THOMSON

AUDIO

# SERVICE MANUAL
# DOCUMENTATION TECHNIQUE
# TECHNISCHE DOKUMENTATION
# DOCUMENTAZIONE TECNICA
# DOCUMENTACION TECNICA

# CS520B / CS520M
# MS3300 / MS3300B
# MS4300 / MS4300B / MS4300U

Version (PC*): A / B

*PC: The version code is indicated either in the battery compartment or on the back of the unit - ce code version est indiqué dans le compartiment à piles ou au dos de l'appareil - PC: Version des Geräts wird im Batteriefach oder auf der Rückseite angegeben - il codice della versione è indicado nello scompartimento delle batterie o sul retro dell'apparecchio - el código de la versión está indicado en el compartimento de las pilas o en la parte trasera del aparato.

## Technical data - Caractéristiques principales
## Technische Daten - Dati tecnici - Caracteristicas del aparato

| | | | |
|---|---|---|---|
| **Type of set:**<br>**Type d'appareil:**<br>**Geräteart:**<br>**Tipo d'apparecchio:**<br>**Tipo de aparato:** | Two-in-one horizontale combination/DAD<br>Ensemble compact stéréophonique<br>DAD-2er Horizontal Kompaktanlage<br>Compatto Hifi/CD<br>Equipo compacto estereofónico/DAD | | 250mm ↕ 280 mm ↗ 310 mm 8kg |
| **Power supply:**<br>**Alimentation:**<br>**Stromversorgung:**<br>**Alimentazione:**<br>**Alimentación:** | 230 V ~ 50Hz | | **Nominal output power:**<br>**Puissance nominale de sortie:** **MS3300** 2 x 40W (rms)<br>**Nennausgangsleistung:** 2 x 80W (music)<br>**Potenza nominale di uscita:** **MS4300** 2 x 80W (rms)<br>**Potencia nominal de salida:** 2 x 160W (music) |
| **FM - MF:**<br>**MW - PO:**<br>**LW - GO:** | 87.5 - 108 MHz<br>522 - 1611 kHz<br>150 - 283 kHz | | **Sensitivity:**<br>**Sensibilité:** **FM - MF:** 48µV (S/N = 50 dB)<br>**Empfindlichkeit:** **MW - PO:** 1000µV/m (S/N = 20 dB)<br>**Sensibilità:** **LW - GO:** 2500µV/m (S/N = 20 dB)<br>**Sensibilidad:** |
| **Frequency response:**<br>**Courbe de réponse:**<br>**Frequenzgang:**<br>**Curva di risposta:**<br>**Curva de respuesta:** | 125 Hz - 6.3 kHz<br>(5 dB) | | **Signal to noise ratio:**<br>**Rapport signal / bruit:**<br>**Geräuschspannungabstand:** 38 dB<br>**Rapporto segnale / disturbo:**<br>**Relación señal / ruido:** |
| **Wow and flutter:**<br>**Fluctuations:**<br>**Gleichlauf:**<br>**Fluttuazioni:**<br>**Fluctuaciones:** | 0,3% | | → 4,75 cm/s<br><< ◀◀ >> << ▶▶ >> C60: 170s |
| **DAD**<br>**Disc rotation speed:**<br>**Vitesse de rotation du disque:**<br>**CD-Drehgeschwindigkeit:**<br>**Velocità di rotazione del disco:**<br>**Velocidad de rotación del disco:** | 200 ➡ 500 tr/mn | | **Frequency response:**<br>**Courbe de réponse:**<br>**Frequenzgang:** 60 Hz - 16 kHz<br>**Curva di risposta:** (-3 dB)<br>**Curva de respuesta:** |
| **Stereo separation :**<br>**Diaphonie :**<br>**Übersprechdämpfung :**<br>**Diafonia :**<br>**Diafonía :** | 40 dB | | **Signal to noise ratio:**<br>**Rapport signal / bruit:**<br>**Geräuschspannungabstand:** 60 dB<br>**Rapporto segnale / disturbo:**<br>**Relación señal / ruido:** |

**WARNING :** ***Before servicing this chassis read the safety recommendations.***
**ATTENTION :** ***Avant toute intervention sur ce châssis, lire les recommandations de sécurité.***
**ACHTUNG :** ***Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.***
**ATTENZIONE :** ***Prima di intervenire sullo chassis, leggere le norme di sicurezza.***
**IMPORTANTE :** ***Antes de cualquier intervención, leer las recomendaciones de seguridad.***

0805 - CRKD2143 - CRKD2143M - CRKD2577 - CRKD2577C

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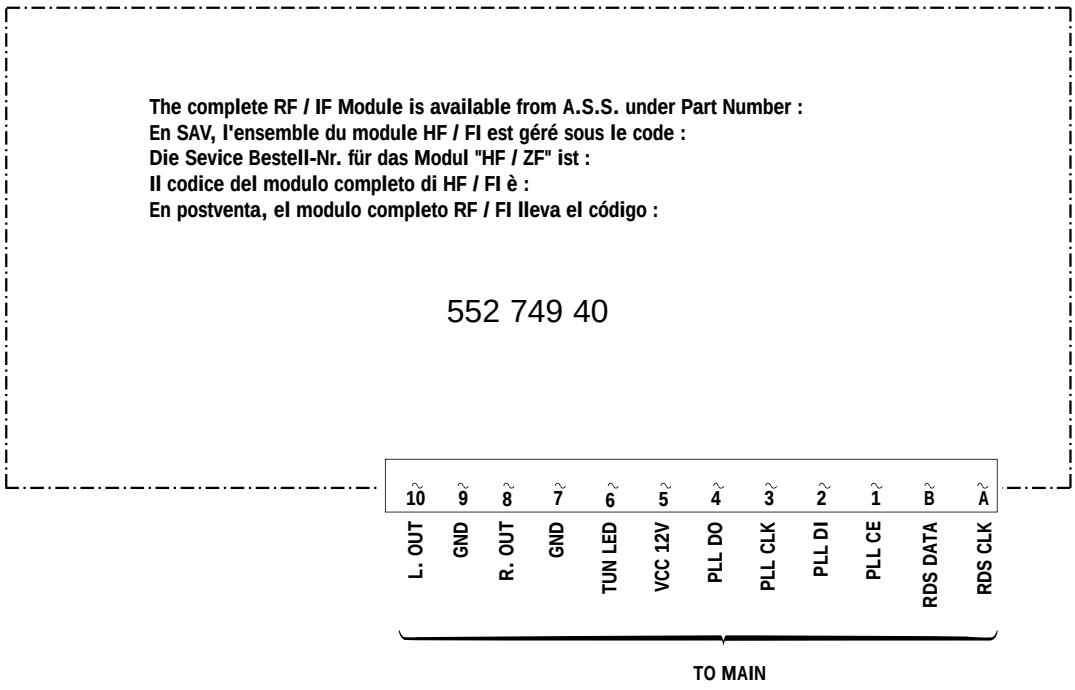
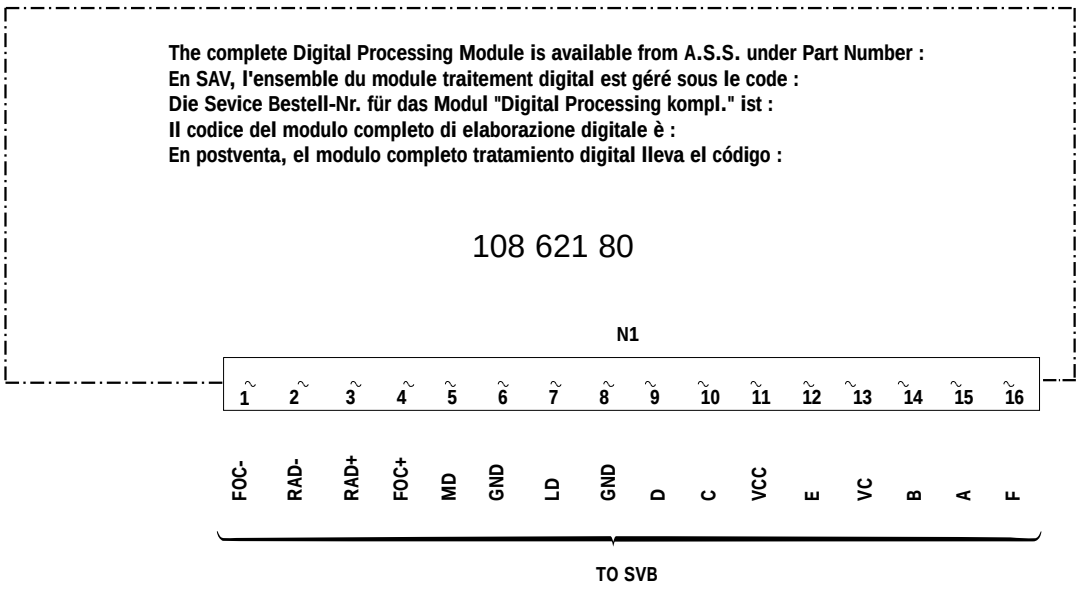
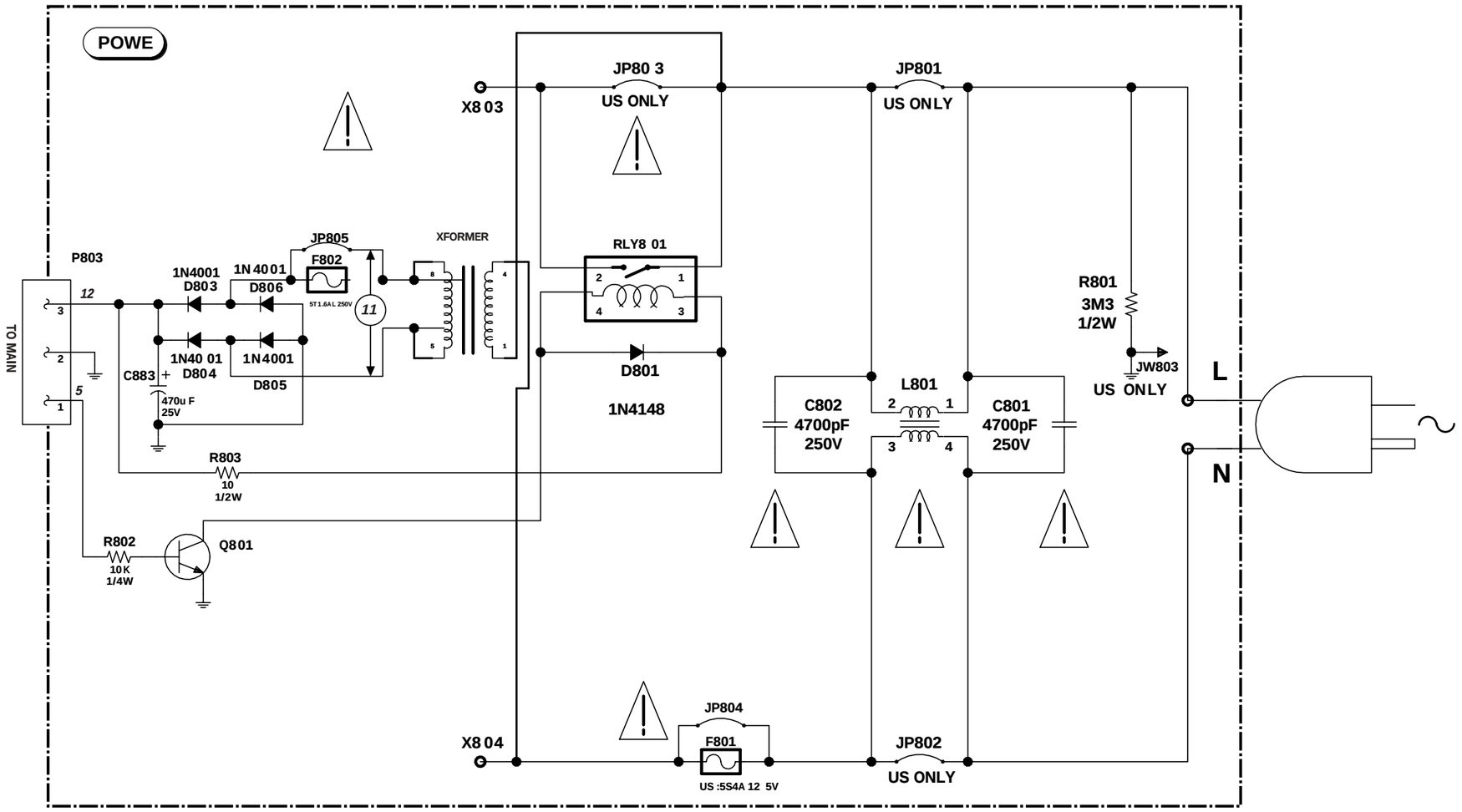
## RF / IF SCHEMATIC DIAGRAM - SCHEMA HF / FI - SCHALTBILD HF / ZF SCHEMA HF / FI - ESQUEMA RF / FI



