd	P	107	Audio clock PLL Power (3.3V)
ACLKVss	P	105	Audio clock PLL Ground
Test			
SCEN	I	103	Scan Chain test enable
SCMD	I	106	Scan Chain test mode
PWR & GND			
VDD	P	*	Core Power =2.5V, pins: 4, 34, 77, 89, 135, 159, 192, 212
Vss	P	*	Core & Ring Ground, pins: 17, 47, 69, 85, 121, 171, 201, 230
VDDIO	P	*	I/O Pad power = 3.3V, pins: 1, 10, 19, 27, 36, 44, 53, 62, 75, 91, 125, 140, 154, 169, 181, 196, 210, 224, 233
VSSIO	P	*	I/O Pad ground, pins: 6, 14, 23, 31, 40, 49, 57, 67, 82, 97, 132, 147, 162, 177, 188, 204, 218, 228, 237

MN102HF



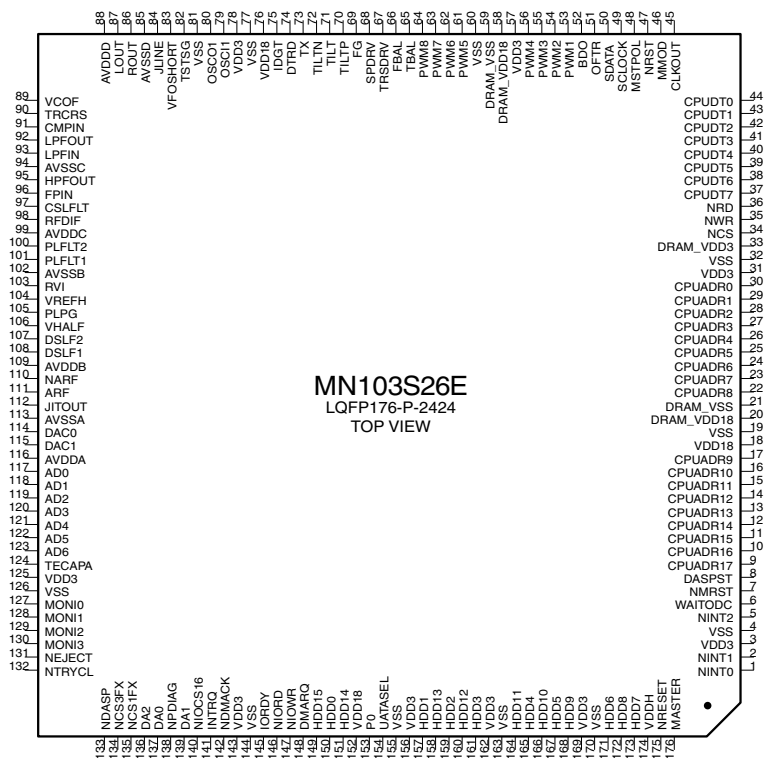
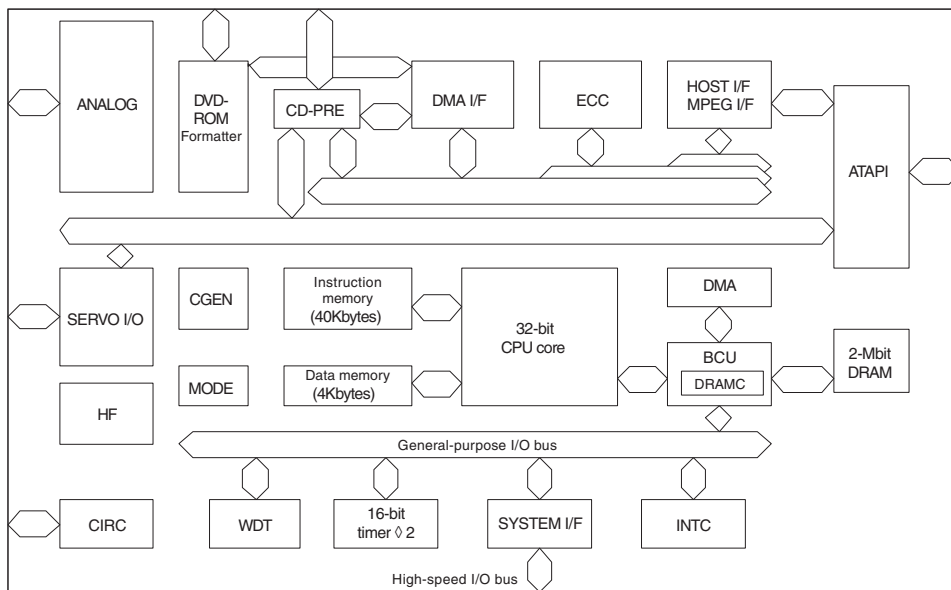
Pin	Pin Name	I/O	Function
1	WAIT P60 SBT2	Input I/O I/O	Bus Cycle Wait Input General-purpose Port 60 Serial Interface 2 Clock Input/Output
2	/RE P61	Output I/O	Read Enable Output General-purpose Port 61
3	/WEL P62	Output I/O	Lower Byte Write Enable Output General-purpose Port 62
4	/WEH /WE P63	Output Output I/O	Upper Byte Write Enable Output Write Enable Output for DRAM General-purpose Port 63
5	/CS0 TM13OA	Output Output	Chip Select Output Timer 13A Output
6	/CS1 TM13OB	Output Output	Chip Select Output Timer 13B Output
7	/CS2 TM14OA	Output Output	Chip Select Output Timer 14A Output
8	/CS3 TM14OB	Output Output	Chip Select Output Timer 14B Output
9	/BREQ P54	Input I/O	Bus Request Input General-purpose Port 54
10	/BRACK P55	Output I/O	Bus Request Enable Output General-purpose Port 55
11	ALE /BSTRE P56 TM15IA	Output Output I/O Input	Address Latch Enable Output Read Enable for Burst ROM General-purpose Port 56 Timer 15A Input
12	/WORD P57	Input I/O	Data Bus Width Setup Input General-purpose Port 57
13	A0 P20 SBT2	Output I/O I/O	Address Output General-purpose Port 20 Serial Interface 2 Clock Input/Output
14	A1 P21 SBI2	Output I/O Input	Address Output General-purpose Port 21 Serial Interface 2 Data Input
15	A2 P22 SBO2	Output I/O Output	Address Output General-purpose Port 21 Serial Interface 2 Data Output
16	A3 P23	Output I/O	Address Output General-purpose Port 23
17	VDD	-	Power
18	BOSC BIBT1/BIBT2 PB0	Output Output I/O	System Clock Output Internal System Clock Output General-purpose Port B0
19	VSS	-	Power (Ground)
20	XI	Input	Low-speed Oscillator Input
21	XO	Output	Low-speed Oscillator Output
22	VDD	-	Power
23	OSCI	Input	High-speed Oscillator Input
24	OSCO	Output	High-speed Oscillator Output
25	MODE	Input	Mode Setup Input
26	A4	Output	Address Output
27-29	A5-A7	Output	Address Output
30-33, 35-38	A8-A15	Output	Address Output
34	AVDD	-	Analog Voltage
39-42	A16-A19 P40-P43	Output I/O	Address Output General-purpose Port 40-43
43	Vref-	-	Analog Basic Voltage
44-45	A20-A21 P44-P45 AN4-AN5	Output I/O Input	Address Output General-purpose Port 44-45 A/D Conversion Input
46	A22 P46 AN6 STOP	Output I/O Input Output	Address Output General-purpose Port 46 A/D Converter 6 Conversion Input STOP Status Output
47	A23 P47 AN7 WDOUT	Output I/O Input Output	Address Output General-purpose Port 47 A/D Converter 7 Conversion Input Watchdog Timer Overflow Output

Pin	Pin Name	I/O	Function
48	P80 TM14OA	I/O Output	General-purpose Port 80 Timer 14A Output
49	P81 TM14OB	I/O Output	General-purpose Port 81 Timer 14B Output
50	P82 TM0IO SBI2 SBT3 SCL3	I/O I/O Input I/O Output	General-purpose Port 82 Timer 0 Input/Output Serial Interface 2 Data Input Serial Interface 3 Clock Input/Output Serial Interface 3 Clock Output
51	P83 TM4IO SBI3	I/O I/O Input	General-purpose Port 83 Timer 4 Input/Output Serial Interface 3 Data Input
52	P84 TM7IO SBO3 SDA3	I/O I/O Output I/O	General-purpose Port 84 Timer 7 Input/Output Serial Interface 3 Data Output Serial Interface 3 Data Input/Output
53	P85 TM9IOA SBO2 SBT4 SCL4	I/O I/O Output I/O Output	General-purpose Port 85 Timer 9A Input/Output Serial Interface 2 Data Output Serial Interface 4 Clock Input/Output Serial Interface 4 Clock Output
54	Vref+	-	Analog Basic Voltage
55	P86 TM9IOB SBI4	I/O I/O Input	General-purpose Port 86 Timer 9B Input/Output Serial Interface 4 Data Input
56	P87 TM9IC SBO4 SDA4	I/O Input Output I/O	General-purpose Port 87 Timer 9C Input Serial Interface 4 Output Serial Interface 4 Input/Output
57	P90 TM8IOA	I/O I/O	General-purpose Port 90 Timer 8A Input/Output
57	BIBT1 /DMAREQ1	Output Input	Internal System Clock Output ETC1 Activation Request Input
58	P91 TM10IOA BIBT2 /DMAACK1	I/O I/O Output Output	General-purpose Port 91 Timer 10A Input/Output Internal System Clock Output ETC1 Acknowledge v
59	P92 TM10IOB /DMAREQ0	I/O I/O Input	General-purpose Port 92 Timer 10B Input/Output ETC0 Activation Request Input
60	P93 TM10IC /DMAACK0	I/O Input Output	General-purpose Port 93 Timer 10C Input ETC0 Acknowledge Output
61	AVSS	-	Analog Voltage (Ground)
62	P94 AN0	I/O Input	General-purpose Port 94 A/D Converter 0 Conversion Input
63	P95 AN1	I/O Input	General-purpose Port 95 A/D Converter 1 Conversion Input
64	P96 AN2	I/O Input	General-purpose Port 96 A/D Converter 2 Conversion Input
65	P97 AN3	I/O Input	General-purpose Port 97 A/D Converter 3 Conversion Input
66	VDD	-	Power
67	/RAS P70 SBT0	Output I/O I/O	DRAM Control Output General-purpose Port 70 Serial Interface 0 Clock Input/Output
68	/CAS, /LCAS P71 SBI0	Output I/O Input	DRAM Control Output General-purpose Port 71 Serial Interface 0 Data Input
69	/UCAS P72 SBO0	Output I/O Output	DRAM Control Output General-purpose Port 72 Serial Interface 0 Data Output
70	DUMX P73 SBT1	Output I/O I/O	DRAM Control Output General-purpose Port 73 Serial Interface 1 Clock Input/Output
71	P74 SBI1	I/O Input	General-purpose Port 74 Serial Interface 1 Data Input
72	P75 SBO1	I/O Output	General-purpose Port 75 Serial Interface 1 Data Output
73-74	PULLUP	Input	Pull-up
75	/NMI	Input	Nonmaskable Interrupt Input

Pin	Pin Name	I/O	Function
76	PA0 /IRQ0	I/O Input	General-purpose Port A0 External Interrupt 0 Input
77	PA1 /IRQ1	I/O Input	General-purpose Port A1 External Interrupt 1 Input
78	PA2 /IRQ2	I/O Input	General-purpose Port A2 External Interrupt 2 Input
79	PA3 /IRQ3	I/O Input	General-purpose Port A3 External Interrupt 3
80	PA4 /IRQ4 TM15IB	I/O Input Input	General-purpose Port A4 Input External Interrupt 4 Timer 15B Input
81	ADSEP PA5	Input I/O	Address/Data Separate General-purpose Port A5
82	/RST	Input	Reset Input