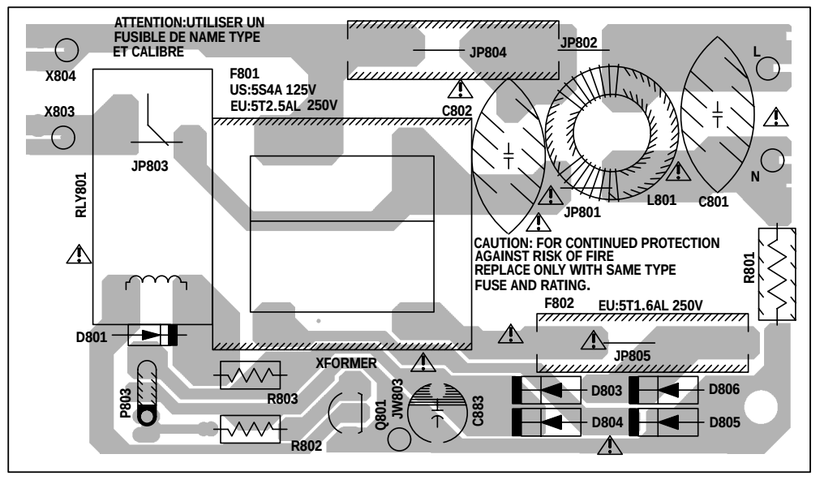

## DIGITAL PROCESSING SCHEMATIC DIAGRAM - SCHEMA DU TRAITEMENT DIGITAL - SCHALTBILD DIGITALVERARBEITUNG - SCHEMA ELABORAZIONE DIGITALE ESQUEMA DEL TRATAMIENTO DIGITAL



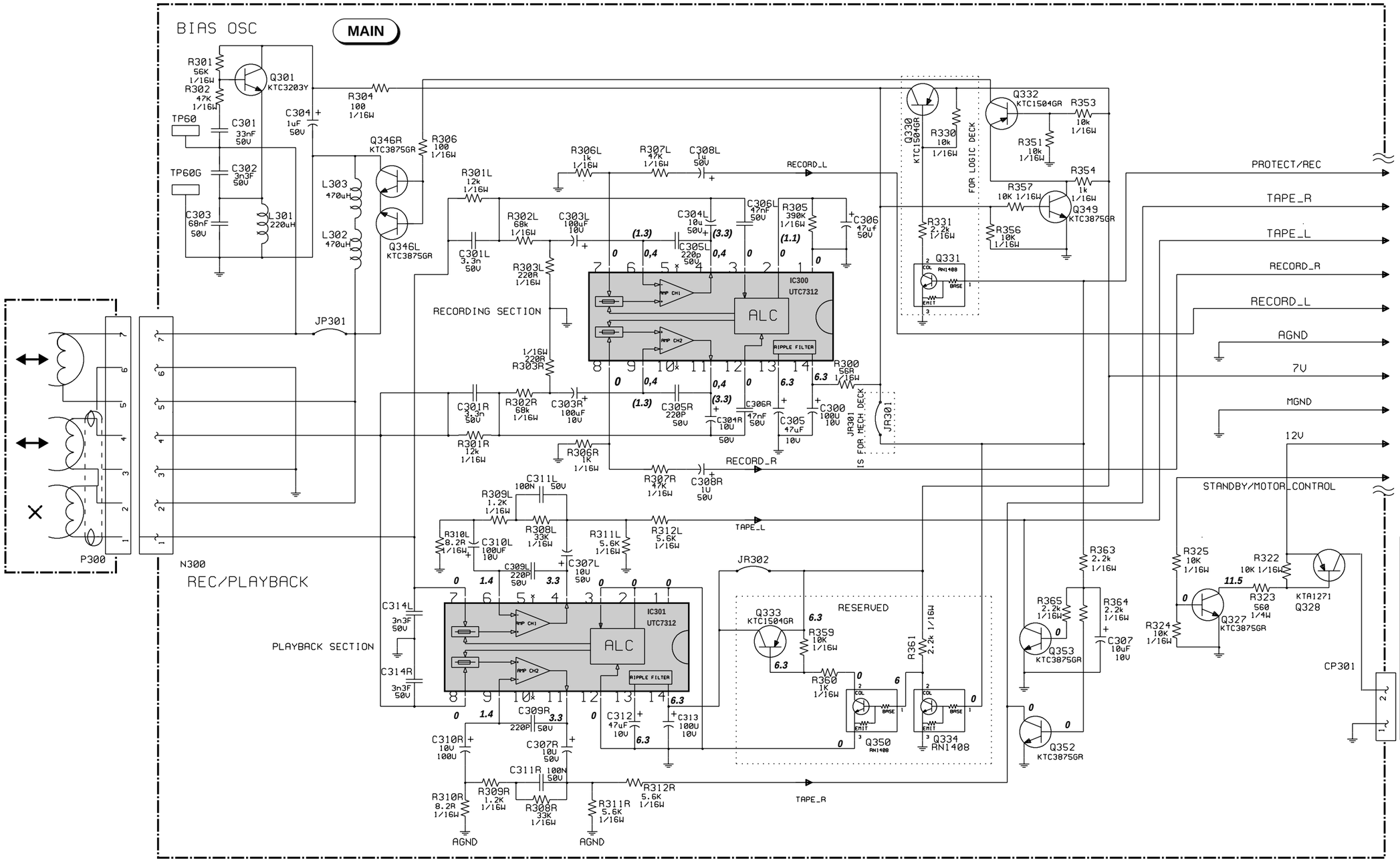
## POWER SUPPLY SCHEMATIC DIAGRAM - SCHEMA DE L'ALIMENTATION - SCHALTBILD NETZTEIL - SCHEMA DELL'ALIMENTAZIONE - ESQUEMA DE LA ALIMENTACIÓN