Pin	Pin Name	I/O	Function
83	VDD	-	Power
84-91	D0-D7	I/O	Data I/O
92	VSS	-	Power (Ground)
93	D8	I/O	Data I/O
94	D9	I/O	Data I/O
95	D10	I/O	Data I/O
96	D11	I/O	Data I/O
97	D12	I/O	Data I/O
98	D13	I/O	Data I/O
99	D14	I/O	Data I/O
100	D15	I/O	Data I/O

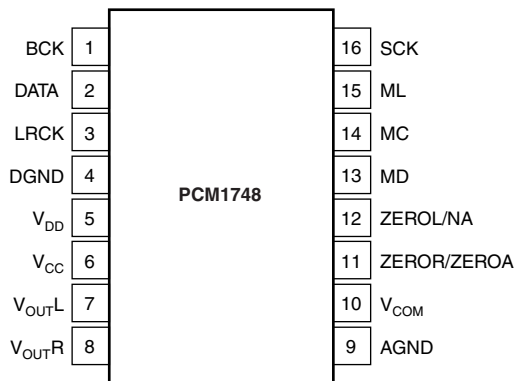
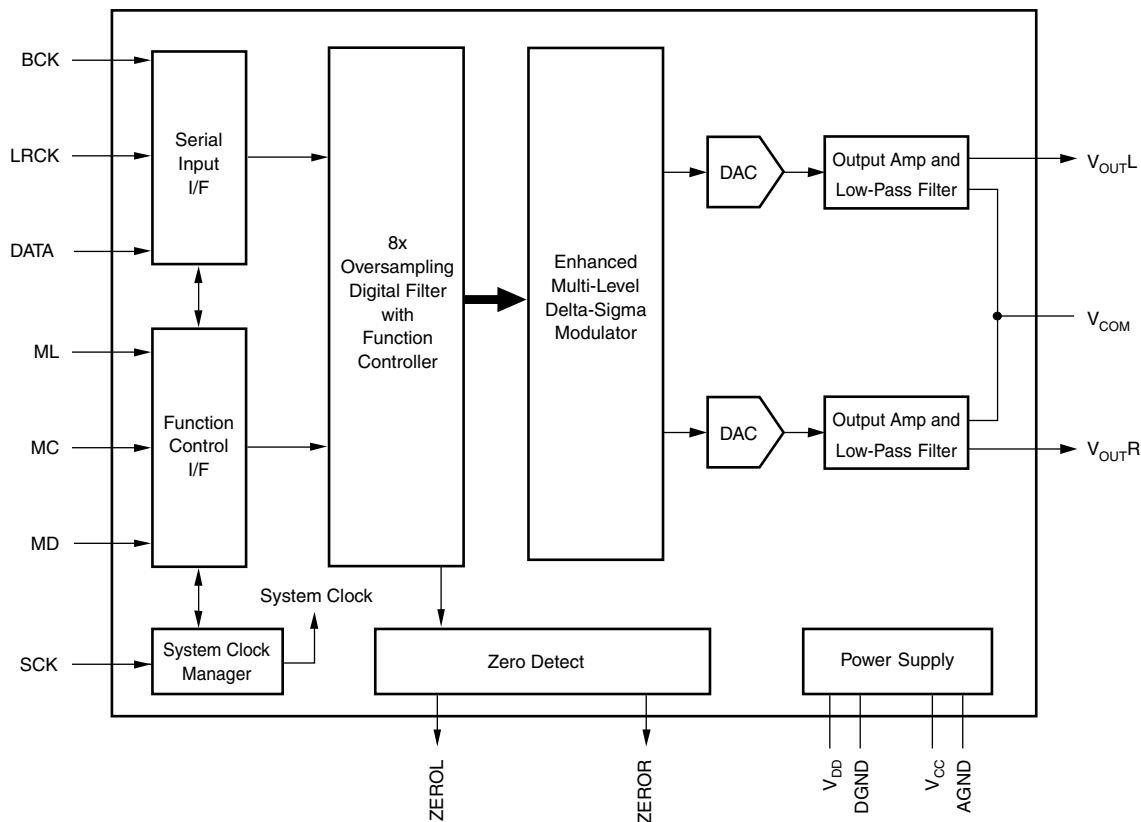
MN103S26E