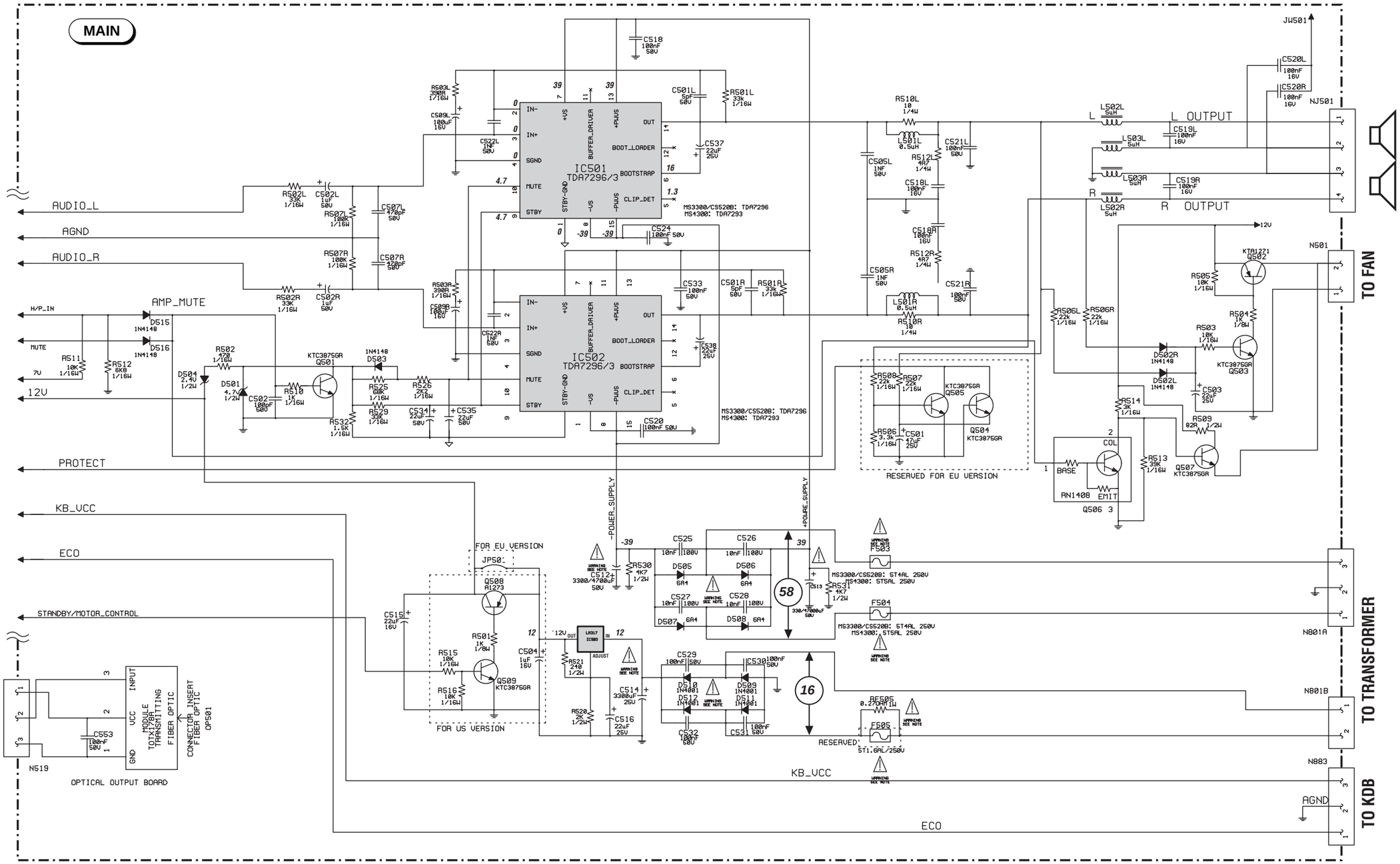

**Power unit P.C.B.**
**Platine secteur**
**Ltpl. Netzanschluss**
**Piastra di rete**
**Platina de red**



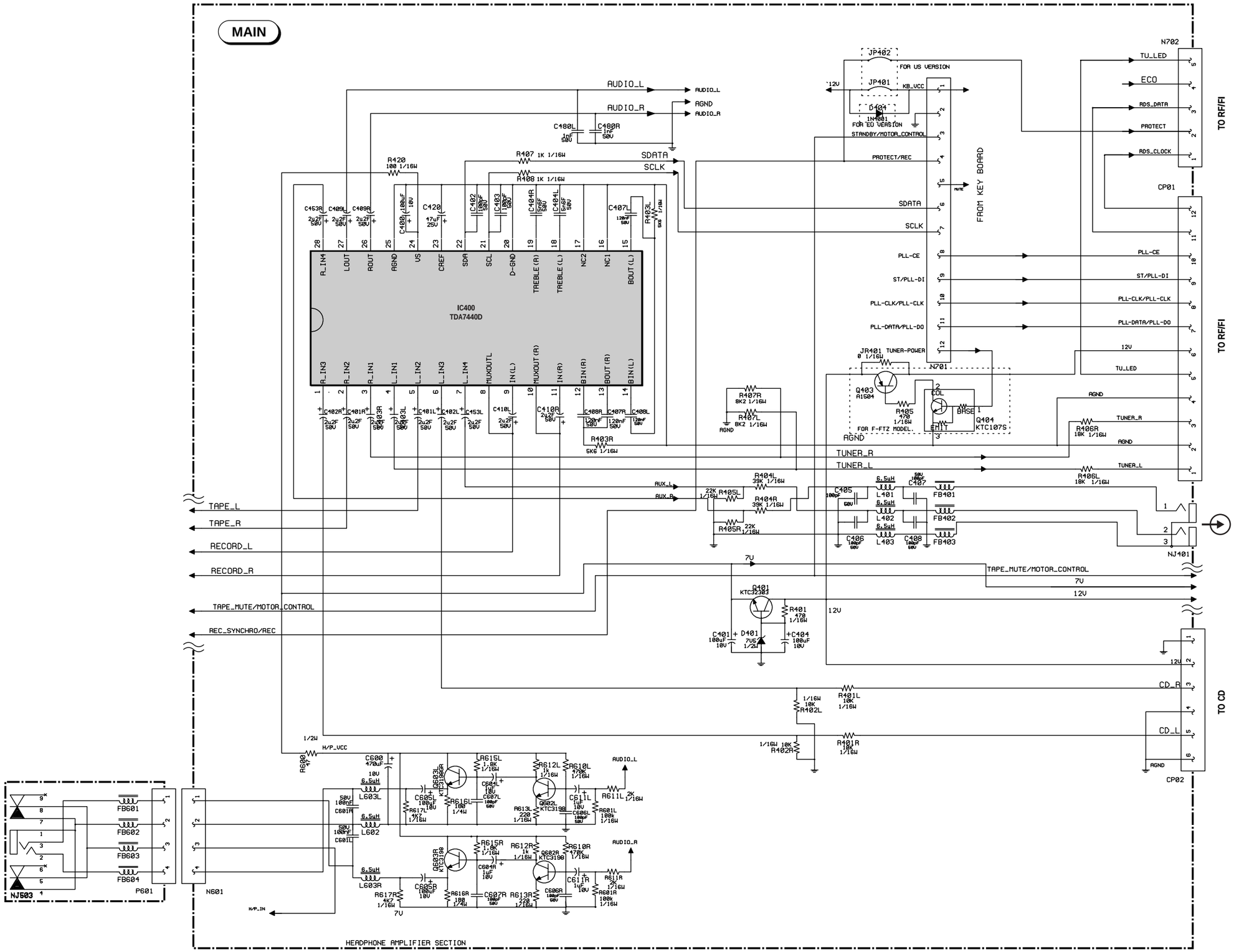
**MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (1/3)**



# MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (2/3)

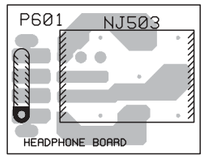


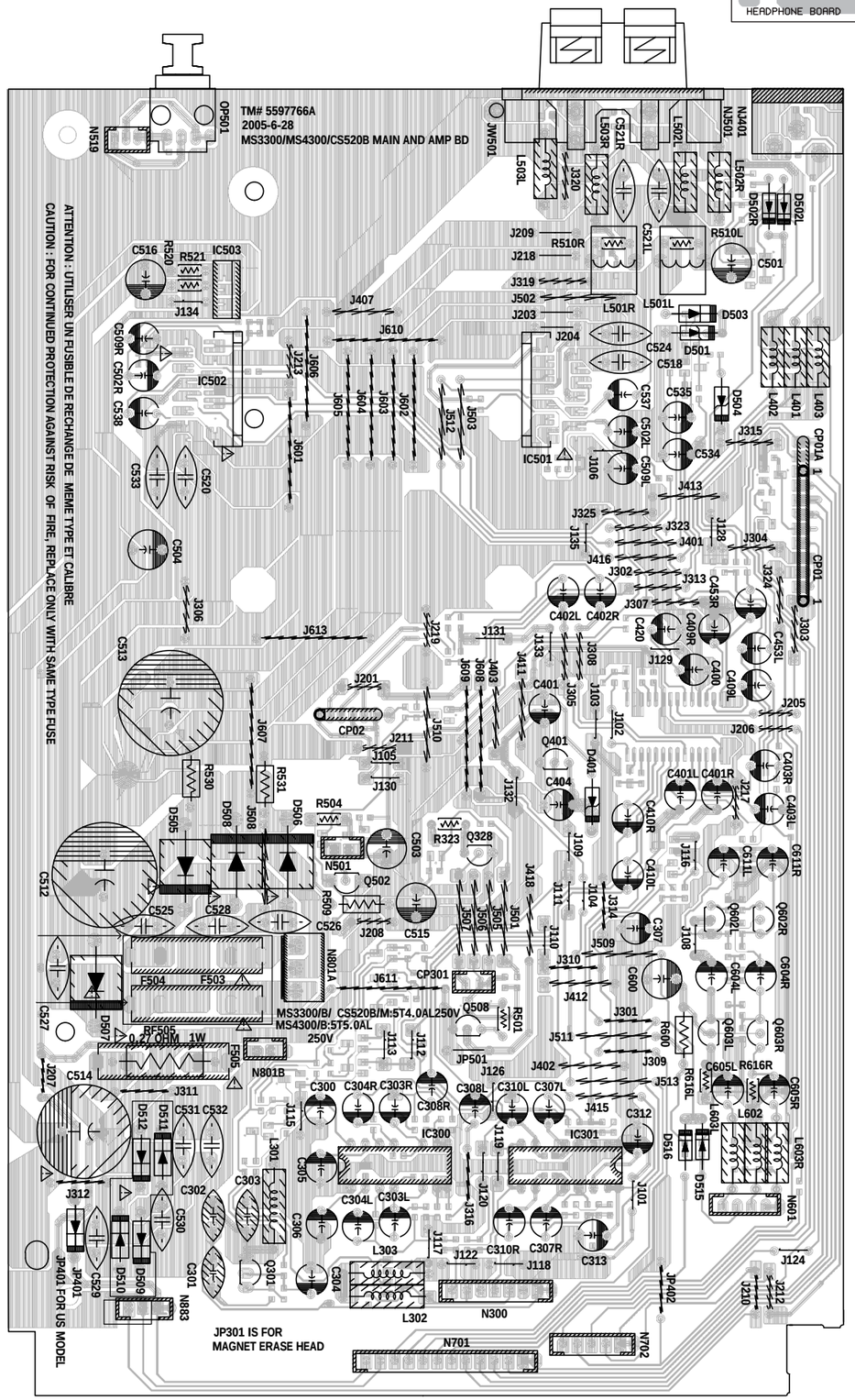
**MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (3/3)**

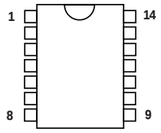


**Main P.C.B.**
**Platine principale**
**Grundplatte**
**Piastra principale**
**Platina principal**

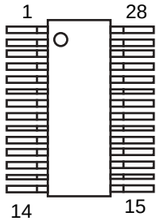
Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes



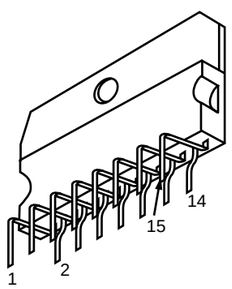




**UTC7312**

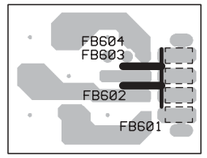


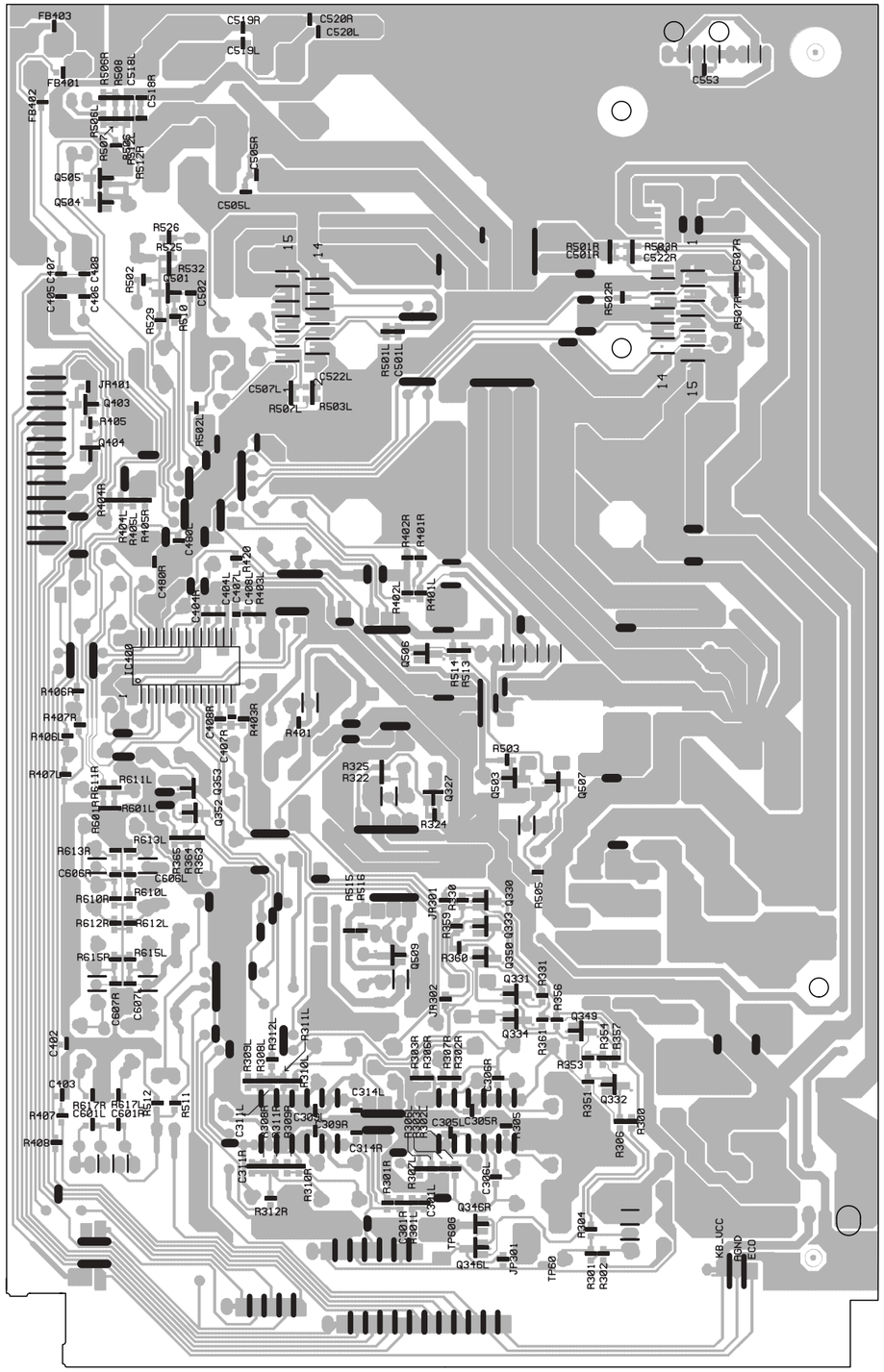

**TDA7440**




**TDA7293**
**TDA7294**
**TDA7296**

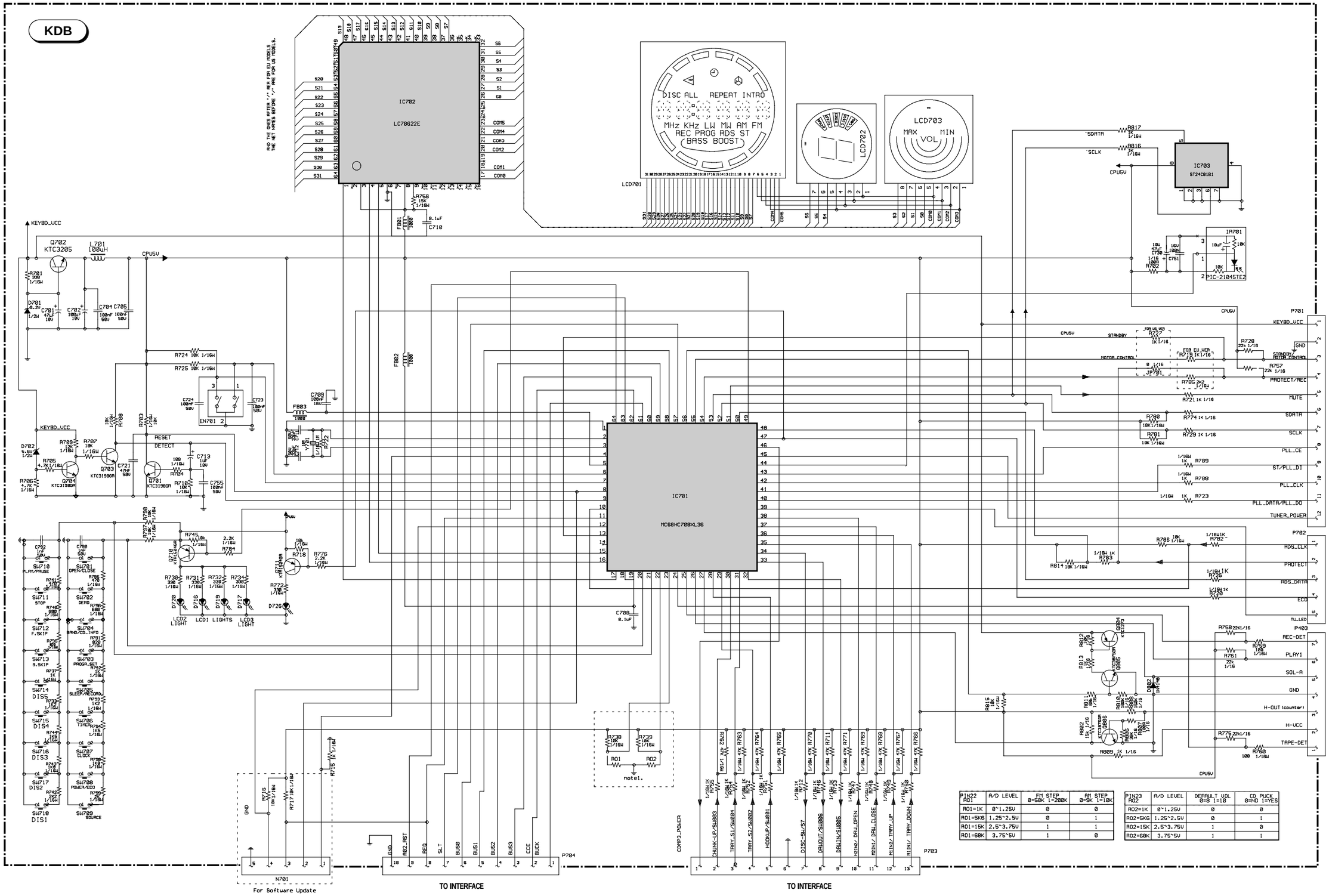
Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre



**CRKD2143 / CRKD2577**
First issue 08/05

# CONTROL / DISPLAY SCHEMATIC DIAGRAM - SCHEMA COMMANDES / AFFICHEUR - SCHALTBILD BEDIENTEIL / ANZEIGE - SCHEMA COMANDI / INDICATORE ESQUEMA MANDOS / INDICADOR



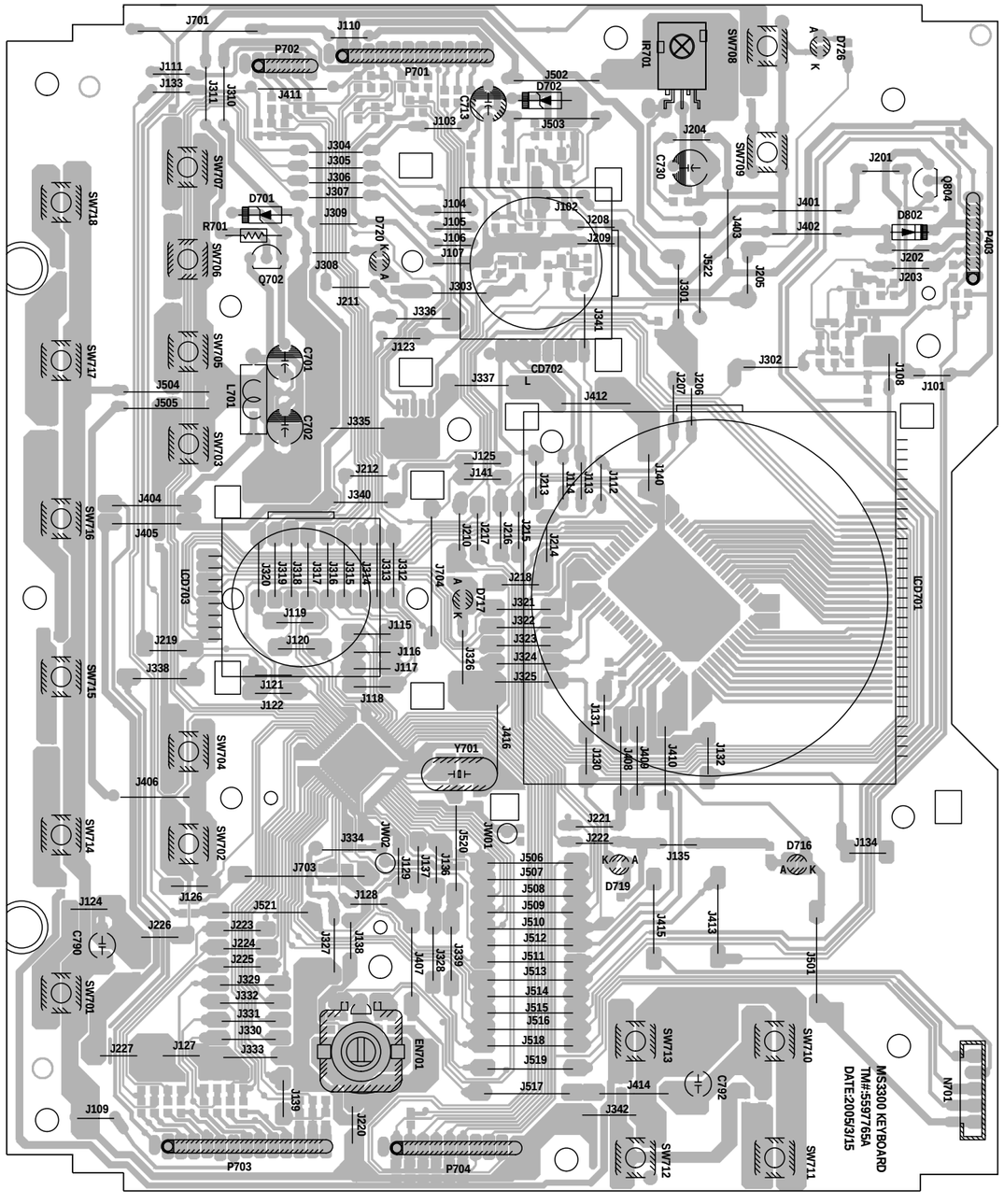

| PIN22 RO1 | A/D LEVEL | FM STEP 0=50K 1=200K | AM STEP 0=9K 1=10K |
|---|---|---|---|
| RO1=1K | 0~1.25V | 0 | 0 |
| RO1=5K6 | 1.25~2.5V | 0 | 1 |
| RO1=15K | 2.5~3.75V | 1 | 1 |
| RO1=68K | 3.75~5V | 1 | 0 |

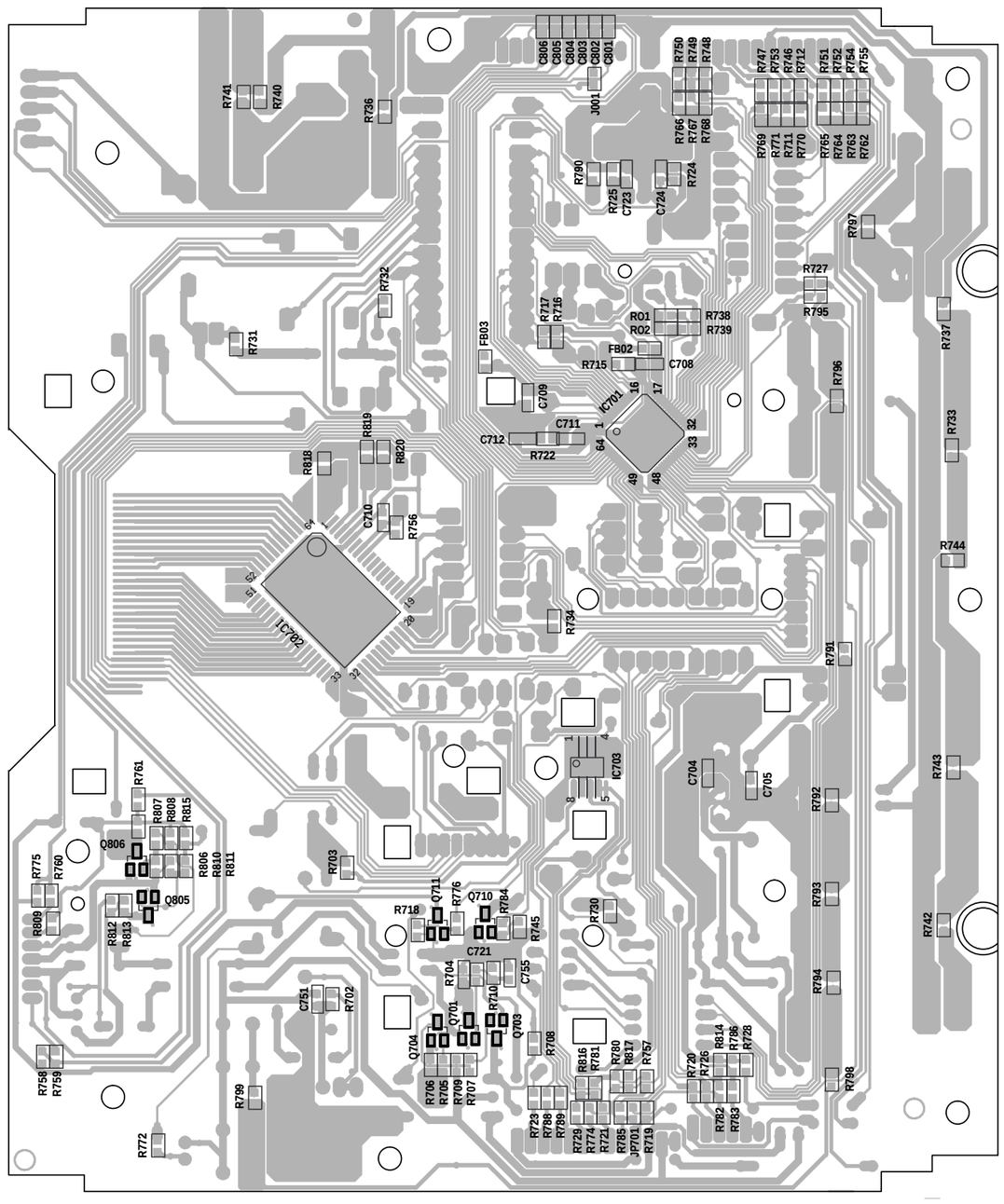
| PIN23 RO2 | A/D LEVEL | DEFAULT VOL 0=8 1=18 | CD PUCK 0=NO 1=YES |
|---|---|---|---|
| RO2=1K | 0~1.25V | 0 | 0 |
| RO2=5K6 | 1.25~2.5V | 0 | 1 |
| RO2=15K | 2.5~3.75V | 1 | 0 |
| RO2=68K | 3.75~5V | 1 | 1 |