Pin	Pin Name	I/O	Function	Connected Device
1	NINT0	O	Systemcontroller interrupt signal 0	SYSCON
2	NINT1	O	Systemcontroller interrupt signal 1	SYSCON
3	VDD3	-	I/O power supply (3.3V)	-
4	VSS	-	Ground	-
5	NINT2	O	Systemcontroller interrupt signal 2	SYSCON
6	WAITODC	O	Systemcontroller bus wait signal	SYSCON
7	NMRST	O	Systemcontroller reset output	SYSCON
8	DASPST	I	DASP signal initial value setting	HOST
9	CPUADR17	I	Systemcontroller address 17	SYSCON
10	CPUADR16	I	Systemcontroller address 16	SYSCON
11	CPUADR15	I	Systemcontroller address 15	SYSCON
12	CPUADR14	I	Systemcontroller address 14	SYSCON
13	CPUADR13	I	Systemcontroller address 13	SYSCON
14	CPUADR12	I	Systemcontroller address 12	SYSCON
15	CPUADR11	I	Systemcontroller address 11	SYSCON
16	CPUADR10	I	Systemcontroller address 10	SYSCON
17	CPUADR9	I	Systemcontroller address 9	SYSCON
18	VDD18	-	I/O power supply (1.8V)	-
19	VSS	-	Ground	-
20	DRAMVDD18	-	DRAM power supply (1.8V)	-
21	DRAMVSS	-	DRAM ground	-
22	CPUADR8	I	Systemcontroller address 8	SYSCON
23	CPUADR7	I	Systemcontroller address 7	SYSCON
24	CPUADR6	I	Systemcontroller address 6	SYSCON
25	CPUADR5	I	Systemcontroller address 5	SYSCON
26	CPUADR4	I	Systemcontroller address 4	SYSCON
27	CPUADR3	I	Systemcontroller address 3	SYSCON
28	CPUADR2	I	Systemcontroller address 2	SYSCON
29	CPUADR1	I	Systemcontroller address 1	SYSCON
30	CPUADR0	I	Systemcontroller address 0	SYSCON
31	VDD3	-	I/O power supply (3.3V)	-
32	VSS	-	Ground	-
33	DRAMVDD33	-	DRAM power supply (3.3V)	-
34	NCS	I	Systemcontroller chip selection signal	SYSCON
35	NWR	I	Systemcontroller write signal Input	SYSCON
36	NRD	I	Systemcontroller read signal Input	SYSCON
37	CPUDT7	I/O	Systemcontroller data 7	SYSCON
38	CPUDT6	I/O	Systemcontroller data 6	SYSCON
39	CPUDT5	I/O	Systemcontroller data 5	SYSCON
40	CPUDT4	I/O	Systemcontroller data 4	SYSCON
41	CPUDT3	I/O	Systemcontroller data 3	SYSCON
42	CPUDT2	I/O	Systemcontroller data 2	SYSCON
43	CPUDT1	I/O	Systemcontroller data 1	SYSCON
44	CPUDT0	I/O	Systemcontroller data 0	SYSCON
45	CLKOUT	O	Systemcontroller clock output	SYSCON
46	MMOD	I	Test mode selection signal	-
47	NRST	I	Reset	Input RSTIC
48	MSTPOL	I	MASTER pin polarity selection Input	-
49	SCLOCK	I/O	Debug serial clock	-
50	SDATA	I/O	Debug serial data	-
51	OFTR	I	Off track signal	Input EFP
52	BDO	I	Dropout signal Input	EFP
53	PWM1	I/O	General-purpose PWM 1 output	-
54	PWM2	I/O	General-purpose PWM 2 output	-
55	PWM3	I/O	General-purpose PWM 3 output	-
56	PWM4	I/O	General-purpose PWM 4 output	-
57	VDD3	-	I/O power supply (3.3V)	-
58	DRAMVDD18	-	DRAM power supply (1.8V)	-
59	DRAMVSS	-	DRAM ground	-
60	VSS	-	Ground	-
61	PWM5	I/O	General-purpose PWM 5 output	-
62	PWM6	I/O	General-purpose PWM 6 output	-
63	PWM7	I/O	General-purpose PWM 7 output	-
64	PWM8	I/O	General-purpose PWM 8 output	-
65	TBAL	O	Tracking balance adjustment output	FEP
66	FBAL	O	Focus balance adjustment output	FEP
67	TRSDRV	O	Traverse drive output	DRVIC
68	SPDRV	O	Spindle drive output	DRVIC
69	FG	I	Motor FG Input	DRVIC
70	TILTP	O	Tilting drive plus (+) output	Optical PU
71	TILT	O	Tilting drive reference output	Optical PU
72	TILTn	O	Tilting drive minus (-) output	Optical PU
73	TX	O	Digital output signal	-
74	DTRD	O	Data block frequency control selection signal	FEP
75	IDGT	O	CAPA block selection signal	FEP
76	VDD18	-	I/O power supply (1.8V)	-
77	VSS	-	Ground	-
78	VDD3	-	I/O power supply (3.3V)	-
79	OSC1	I	16.9MHz oscillation	Input
80	OSCO1	O	16.9MHz oscillation	output
81	VSS	-	Ground	-
82	TSTSG	O	EQ calibration signal	FEP
83	VFOshort	O	VFO short-circuit output	FEP
84	JLINE	O	J-line setting output	FEP
85	AVSSD	-	Analog circuit ground	-
86	ROUT	O	MASH R-ch audio output	-
87	LOUT	O	NASH L-ch audio output	-
88	AVDDD	-	Analog circuit power supply (3.3V)	-