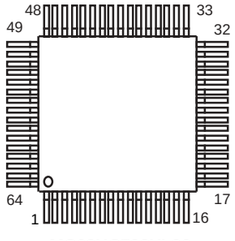
**Control / display P.C.B.**
**Platine commandes / afficheur**
**Ltpl. Bedienteil / Anzeige**
**Piastra comandi / indicatore**
**Platina de mandos / indicador**

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

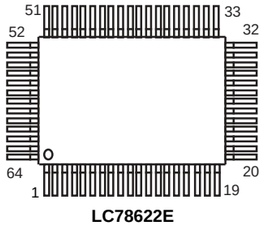
Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre




MC68HC708XL36




LC78622E

**CRKD2143 / CRKD2577**
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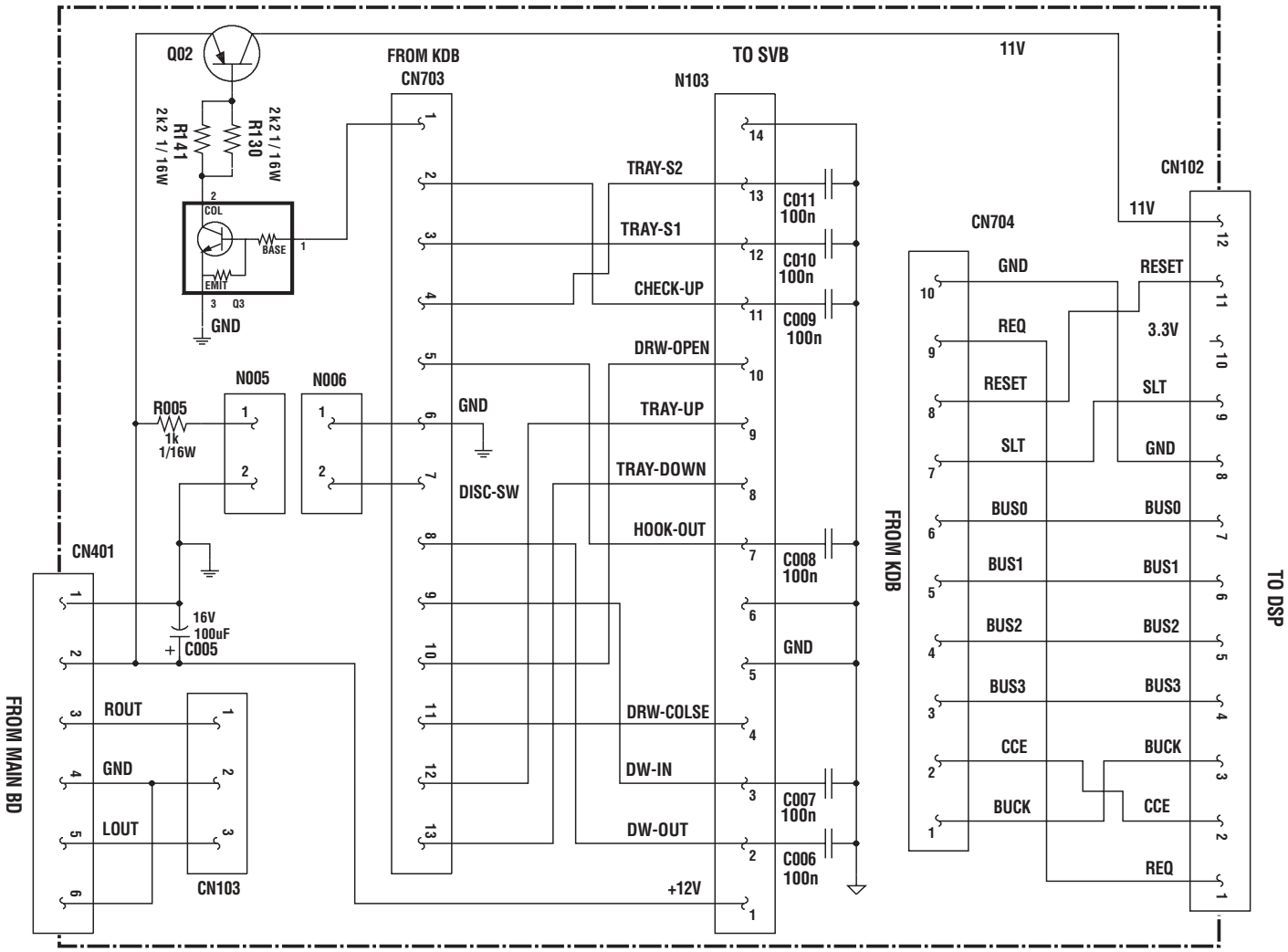
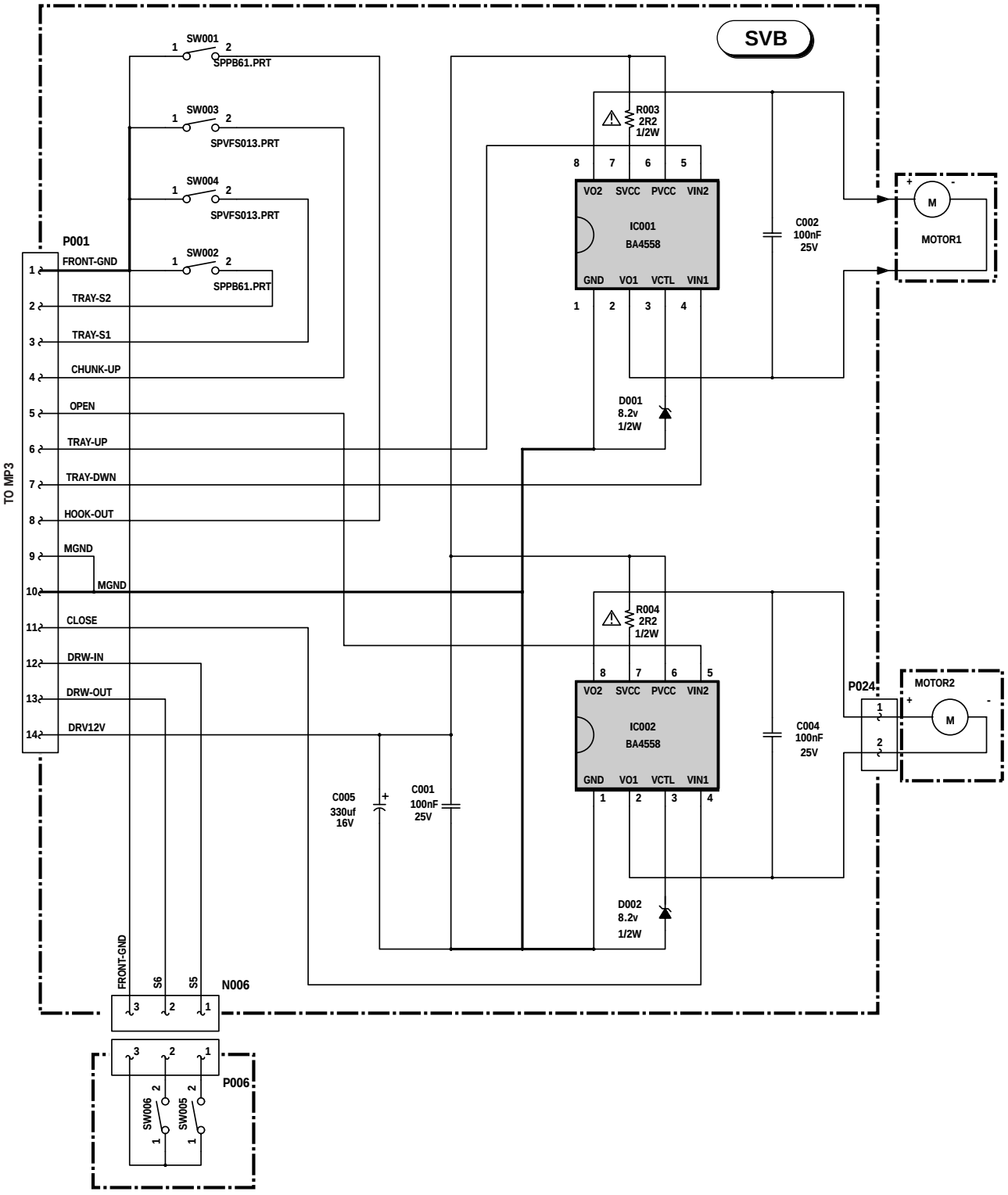
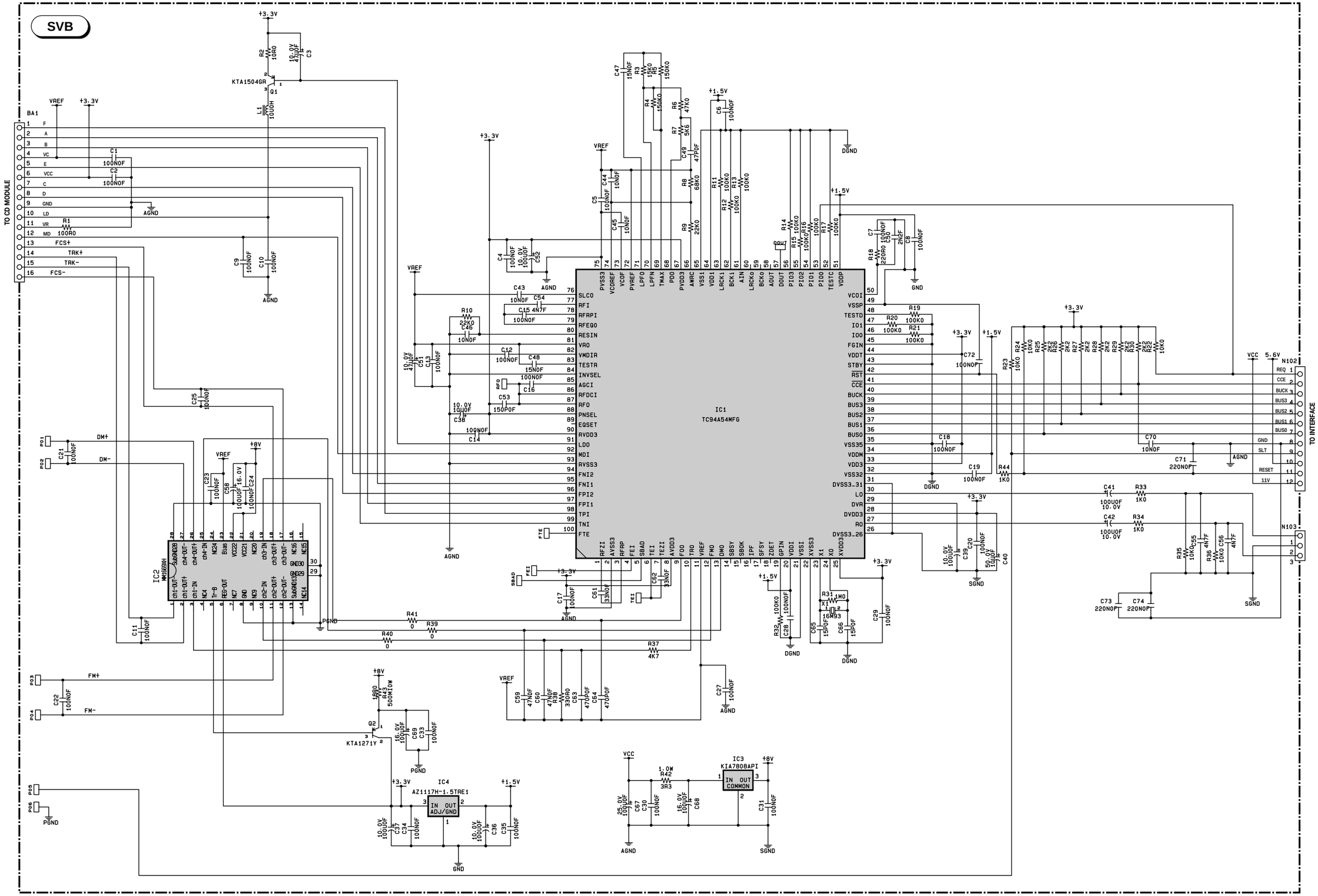
## INTERFACE SCHEMATIC DIAGRAM - SCHEMA D'INTERFACE - SCHALTBILD INTERFACE SCHEMA DEI INTERFACCIA - ESQUEMA DEL INTERFACE



# CD MOTOR CONTROL SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE COMMANDES MOTEURS CD - CD WECHSLER-MOTOR SCHALTBILD - SCHEMA DELLA PIASTRA COMANDI MOTORI CD ESQUEMA DE LA PLATINA MANDOS MOTORES CD

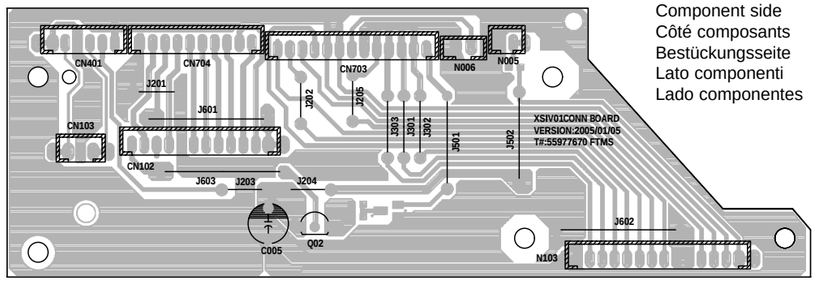


# DIGITAL PROCESSING SCHEMATIC DIAGRAM - SCHEMA DU TRAITEMENT DIGITAL - SCHALTBILD DIGITALVERARBEITUNG - SCHEMA ELABORAZIONE DIGITALE ESQUEMA DEL TRATAMIENTO DIGITAL

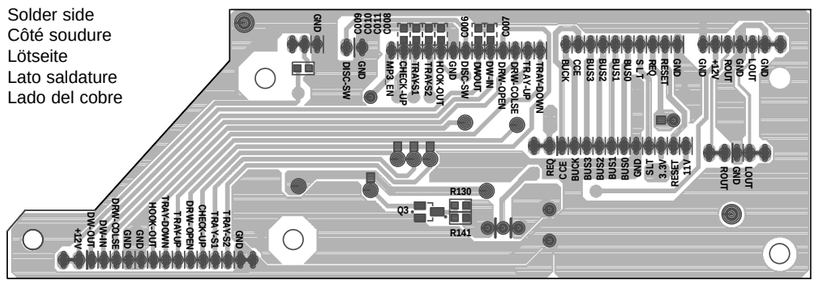


## Interface P.C.B.
## Platine d'interface
## Lptl. Interface
## Piastra dei interfaccia
## Platina del interface

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

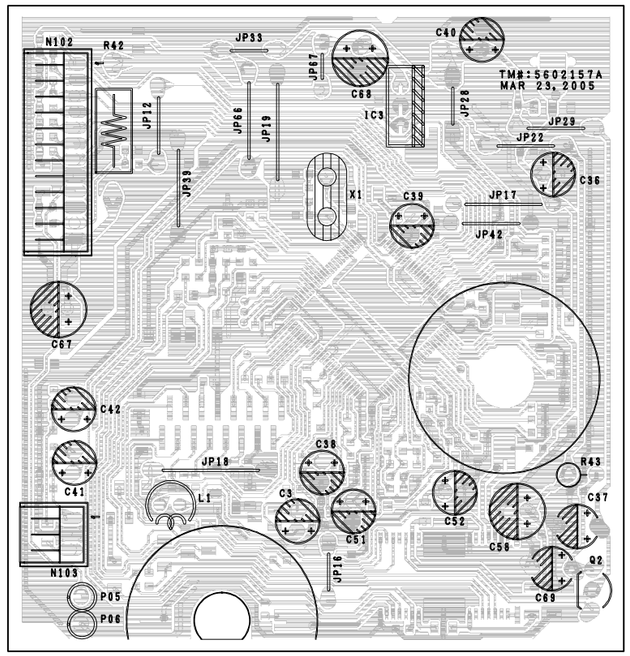



Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre

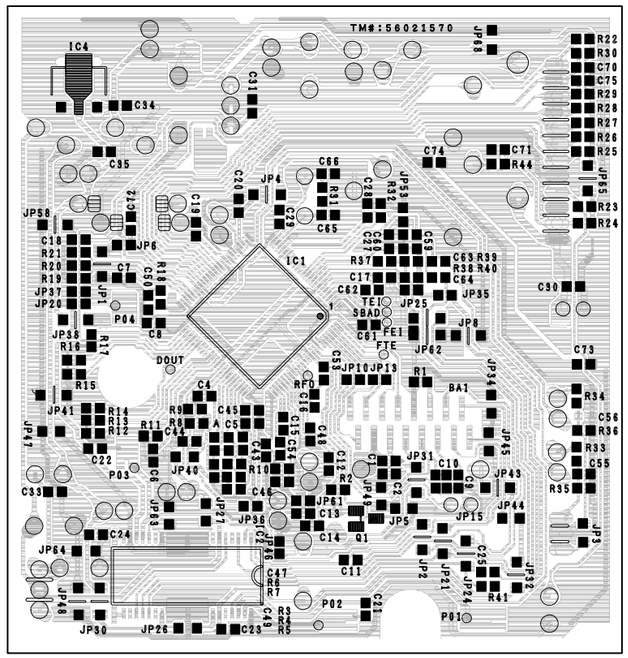



## Digital processing P.C.B.
## Platine traitement digital
## Ltpl. Digitalverarbeitung
## Piastra elaborazione digitale
## Platina tratamiento digital