Pin	Pin Name	I/O	Function	Connected Device
89	VCOF	I	JFVCO control voltage	–
90	TRCRS	I	Track cross generating signal Input	FEP
91	CMPIN	I	WOBBLE comparator Input	–
92	LPFOUT	O	LPF output	–
93	LPPIN	I	LPF Input	–
94	AVSSC	–	Analog circuit ground	–
95	HPFOUT	O	HPF output	–
96	FPFIN	I	HPF Input	–
97	CSLFLT	I	CPDET capacitor	–
98	RFDIF	I	CPDET RF Input	–
99	AVDDC	–	Analog circuit power supply (3.3V)	–
100	PLFLT2	I	PLL capacitor 2	–
101	PLFLT1	I	PLL capacitor 1	–
102	AVSSB	–	Analog circuit ground	–
103	RVI	I	VREFH reference current source resistor	–
104	VREFH	I	Reference voltage 2.2V Input	FEP
105	PLPG	I	PLL phase gain setting resistor	–
106	VHALF	I	Reference voltage 1.65V Input	FEP
107	DSLFF2	I	DSL capacitor 2	–
108	DSLFF1	I	DSL capacitor 1	–
109	AVDDB	–	Analog circuit power supply (3.3V)	–
110	NARF	I	Equivalent RF - Input	FEP
111	ARF	I	Equivalent RF - Input	FEP
112	JITOUT	O	Jitter signal monitor	–
113	AVSSA	–	Analog circuit ground	–
114	DAC0	O	Tracking drive output	DRVIC
115	DAC1	O	Focus drive output	DRVIC
116	AVDDA	–	Analog circuit power supply (3.3V)	–
117	AD0	I	FE Input	FEP
118	AD1	I	AS Input	FEP
119	AD2	I	TEph/TE3b/TEpp Input	FEP
120	AD3	I	RF envelope Input	FEP
121	AD4	I	Tangential phase difference Input	FEP
122	AD5/CAPAC2	I	Upper CAPA ENV Input/hold capacitor	FEP
123	AD6/CAPAC1	I	Lower CAPA ENV Input/hold capacitor	FEP
124	TECAPA	I	CAPA tracking error signal	–
125	VDD3	–	I/O power supply (3.3V)	–
126	VSS	–	Ground	–
127	MONI0	O	Internal signal monitor 0	–
128	MONI1	O	Internal signal monitor 1	–
129	MONI2	O	Internal signal monitor 2	–
130	MONI3	O	Internal signal monitor 3	–
131	NEJECT	I/O	Eject detection	MECA
132	NTRYCL	I/O	Tray close detection	MECA
133	NDASP	I/O	ATAPI drive active / slave connection I/O	HOST
134	NCS3FX	I	ATAPI host chip selection	HOST
135	NCS1FX	I	ATAPI host chip selection	HOST
136	DA2	I/O	ATAPI host address 2	HOST
137	DA0	I/O	ATAPI host address 0	HOST
138	NPDIAG	I/O	ATAPI slave to master diagnostic I/O	HOST
139	DA1	I/O	ATAPI host address 1	HOST
140	NIOCS16	O	ATAPI host data bus width selection output	HOST
141	INTRQ	O	ATAPI host Interrupt request	HOST
142	NDMACK	I	ATAPI host DMA acknowledge	HOST
143	VDD3	–	I/O power supply (3.3V)	–
144	VSS	–	Ground	–
145	IORDY	O	ATAPI host ready output	HOST
146	NIORD	I/O	ATAPI host data read	HOST
147	NIOWR	I/O	ATAPI host data write	HOST
148	DMARQ	O	ATAPI host DMA request	HOST
149	HDD15	I/O	ATAPI host data 15	HOST
150	HDD0	I/O	ATAPI host data 0	HOST
151	HDD14	I/O	ATAPI host data 14	HOST
152	VDD18	–	I/O power supply (1.8V)	–
153	P0	I	(Fix to the ground)	–
154	UATASEL	I	(Fix to the ground)	–
155	VSS	–	Ground	–
156	VDD3	–	I/O power supply (3.3V)	–
157	HDD1	I/O	ATAPI host data 1	HOST
158	HDD13	I/O	ATAPI host data 13	HOST
159	HDD2	I/O	ATAPI host data 2	HOST
160	HDD12	I/O	ATAPI host data 12	HOST
161	HDD3	I/O	ATAPI host data 3	HOST
162	VDD3	–	I/O power supply (3.3V)	–
163	VSS	–	Ground	–
164	HDD11	I/O	ATAPI host data 11	HOST
165	HDD4	I/O	ATAPI host data 4	HOST
166	HDD10	I/O	ATAPI host data 10	HOST
167	HDD5	I/O	ATAPI host data 5	HOST
168	HDD9	I/O	ATAPI host data 9	HOST
169	VDD3	–	I/O power supply (3.3V)	–
170	VSS	–	Ground	–
171	HDD6	I/O	ATAPI host data 6	HOST
172	HDD8	I/O	ATAPI host data 8	HOST
173	HDD7	I/O	ATAPI host data 7	HOST
174	VDDH	–	ATAPI reference power supply (5.0V)	–
175	NRESET	I	ATAPI host reset Input	HOST
176	MASTER	I	ATAPI master / slave selection	HOST