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

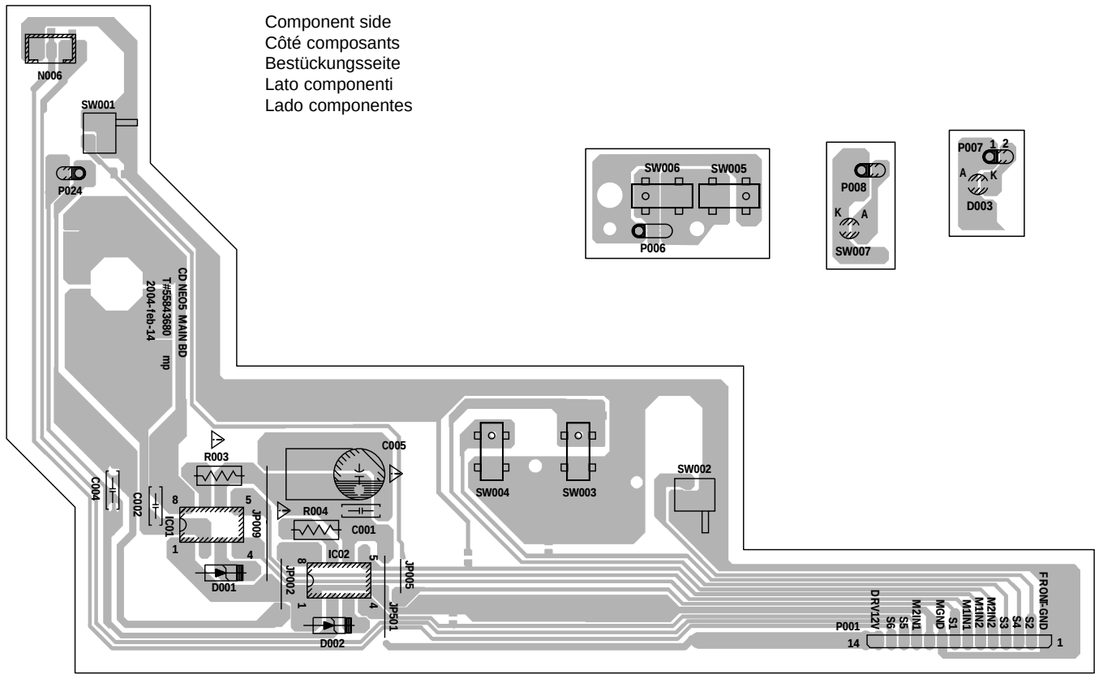



Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre

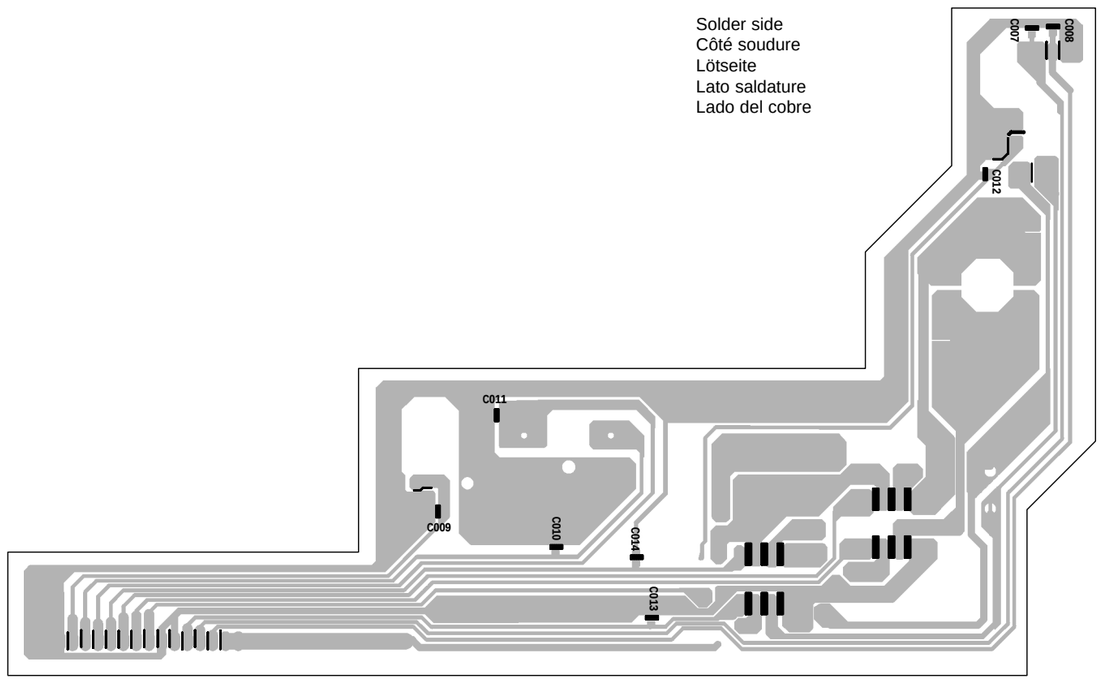



## CD motor control P.C.B.
## Platine commandes moteurs CD
## Ltpl. CD wechsler-motor
## Piastra comandi motori CD
## Platina mandos motores CD

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes




Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre





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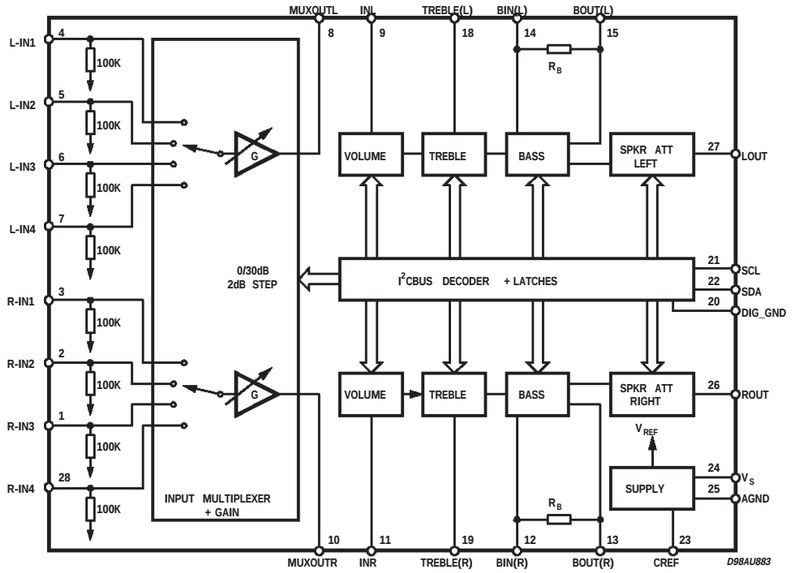
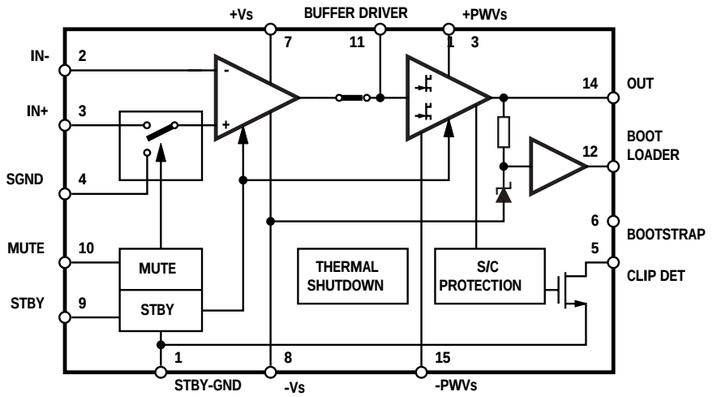
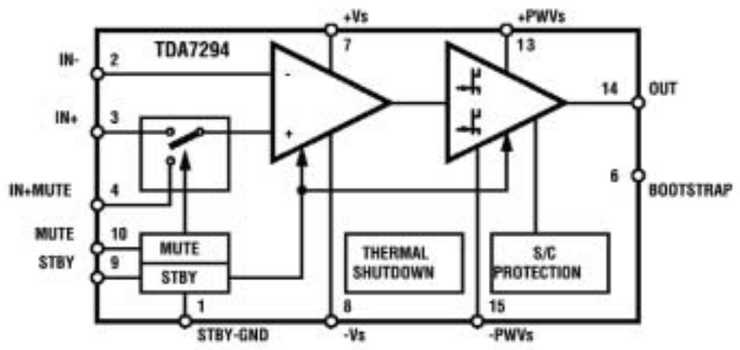
**IC400** TDA7440




**IC 501 / IC502** TDA7293




**IC501 / IC502** TDA7294 - TDA7296








**CRKD2005**
First issue 08/05

## Abbreviations - Abreviations - Abkürzungen - Abbreviazioni - Abreviaciones

| | |
|---|---|
| **AC** | Alternating Current |
| **ACC** | Automatic Colour Control |
| **AGC** | Automatic Gain Control |
| **A_IF** | Audio IF |
| **ALC** | Automatic Level Control |
| **AMP** | Amplifier |
| **APC** | Automatic Phase Control |
| **AV** | Audio-Video |
| **BPF** | Band Pass Filter |
| **CH** | Channel |
| **CLK** | Clock |
| **COMP** | Comparator |
| **CONV** | Converter |
| **CSYNC** | Composite Synch |
| **CTL** | Control |
| **DC** | Direct Current |
| **DET** | Detector |
| **DIG** | Digital |
| **ENV** | Envelope |
| **EQ** | Equalizer |
| **FG** | Frequency Generator |
| **GND** | Ground |
| **GCA** | Gain Controlled Amplifier |
| **HPF** | High Pass Filter |
| **I.R** | Infra Red |
| **ID** | Identification |
| **INP/IN** | Input |
| **KDB** | Key Display Board |
| **LIM** | Limitter |
| **LPF** | Low Pass Filter |
| **PCB** | Printed Circuit Board |
| **PG** | Pulse Generator |
| **PLL** | Phase Locked Loop |
| **PWM** | Pulse Width Modulation |
| **SCL** | Serial Clock |
| **SDA** | Serial Data |
| **SMPS** | Switch Mode Power Supply |
| **SW** | Switch |
| **VCA** | Voltage Controlled Amplifier |
| **VCO** | Voltage Controlled Oscillator |
| **VD** | Supply Voltage Digital |
| **VE** | Voltage (Ever) |
| **VS** | Voltage (Switched) |

This technical documentation is for use by maintenance technicians only
Documentation technique exclusivement destinée aux professionnels de la maintenance
Diese Angaben und Hinweise sind ausschließlich für den Service des Fachhändlers bestimmt
Documentazione tecnica destinata esclusivamente ai tecnici dell'assistenza
Documentación técnica destinada exclusivamente a los profesionales de mantenimiento

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