PCM1748

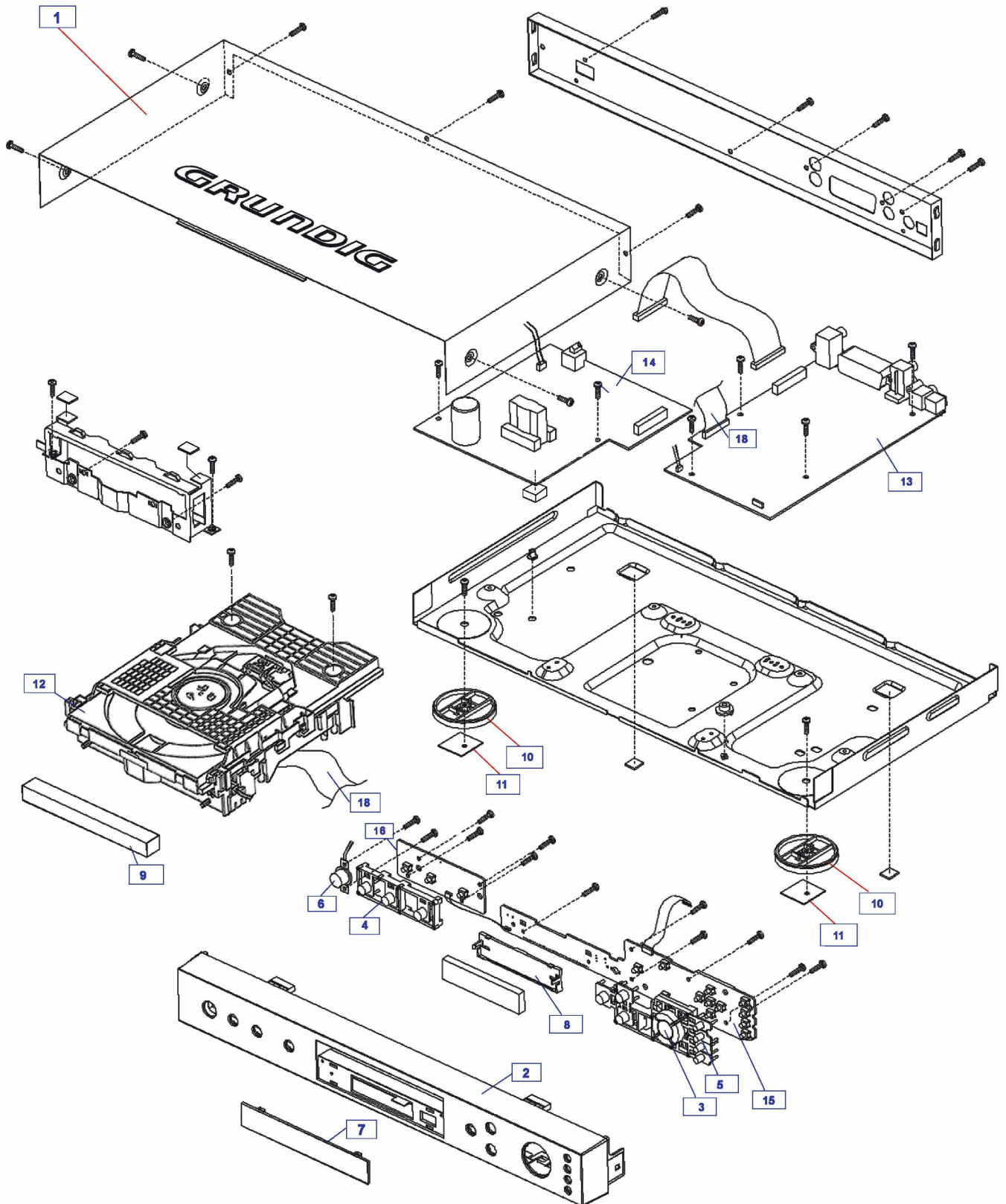


Pin	Pin Name	I/O	Function
1	BCK	IN	Audio Data Bit Clock Input. (1)
2	DATA	IN	Audio Data Digital Input. (1)
3	LRCK	IN	L-Channel and R-Channel Audio Data Latch Enable Input. (1)
4	DGND	-	Digital Ground
5	V _{DD}	-	Digital Power Supply, +3.3V
6	V _{CC}	-	Analog Power Supply, +5V
7	V _{OUTL}	L	OUT Analog Output for L-Channel.
8	V _{OUTR}	R	OUT Analog Output for R-Channel.
9	AGND	-	Analog Ground
10	V _{COM}	-	Common Voltage Decoupling.
11	ZEROR/ ZEROA	OUT	Zero Flag Output for R-Channel/Zero Flag Output for L/R-Channel.
12	ZEROL/NA	OUT	Zero Flag Output for L-Channel/No Assign.
13	MD	IN	Mode Control Data Input. (2)
14	MC	IN	Mode Control Clock Input. (2)
15	ML	IN	Mode Control Latch Input. (2)
16	SCK	IN	System Clock Input.

Explosionszeichnungen und Ersatzteillisten

Exploded Views and Spare Parts Lists

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Ersatzteilliste Spare Parts List

DVD

10 / 2002

XENARO GDP 4200

MATERIAL-NR. / PART NO.: 774010365100
BESTELL-NR. / ORDER NO.: GMJ8400 SCHWARZ/BLACK

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		774010365100		XENARO GDP 4200 SCHWARZ KEIN E-TEIL	XENARO GDP 4200 BLACK NO SPARE PART
0001.000	1	759880716500		GEH.-OBERTEIL	TOP COVER
0002.000	1	759880716600		FRONTPLATTE KPL. SCHWARZ	FRONT PANEL CPL. BLACK
0003.000	1	759880716700		TASTENSATZ RECHTS	TASTE SET RIGHT
0004.000	1	759880716800		TASTENSATZ LINKS	TASTE SET LEFT
0005.000	1	759880716900		TASTENSATZ FUNKTION	TASTE SET FUNCTION
0006.000	1	759880717000		KNOPF NETZ	POWER KNOB
0007.000	1	759880715100		FENSTER DISPLAY	WINDOW DISPLAY
0008.000	1	759880714700		FL-HALTER	FL-HOLDER
0009.000	1	759880717100		ABDECKUNG SCHUBLADE	TRAY COVER
0010.000	1	759880714500	2	FUSS	FOOT
0011.000	1	759880714600	2	GUMMI FUSS	RUBBER FOOT
0012.000	1	759880715000		LAUFWERK	DRIVE MECHANISM
0013.000	1	275990113900	X	LP-HAUPTMODUL KEIN E-TEIL	MAIN BOARD NO SPARE PART
0014.000	△ 1	275990032300	X	LP-NETZMODUL	POWER BOARD
0015.000	1	275990201700	X	LP-BEDIENMODUL RECHTS KEIN E-TEIL	CONTROL BOARD RIGHT NO SPARE PART
0016.000	1	275990201800	X	LP-BEDIENMODUL LINKS KEIN E-TEIL	CONTROL BOARD LEFT NO SPARE PART
0017.000	△	829099122000		NETZKABEL	POWER CABLE
0018.000	1	759880714900		FLEXIBLES KABEL 50P	FLEXIBLE CABLE 50P
0019.000		267280120201		FERNBEDIENUNG TP 81 D	REMOTE CONTROL TP 81 D
		720105411500		SERVICE MANUAL D/GB	SERVICE MANUAL D/GB
		720116024500		BEDIENUNGSANLEITUNG D/GB/F//NL	INSTRUCTION MANUAL D/GB/F//NL
		720116024600		BEDIENUNGSANLEITUNG DK/S/FIN/N/E/P	INSTRUCTION MANUAL DK/S/FIN/N/E/P
				X = SIEHE GESONDERTE E-LISTE	X = SEE SEPARATE PARTS LIST

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste Spare Parts List

DVD

10 / 2002

XENARO GDP 4200

MATERIAL-NR. / PART NO.: 774010245100
BESTELL-NR. / ORDER NO.: GMJ8300 PROCON SILBER/PROCON SILVER

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		774010245100		XENARO GDP 4200 PROCON SILBER KEIN E-TEIL	XENARO GDP 4200 PROCON SILVER NO SPARE PART
0001.000	1	759880714400		GEH.-OBERTEIL	TOP COVER
0002.000	1	759880715200		FRONTPLATTE KPL. SILBER	FRONT PANEL CPL. SILVER
0003.000	1	759880716100		TASTENSATZ RECHTS	TASTE SET RIGHT
0004.000	1	759880716200		TASTENSATZ LINKS	TASTE SET LEFT
0005.000	1	759880716300		TASTENSATZ FUNKTION	TASTE SET FUNCTION
0006.000	1	759880716400		KNOPF NETZ	POWER KNOB
0007.000	1	759880715100		FENSTER DISPLAY	WINDOW DISPLAY
0008.000	1	759880714700		FL-HALTER	FL-HOLDER
0009.000	1	759880714800		ABDECKUNG SCHUBLADE	TRAY COVER
0010.000	1	759880714500	2	FUSS	FOOT
0011.000	1	759880714600	2	GUMMI FUSS	RUBBER FOOT
0012.000	1	759880715000		LAUFWERK	DRIVE MECHANISM
0013.000	1	275990113900	X	LP-HAUPTMODUL KEIN E-TEIL	MAIN BOARD NO SPARE PART
0014.000	△ 1	275990032300	X	LP-NETZMODUL	POWER BOARD
0015.000	1	275990201700	X	LP-BEDIENMODUL RECHTS KEIN E-TEIL	CONTROL BOARD RIGHT NO SPARE PART
0016.000	1	275990201800	X	LP-BEDIENMODUL LINKS KEIN E-TEIL	CONTROL BOARD LEFT NO SPARE PART
0017.000	△	829099122000		NETZKABEL	POWER CABLE
0018.000	1	759880714900		FLEXIBLES KABEL 50P	FLEXIBLE CABLE 50P
0019.000		267280120001		FERNBEDIENUNG TP 81 D	REMOTE CONTROL TP 81 D
		720105411500		SERVICE MANUAL D/GB	SERVICE MANUAL D/GB
		720116024500		BEDIENUNGSANLEITUNG D/GB/F//NL	INSTRUCTION MANUAL D/GB/F//NL
		720116024600		BEDIENUNGSANLEITUNG DK/S/FIN/N/E/P	INSTRUCTION MANUAL DK/S/FIN/N/E/P
				X = SIEHE GESONDERTE E-LISTE	X = SEE SEPARATE PARTS LIST

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste Spare Parts List

10 / 2002

XENARO GDP 4204

MATERIAL-NR. / PART NO.: 774010355100
BESTELL-NR. / ORDER NO.: GMJ8500 PROCON SILBER/PROCON SILVER

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		774010355100		XENARO GDP 4204 PROCON SILBER KEIN E-TEIL	XENARO GDP 4204 PROCON SILVER NO SPARE PART
0001.000	1	759880714400		GEH.-OBERTEIL	TOP COVER
0002.000	1	759880715200		FRONTPLATTE KPL. SILBER	FRONT PANEL CPL. SILVER
0003.000	1	759880716100		TASTENSATZ RECHTS	TASTE SET RIGHT
0004.000	1	759880716200		TASTENSATZ LINKS	TASTE SET LEFT
0005.000	1	759880716300		TASTENSATZ FUNKTION	TASTE SET FUNCTION
0006.000	1	759880716400		KNOPF NETZ	POWER KNOB
0007.000	1	759880715100		FENSTER DISPLAY	WINDOW DISPLAY
0008.000	1	759880714700		FL-HALTER	FL-HOLDER
0009.000	1	759880714800		ABDECKUNG SCHUBLADE	TRAY COVER
0010.000	1	759880714500	2	FUSS	FOOT
0011.000	1	759880714600	2	GUMMI FUSS	RUBBER FOOT
0012.000	1	759880715000		LAUFWERK	DRIVE MECHANISM
0013.000	1	275990113900	X	LP-HAUPTMODUL KEIN E-TEIL	MAIN BOARD NO SPARE PART
0014.000	△ 1	275990032300	X	LP-NETZMODUL	POWER BOARD
0015.000	1	275990201700	X	LP-BEDIENMODUL RECHTS KEIN E-TEIL	CONTROL BOARD RIGHT NO SPARE PART
0016.000	1	275990201800	X	LP-BEDIENMODUL LINKS KEIN E-TEIL	CONTROL BOARD LEFT NO SPARE PART
0017.000	△	759880717200		NETZKABEL	POWER CABLE
0018.000	1	759880714900		FLEXIBLES KABEL 50P	FLEXIBLE CABLE 50P
0019.000		267280120001		FERNBEDIENUNG TP 81 D	REMOTE CONTROL TP 81 D
		720105411500		SERVICE MANUAL D/GB	SERVICE MANUAL D/GB
		720116025000		BEDIENUNGSANLEITUNG GB	INSTRUCTION MANUAL GB

X = SIEHE GESONDERTE E-LISTE

X = SEE SEPARATE PARTS LIST

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste Spare Parts List

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LP-HAUPTMODUL MAIN BOARD

MATERIAL-NR. / PART NO.: 275990113900

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		275990113900		LP-HAUPTMODUL KEIN E-TEIL	MAIN BOARD NO SPARE PART

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION	POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
D 00002	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00014	830477202300	SMD IC PANTERA NDV8602VWA
D 00003	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00015	759880713000	IC 74LCX573WM
D 00004	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00018	759880713000	IC 74LCX573WM
D 00005	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00026	759880715700	IC74ACT125SCX
D 00006	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00027	759880713200	IC MN102H60G
D 00007	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00028	759880713300	IC MN103S26E
D 00008	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00029	759880713400	IC FLASH 16MB
D 00009	830921505000	DIODE 1 N 4148 GEG.N.AV 6			SST39VF160-70-4C-EK
D 00010	830921505000	DIODE 1 N 4148 GEG.N.AV 6	U 00030	759880713500	IC 2CH 96KHZ DAC PCM1748KE
D 00011	830921505000	DIODE 1 N 4148 GEG.N.AV 6			
D 00013	830921505000	DIODE 1 N 4148 GEG.N.AV 6	Y 00001	759880713600	QUARZ 27MHZ
D 00014	830921505000	DIODE 1 N 4148 GEG.N.AV 6	Y 00002	759880713700	QUARZ 16.9344 MHZ
D 00015	830921505000	DIODE 1 N 4148 GEG.N.AV 6			
L 00001	759880712500	SPULE 1UH			
L 00002	759880712500	SPULE 1UH			
L 00003	759880712600	SPULE 2.2UH			
L 00004	759880712500	SPULE 1UH			
L 00004	759880712700	SPULE 100UH DP4200			
L 00005	759880712700	SPULE 100UH DP4200			
L 00008	759880712700	SPULE 100UH DP4200			
L 00010	759880712700	SPULE 100UH DP4200			
Q 00005	830320654800	TRANS BC547C PHI/MOT			
Q 00006	830320654800	TRANS BC547C PHI/MOT			
Q 00007	830320755800	TRANS.BC 557B SIE/VAL/TFK			
Q 00008	830320755800	TRANS.BC 557B SIE/VAL/TFK			
Q 00009	830320654800	TRANS BC547C PHI/MOT			
Q 00014	830320654800	TRANS BC547C PHI/MOT			
Q 00015	830320654800	TRANS BC547C PHI/MOT			
Q 00016	830320654800	TRANS BC547C PHI/MOT			
Q 00017	830320654800	TRANS BC547C PHI/MOT			
Q 00018	830320654800	TRANS BC547C PHI/MOT			
Q 00019	830320654800	TRANS BC547C PHI/MOT			
Q 00020	830320654800	TRANS BC547C PHI/MOT			
Q 00021	830320755800	TRANS.BC 557B SIE/VAL/TFK			
U 00003	830575983400	SMD IC LM833M NSC			
U 00007	759880712800	IC EEPROM NM93CS46LZEM8			
U 00009	830576111700	SMD IC LM1117DT-1.8 SOT25			
U 00010	759880712900	IC SDRAM HY57V653220BTC-7			

Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Mat.-Nummer 720108000000, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000000, as well as the respective national deviations.

ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste Spare Parts List

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NETZTEILMODUL POWER BOARD

MATERIAL-NR. / PART NO.: 275990032300

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG DESCRIPTION (D)
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275990032300 LP-NETZMODUL

POWER BOARD

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION	POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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△	759880716000	NETZSCHALTER POWER SWITCH
BC 01001	△ 759880710100	KONDENS. -275V 104
BC 01002	△ 759880710200	KONDENS. -400V 102
BC 01003	△ 759880710200	KONDENS. -400V 102
BC 01004	△ 759880710200	KONDENS. -400V 102
BC 01005	△ 759880710100	KONDENS. -275V 104
BC 01006	△ 759880710400	KONDENS. -400V 222

D 01001	830921512700	DIODE 1 N 4007 -GA
D 01002	830921512700	DIODE 1 N 4007 -GA
D 01003	830921512700	DIODE 1 N 4007 -GA
D 01004	830921512700	DIODE 1 N 4007 -GA
D 01005	759880715300	DIODE HER107
D 01006	759550231400	DIODE HER105
D 01007	759550231400	DIODE HER105
D 01008	759550231400	DIODE HER105

F 01001 △ 759880710600 SICHERUNG

IC 01001	759880710700	IC 5L0380R
IC 01002	△ 759880710800	IC H11A817C300
IC 01003	759880710900	IC KA431AZ
IC 01005	759880711000	IC UA7805CKC
IC 01006	759880711100	IC UA7812CKC
IC 01007	759880711200	IC KA7912

L 01001	759880711300	SPULE
L 01002	759880711300	SPULE
L 01003	759880715700	SPULE 10UH 2A
L 01004	759880715700	SPULE 10UH 2A
L 01005	759880715700	SPULE 10UH 2A
L 01006	759880715600	SPULE 10UH 1A
L 01007	759880715600	SPULE 10UH 1A
L 01008	759880715700	SPULE 10UH 2A

P 01001 △ 759880711400 NETZBUCHSE

POW 0000 759880711500 VERBINDER 2P 7.92MM

R 01001 759880710300 WIDERST. 470K

RV 01001 759880711600 VARISTOR 14D471

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION

Ersatzteilliste Spare Parts List

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LP-BEDIENMODUL RECHTS CONTROL BOARD RIGHT

MATERIAL-NR. / PART NO.: 275990201700

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG DESCRIPTION (D)
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275990201700 LP-BEDIENMODUL RECHTS
KEIN E-TEIL

CONTROL BOARD RIGHT
NO SPARE PART

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION	POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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D 03000	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03001	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03002	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03003	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03004	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03005	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03006	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03007	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03008	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 03009	830921505000	DIODE 1 N 4148 GEG.N.AV 6

DL 03001 759880713800 FLUORESZENZANZEIGE
FLUORESCENT TUBE

IC 03001	759880714000	IC UPD16312
IC 03002	759880714100	QUARZ 36KHZ

IC 03003 759880714200 IC LM9022M

Q 03001 830320654800 TRANS BC547C PHI/MOT

SW 03001	759880714300	SCHALTER EVQPAE07K
SW 03002	759880714300	SCHALTER EVQPAE07K
SW 03003	759880714300	SCHALTER EVQPAE07K
SW 03004	759880714300	SCHALTER EVQPAE07K
SW 03005	759880714300	SCHALTER EVQPAE07K
SW 03006	759880714300	SCHALTER EVQPAE07K
SW 03007	759880714300	SCHALTER EVQPAE07K
SW 03008	759880714300	SCHALTER EVQPAE07K
SW 03009	759880715900	SCHALTER EVQ11L07K
SW 03010	759880715900	SCHALTER EVQ11L07K
SW 03011	759880714300	SCHALTER EVQPAE07K
SW 03012	759880714300	SCHALTER EVQPAE07K

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LP-BEDIENMODUL LINKS CONTROL BOARD LEFT

MATERIAL-NR. / PART NO.: 275990201800

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG DESCRIPTION (D)
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275990201800 LP-BEDIENMODUL LINKS
KEIN E-TEIL

CONTROL BOARD LEFT
NO SPARE PART

POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION	POS. NR. POS. NO.	MATERIAL-NR. PART NUMBER	BEZEICHNUNG DESCRIPTION
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D 02001	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 02002	830921505000	DIODE 1 N 4148 GEG.N.AV 6
D 02003	830921505000	DIODE 1 N 4148 GEG.N.AV 6

SW 02001	759880714300	SCHALTER
SW 02002	759880714300	SCHALTER
SW 02003	759880714300	SCHALTER

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION