



# 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 indicato 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 - Características del aparato

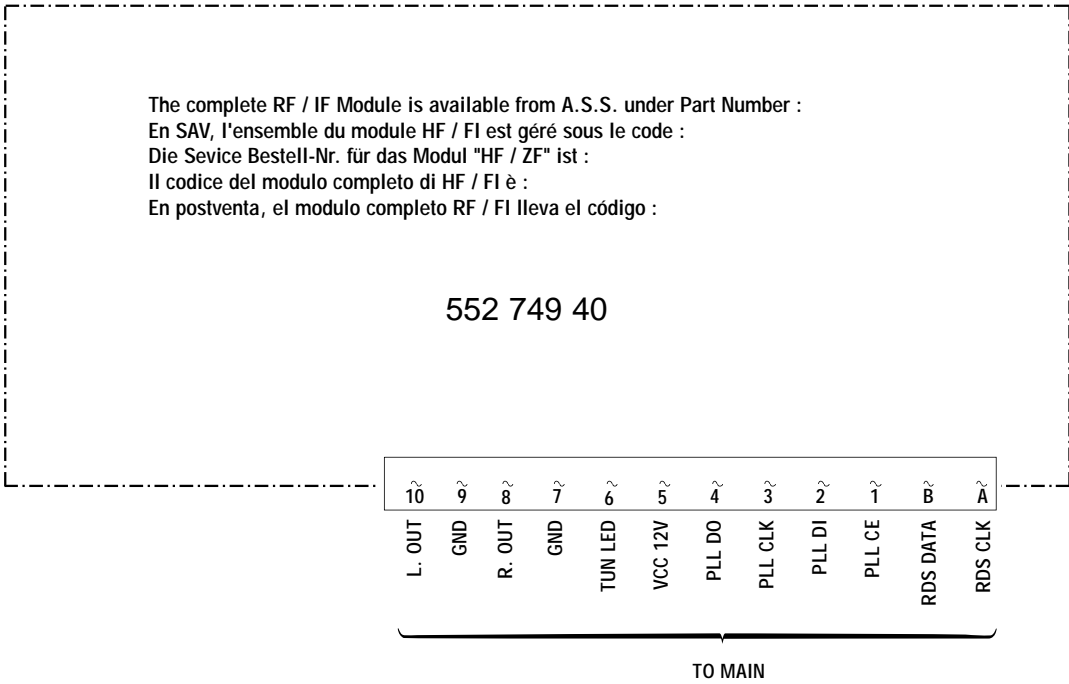
<b>Type of set:</b> Two-in-one horizontale combination/DAD <b>Type d'appareil:</b> Ensemble compact stéréophonique <b>Geräteart:</b> DAD-2er Horizontal Kompaktanlage <b>Tipo d'apparecchio:</b> Compatto Hifi/CD <b>Tipo de aparato:</b> Equipo compacto estereofónico/DAD	
<b>Power supply:</b> <b>Alimentation: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



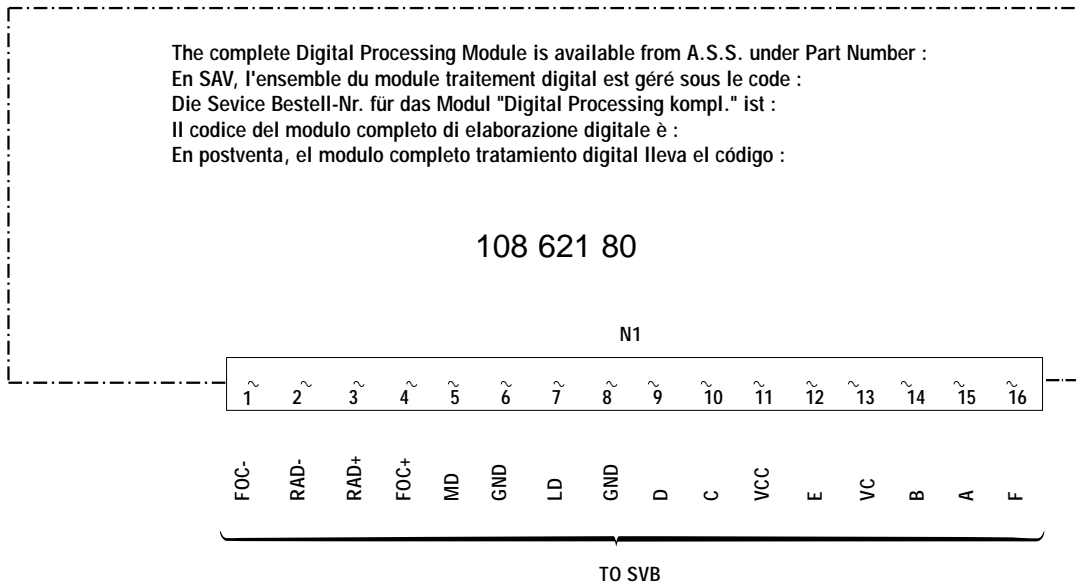
**WARNING :** Before servicing this chassis read the safety recommendations.  
**ATTENTION :** Avant toute intervention sur ce châssis, lire les recommandations de sécurité.  
**ACHTUNG :** Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.  
**ATTENZIONE :** Prima di intervenire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

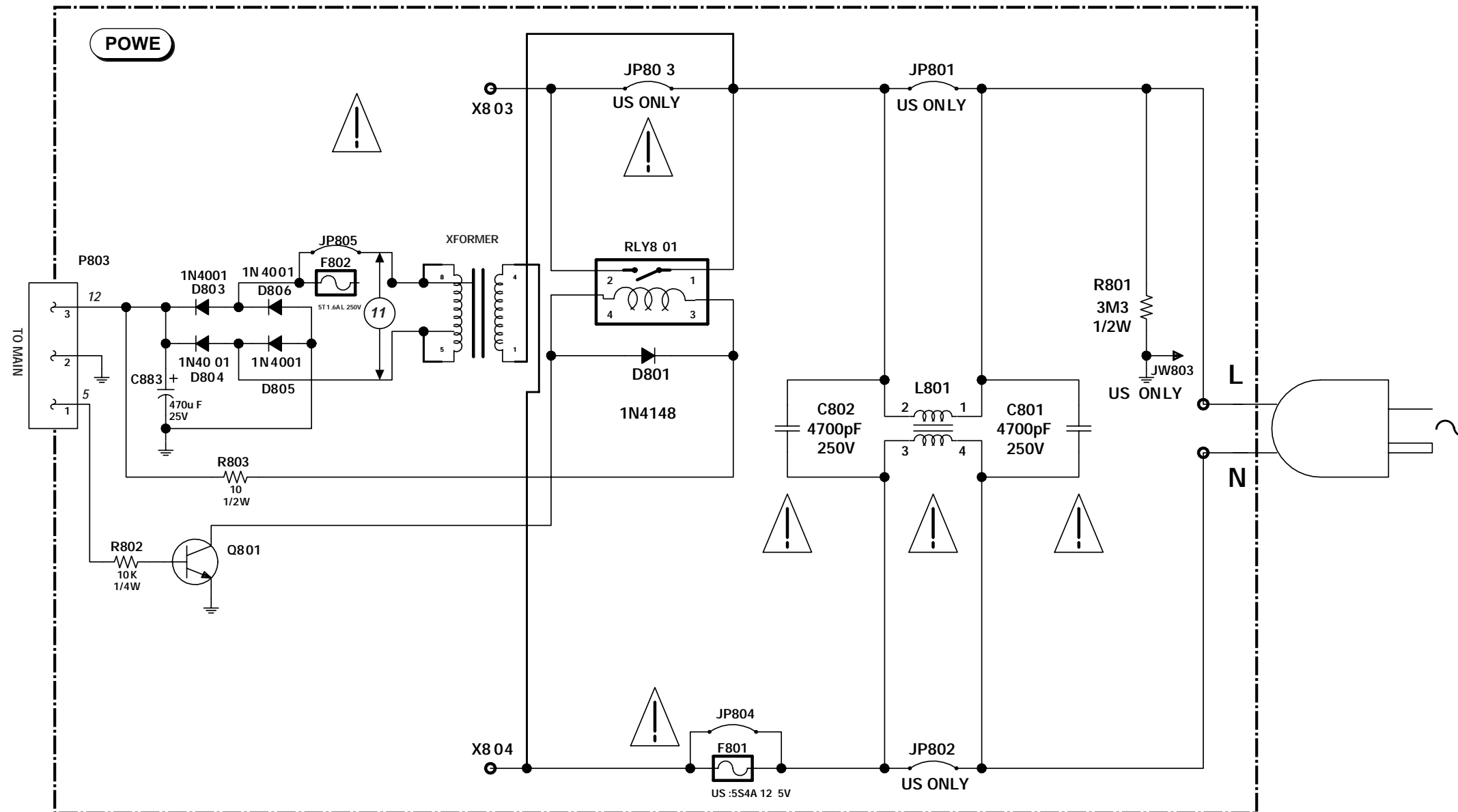
0805 - CRKD2143 - CRKD2143M - CRKD2577 - CRKD2577C

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

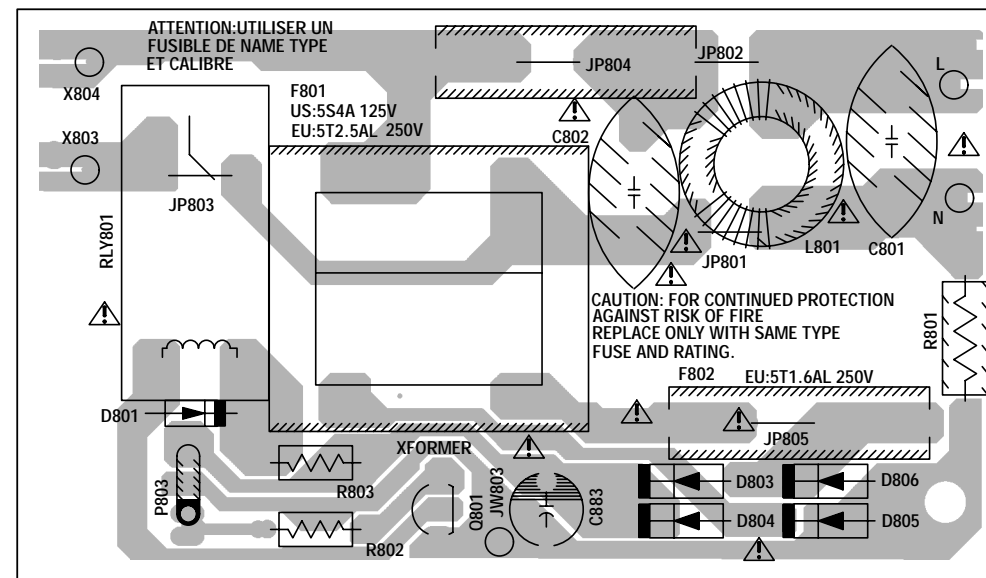


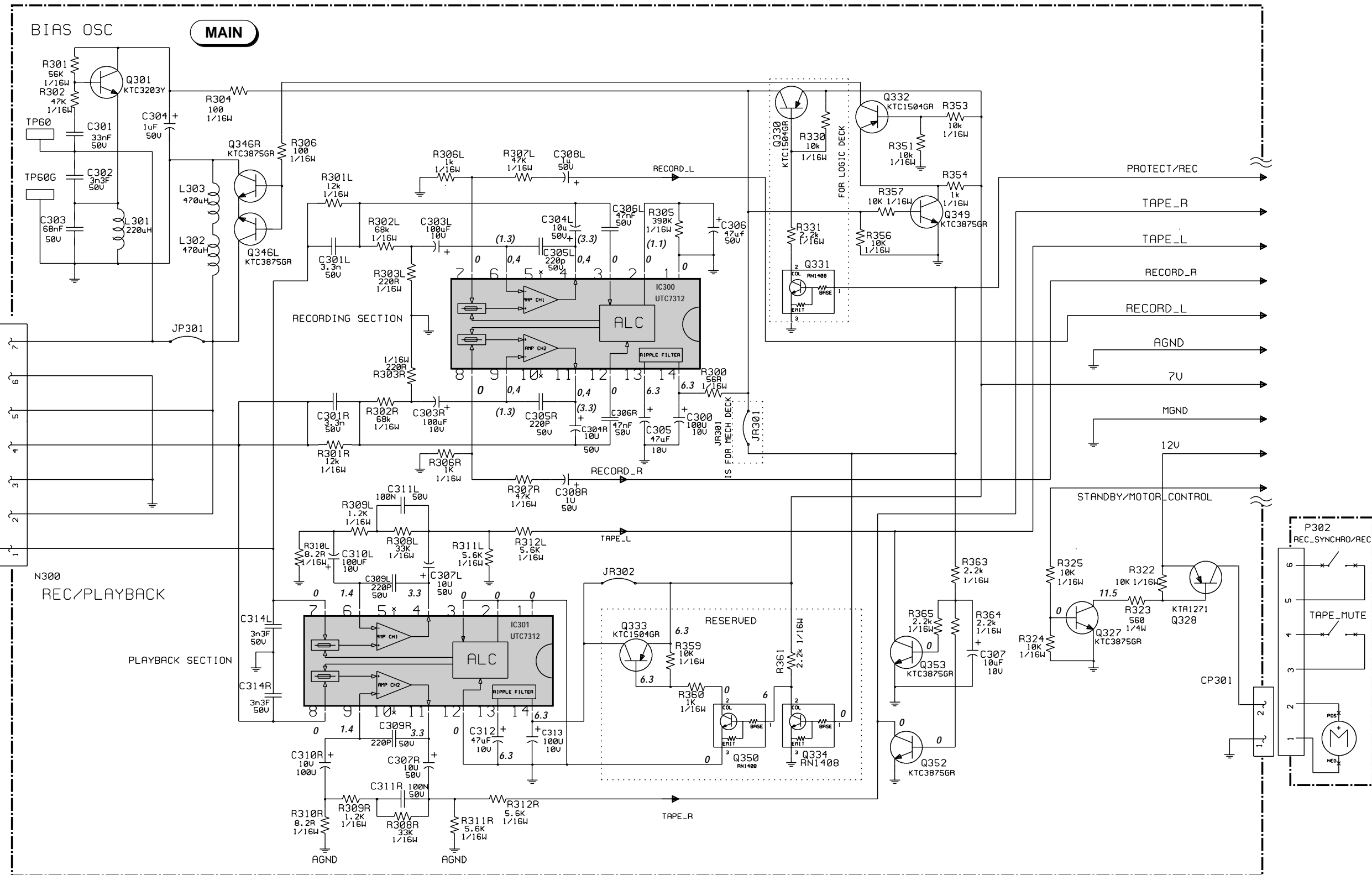
**DIGITAL PROCESSING SCHEMATIC DIAGRAM - SCHEMA DU TRAITEMENT DIGITAL -  
 SCHALTBILD DIGITALVERARBEITUNG - SCHEMA ELABORAZIONE DIGITALE  
 ESQUEMA DEL TRATAMIENTO DIGITAL**



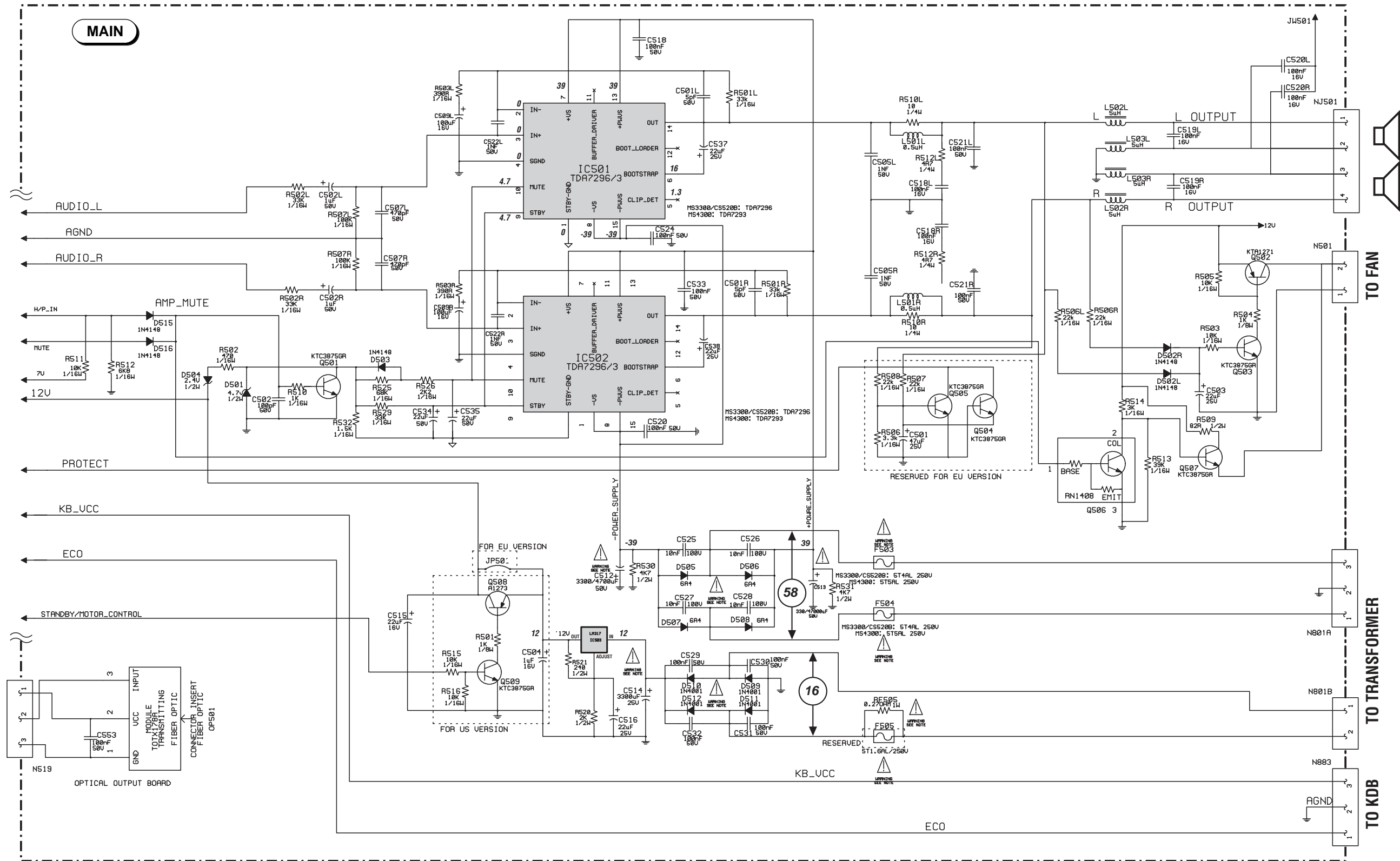


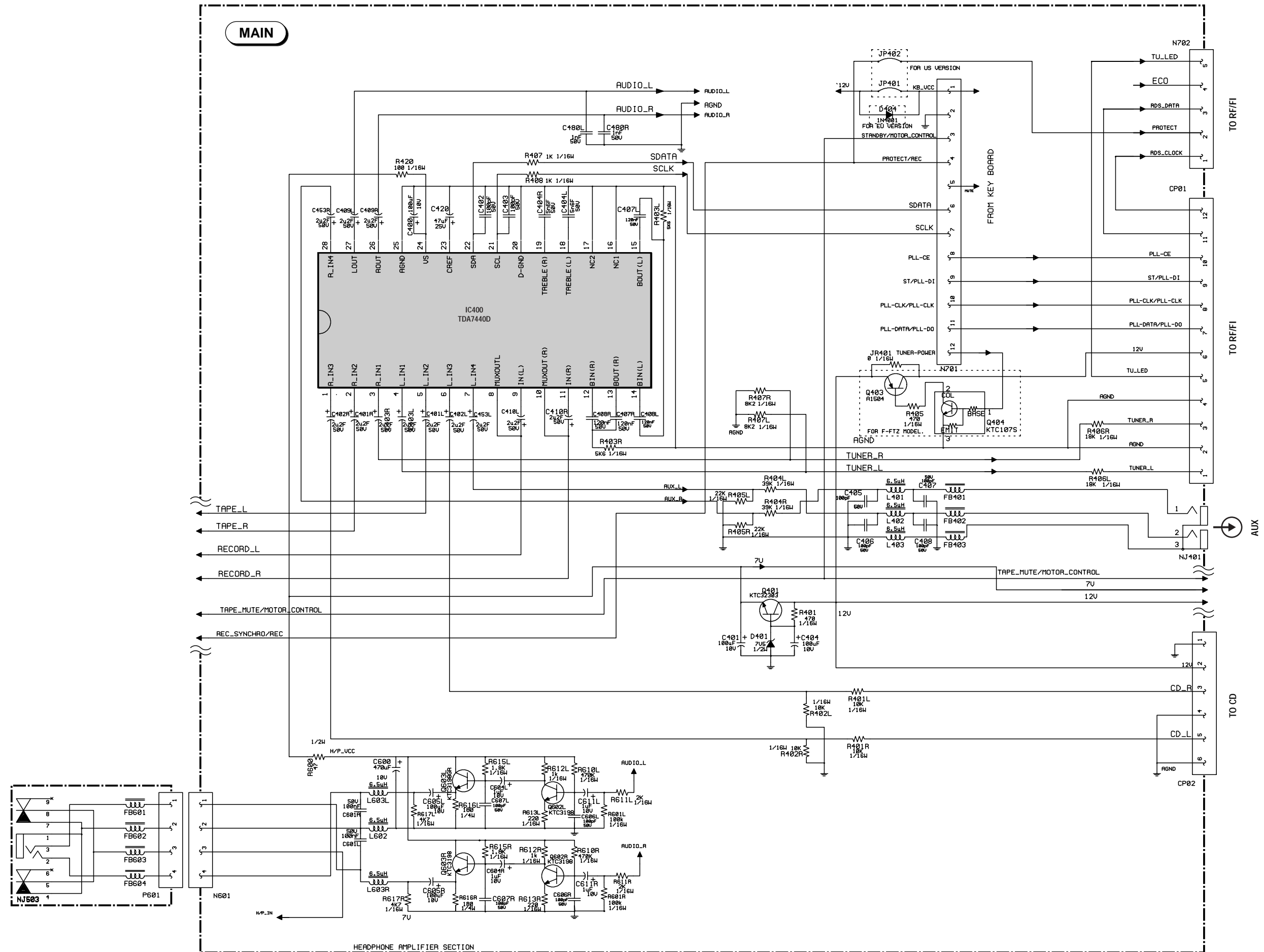
Power unit P.C.B.  
 Platine secteur  
 Ltpl. Netzanschluss  
 Piastra di rete  
 Platina de red





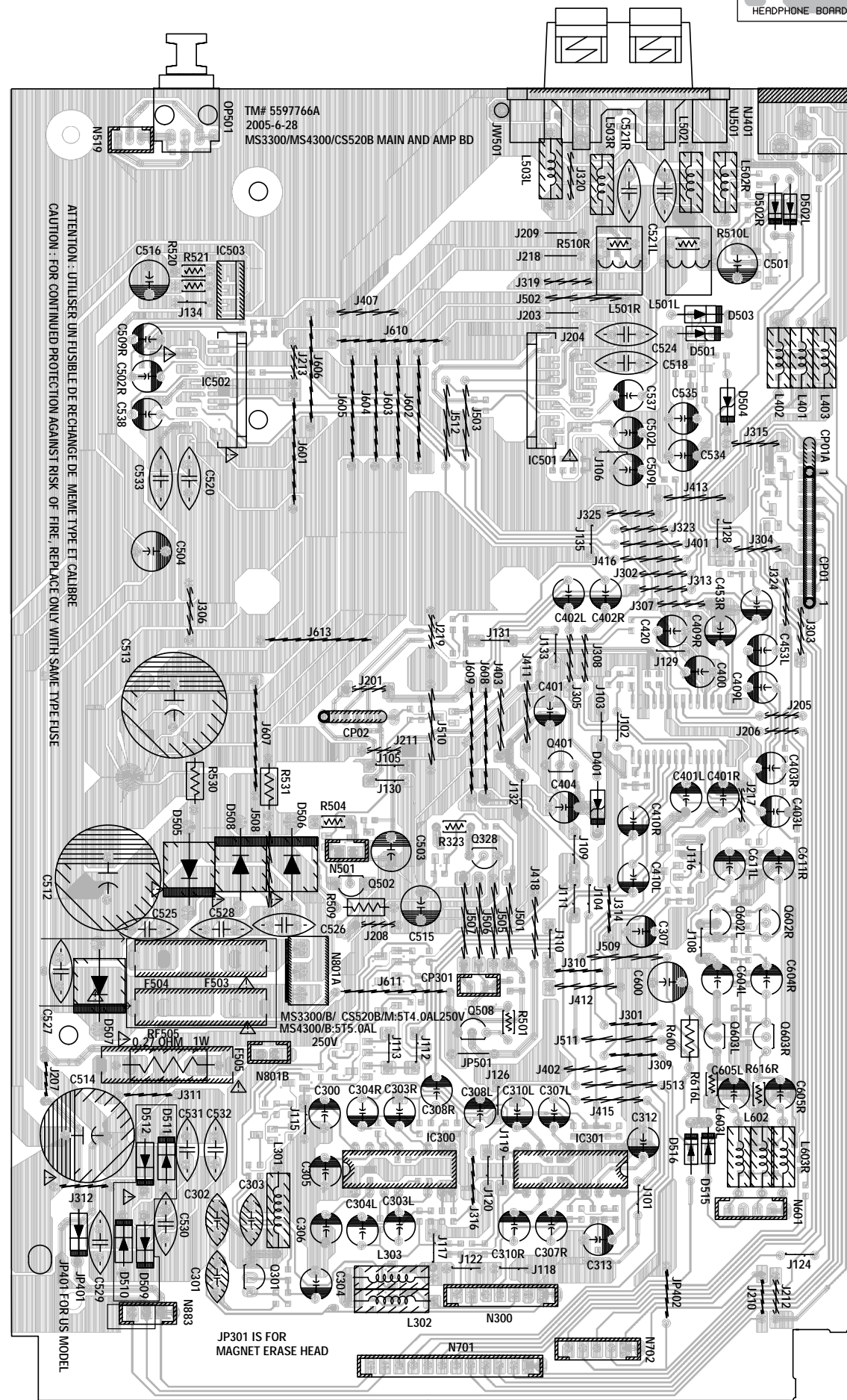
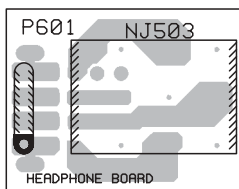
MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (2/3)



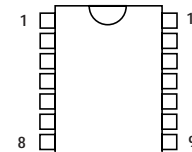
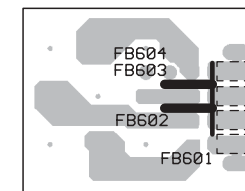


**Main P.C.B.**  
**Platine principale**  
**Grundplatte**  
**Piastra principale**  
**Platina principal**

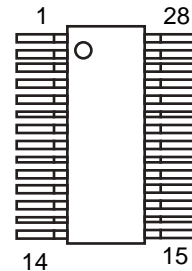
Component side  
Côté composants  
Bestückungsseite  
Lato componenti  
Lado componentes



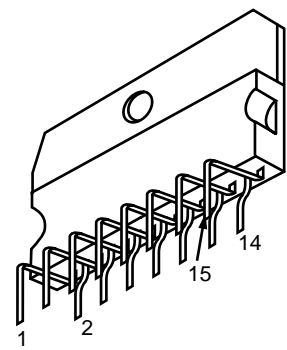
Solder side  
Côté soudure  
Lötseite  
Lato saldature  
Lado del cobre



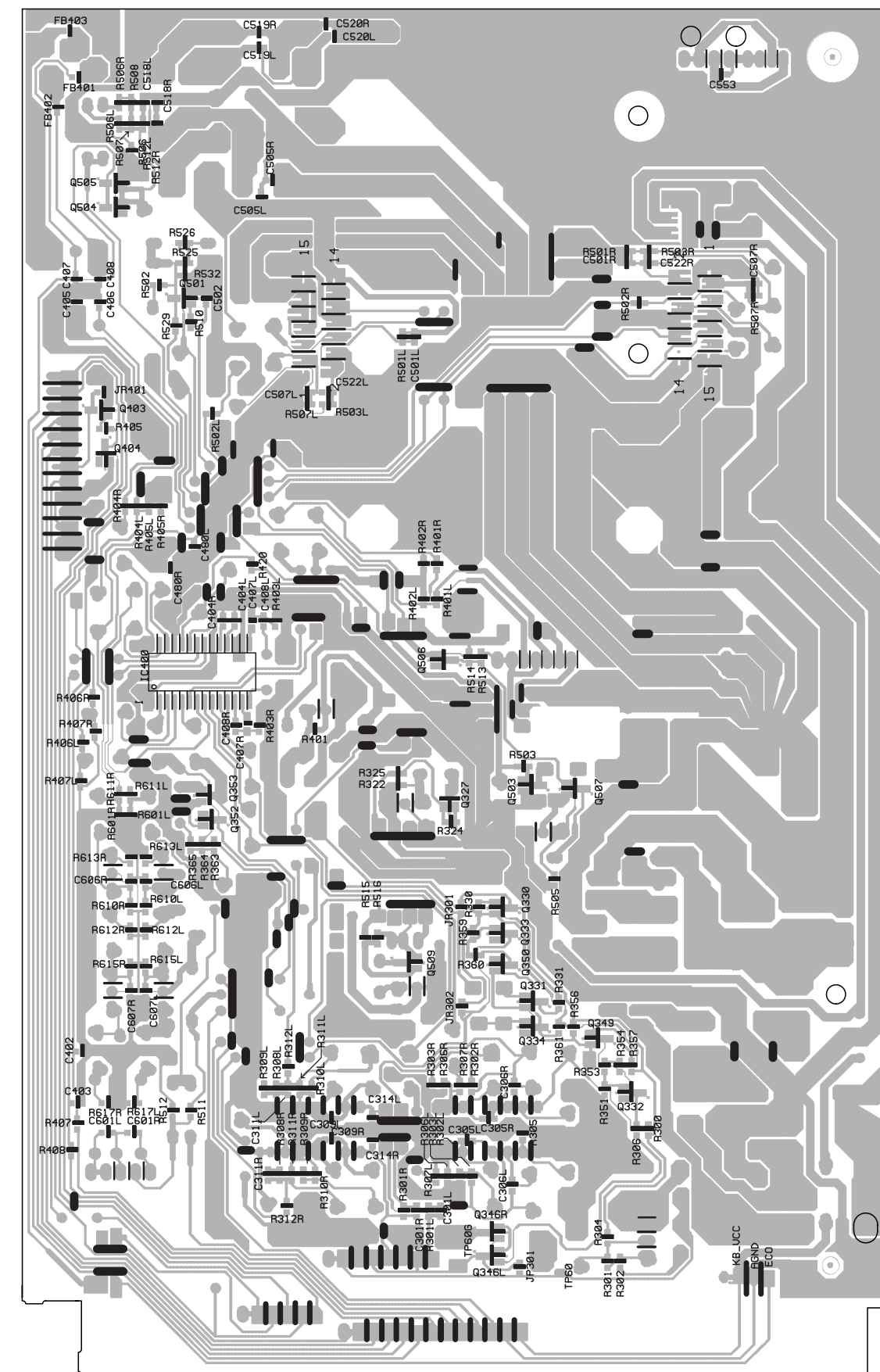
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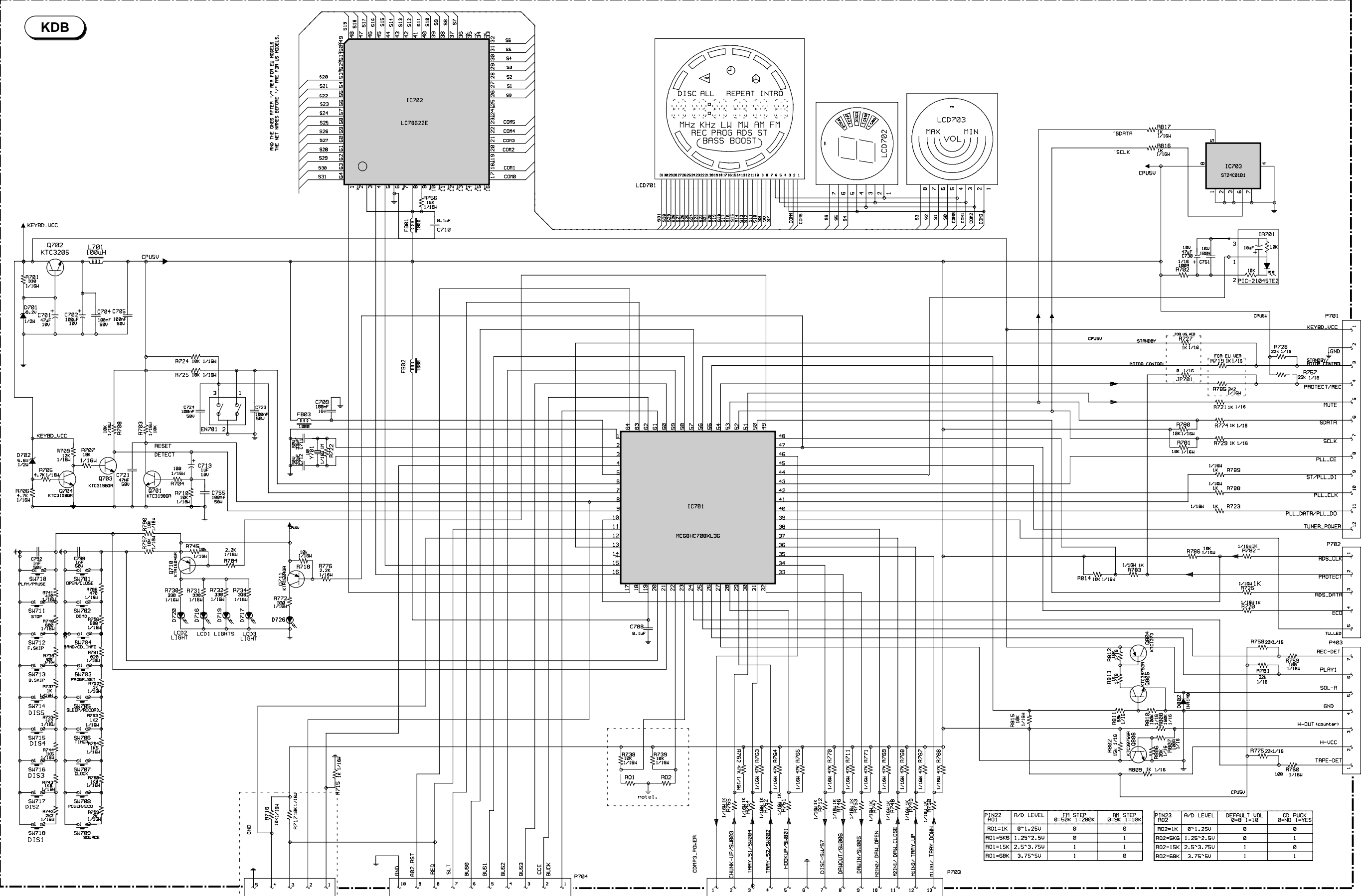
TDA7440



TDA7293  
TDA7294  
TDA7296



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



PIN	F/D LEVEL	FR STEP	FR STEP
PIN22	0	0	0
R01=1K	0°1.25U	0	0
R01=5K	1.25°2.5U	0	1
R01=15K	2.5°3.75U	1	1
R01=68K	3.75°5U	1	0

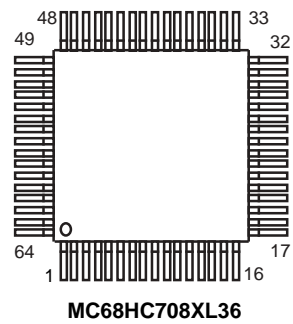
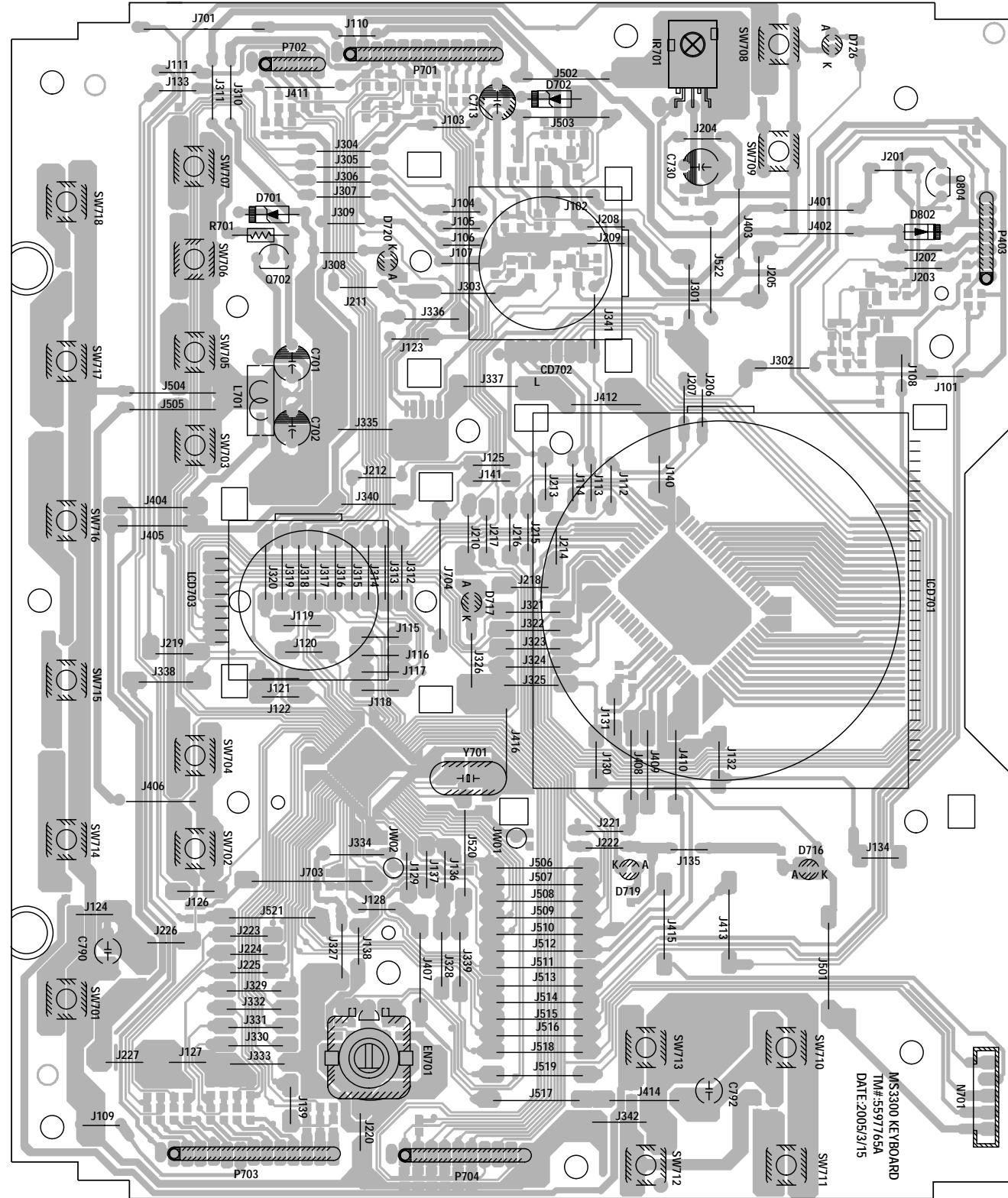
PIN	F/D LEVEL	DEFAULT UBL	CD PUCK
PIN23	0	0-8 1-16	0-NO 1-YES
R02=1K	0°1.25U	0	0
R02=5K	1.25°2.5U	0	1
R02=15K	2.5°3.75U	1	0
R02=68K	3.75°5U	1	1



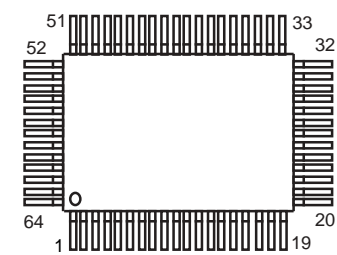
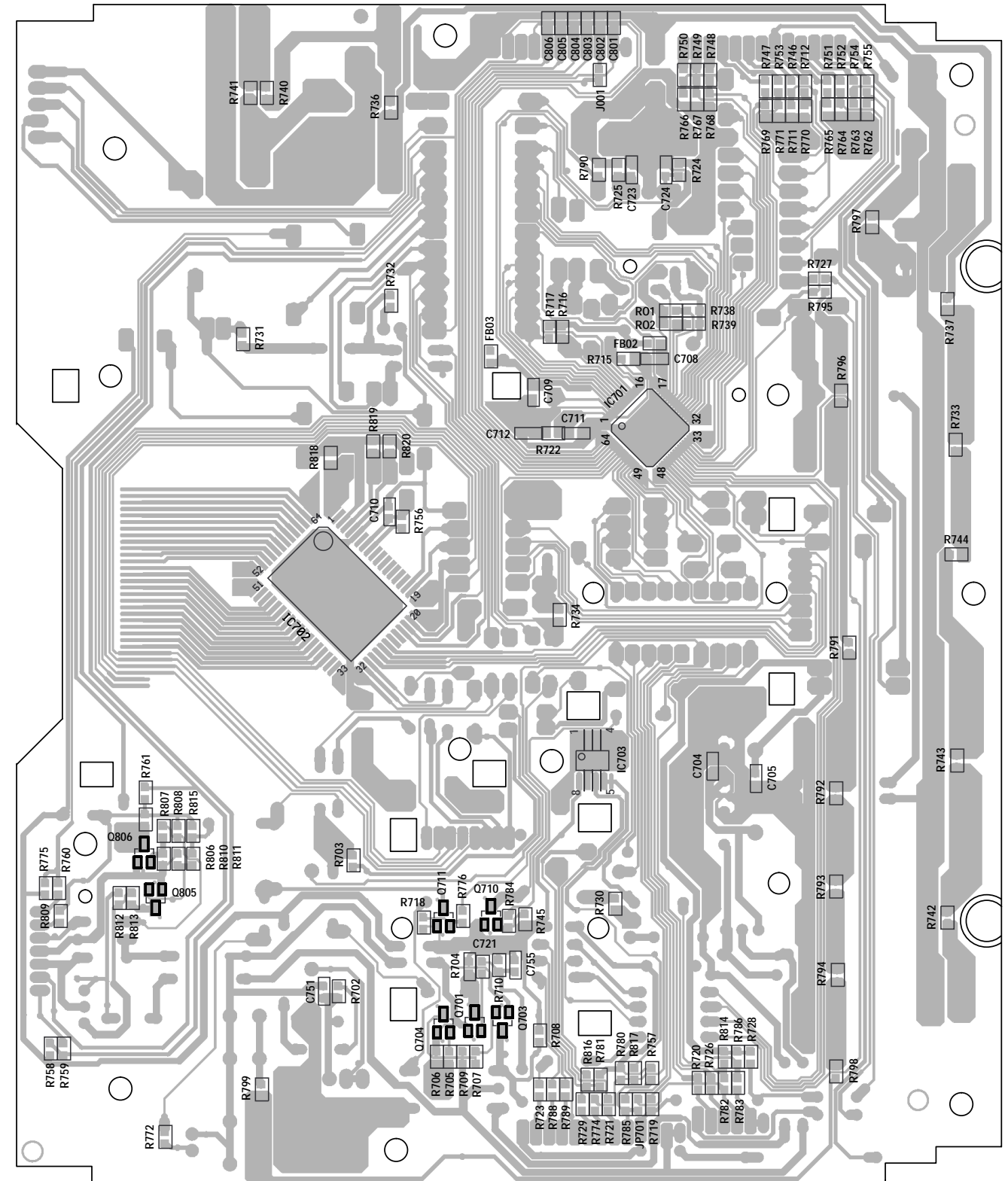
Control / display P.C.B.  
 Platine commandes / afficheur  
 Ltpl. Bedienteil / Anzeige  
 Piastra comandi / indicatore  
 Platina de mandos / indicador

Component side  
 Côté composants  
 Bestückungsseite  
 Lato componenti  
 Lado componentes

Solder side  
 Côté soudure  
 Lötseite  
 Lato saldature  
 Lado del cobre

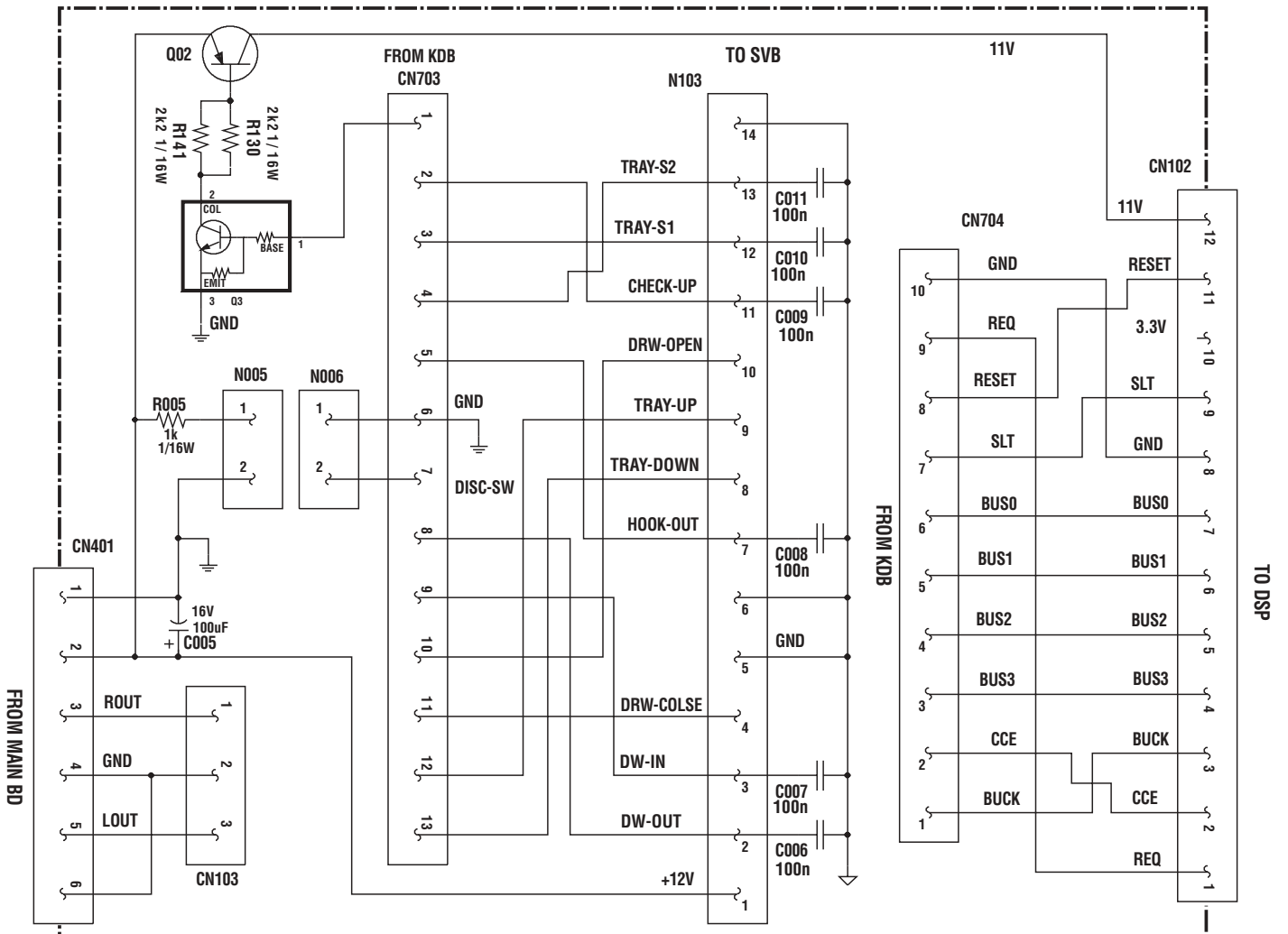


MC68HC708XL36

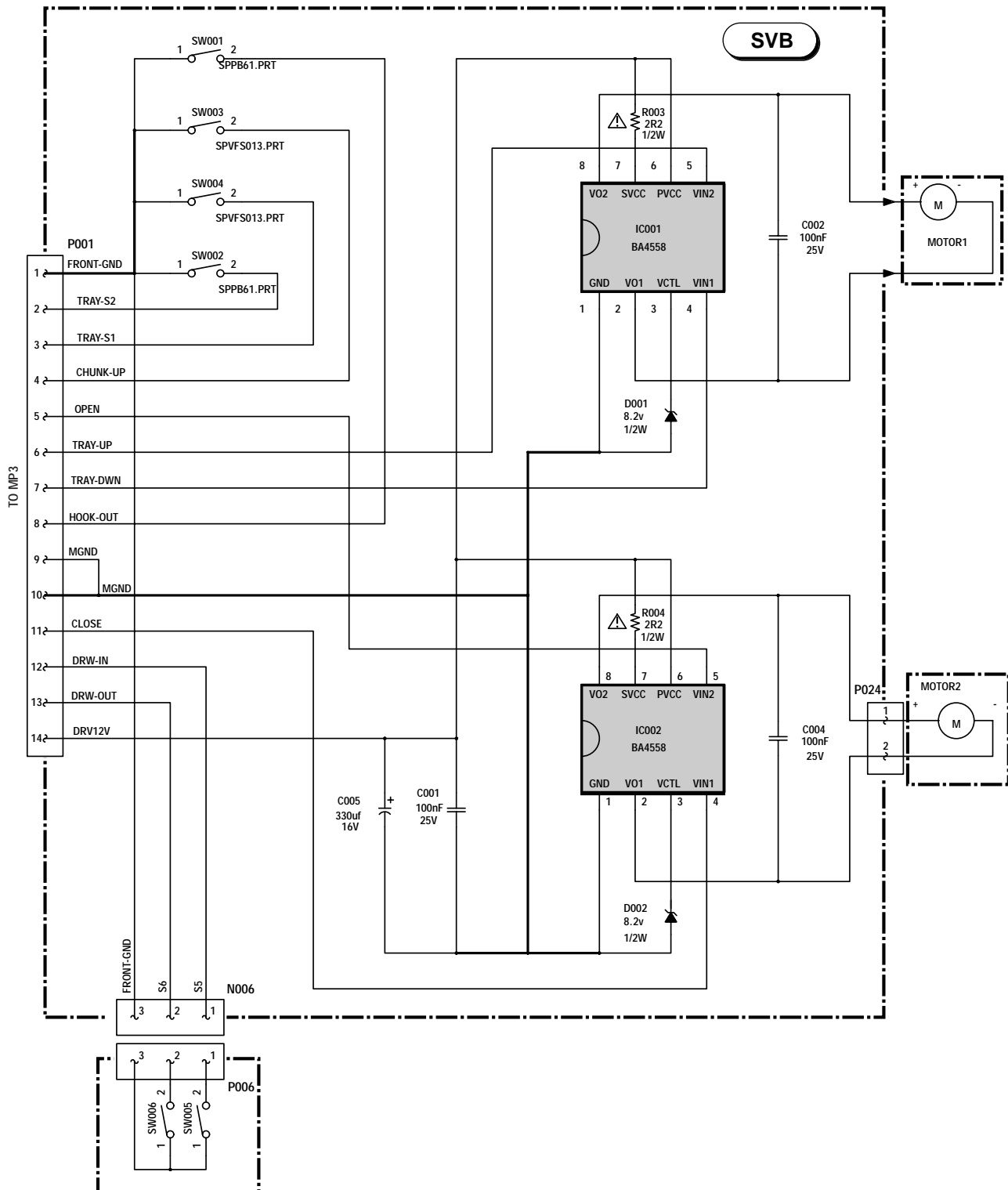


LC78622E

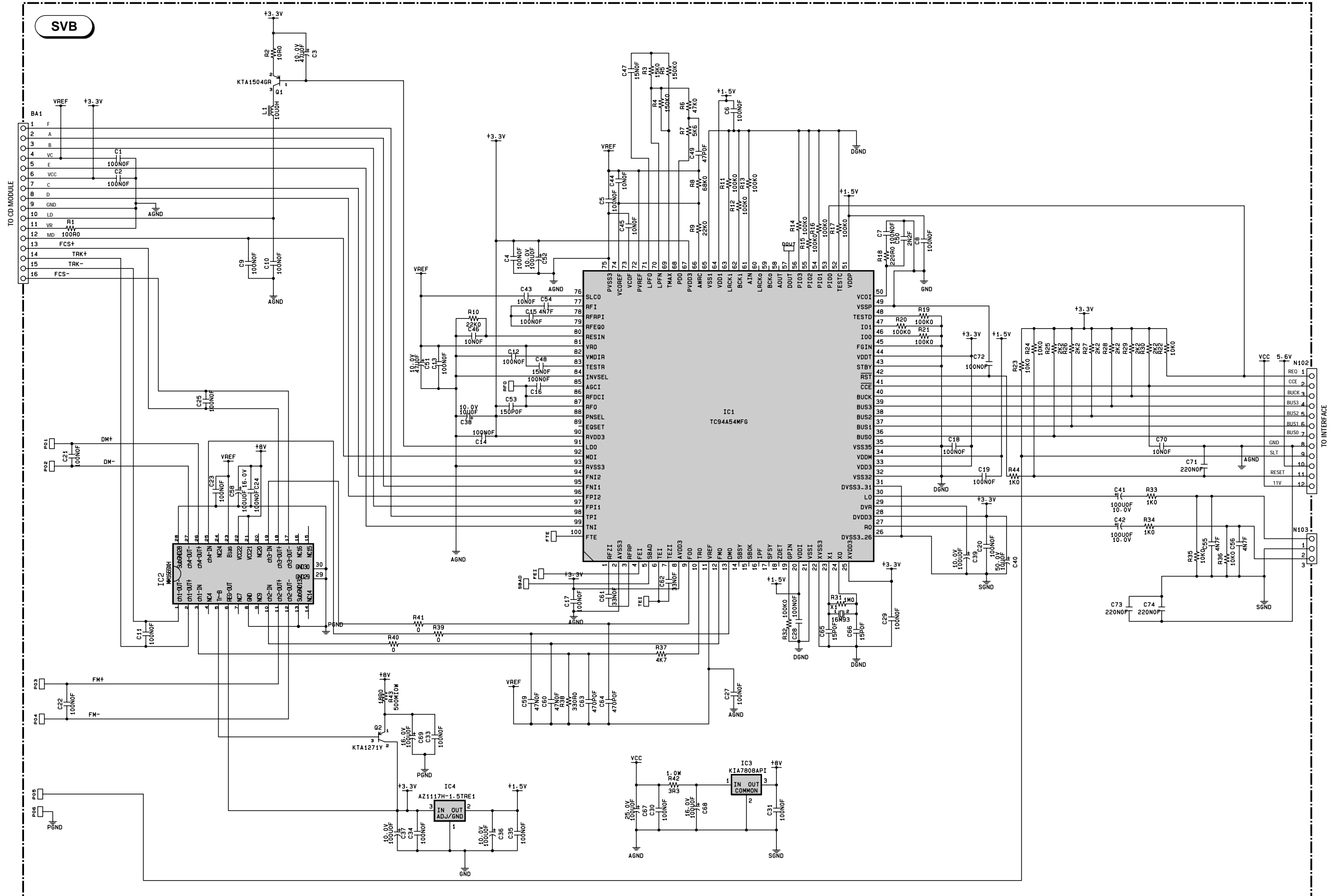
**INTERFACE SCHEMATIC DIAGRAM - SCHEMA D'INTERFACE - SCHALTBILD INTERFACE  
 SCHEMA DEI INTERFACCIA - ESQUEMA DEL INTERFACE**



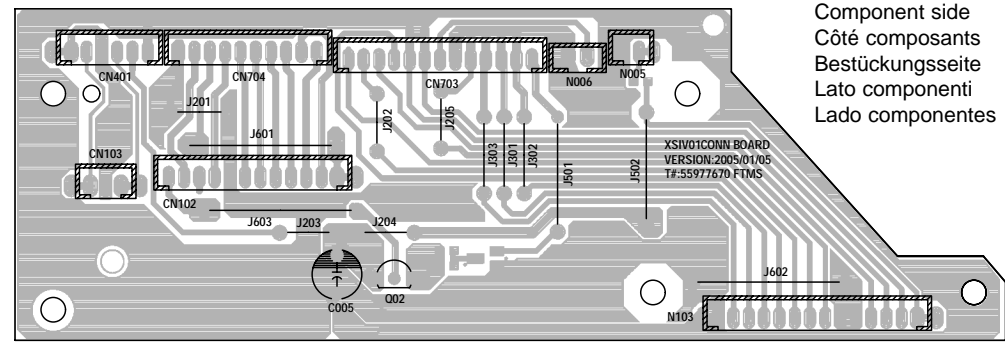
**CD MOTOR CONTROL SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE  
 COMMANDES MOTEURS CD - CD WECHSLER-MOTOR SCHALTBILD -  
 SCHEMA DELLA PIASTRA COMANDI MOTORI CD  
 ESQUEMA DE LA PLATINA MANDOS MOTORES CD**



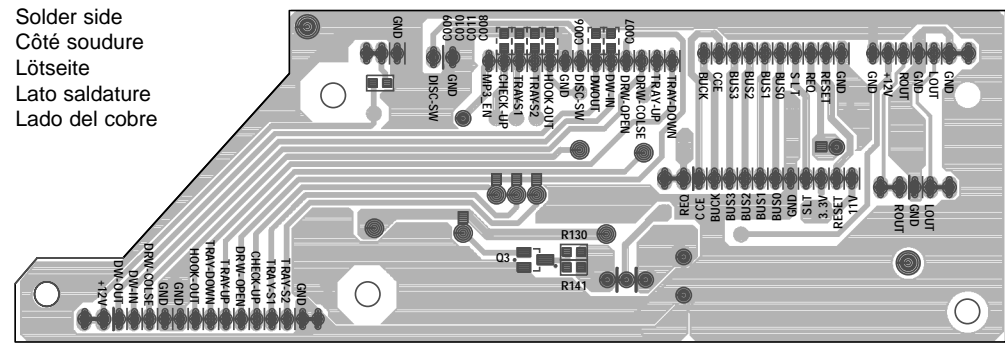
DIGITAL PROCESSING SCHEMATIC DIAGRAM - SCHEMA DU TRAITEMENT DIGITAL - SCHALTBILD DIGITALVERARBEITUNG - SCHEMA ELABORAZIONE DIGITALE  
 ESQUEMA DEL TRATAMIENTO DIGITAL



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



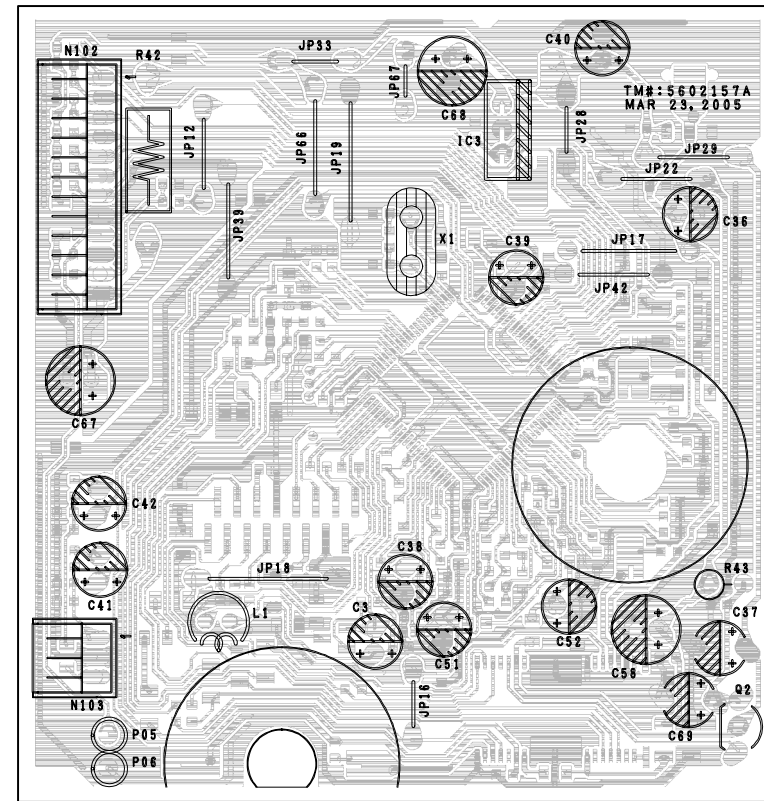
Component side  
 Côté composants  
 Bestückungsseite  
 Lato componenti  
 Lado componentes



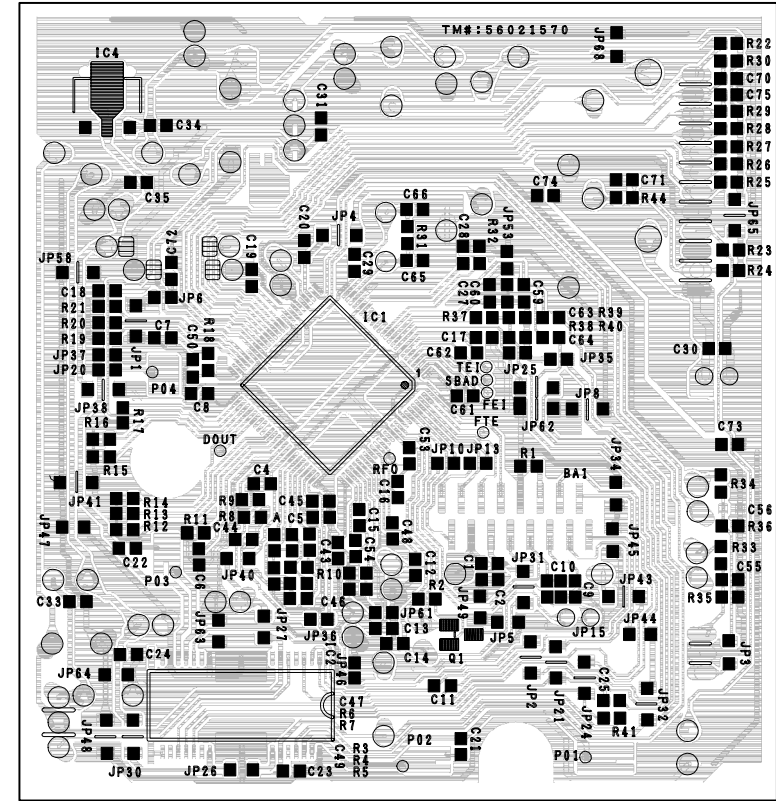
Solder side  
 Côté soudure  
 Lötseite  
 Lato saldature  
 Lado del cobre

**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

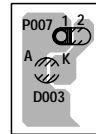
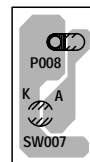
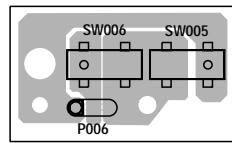
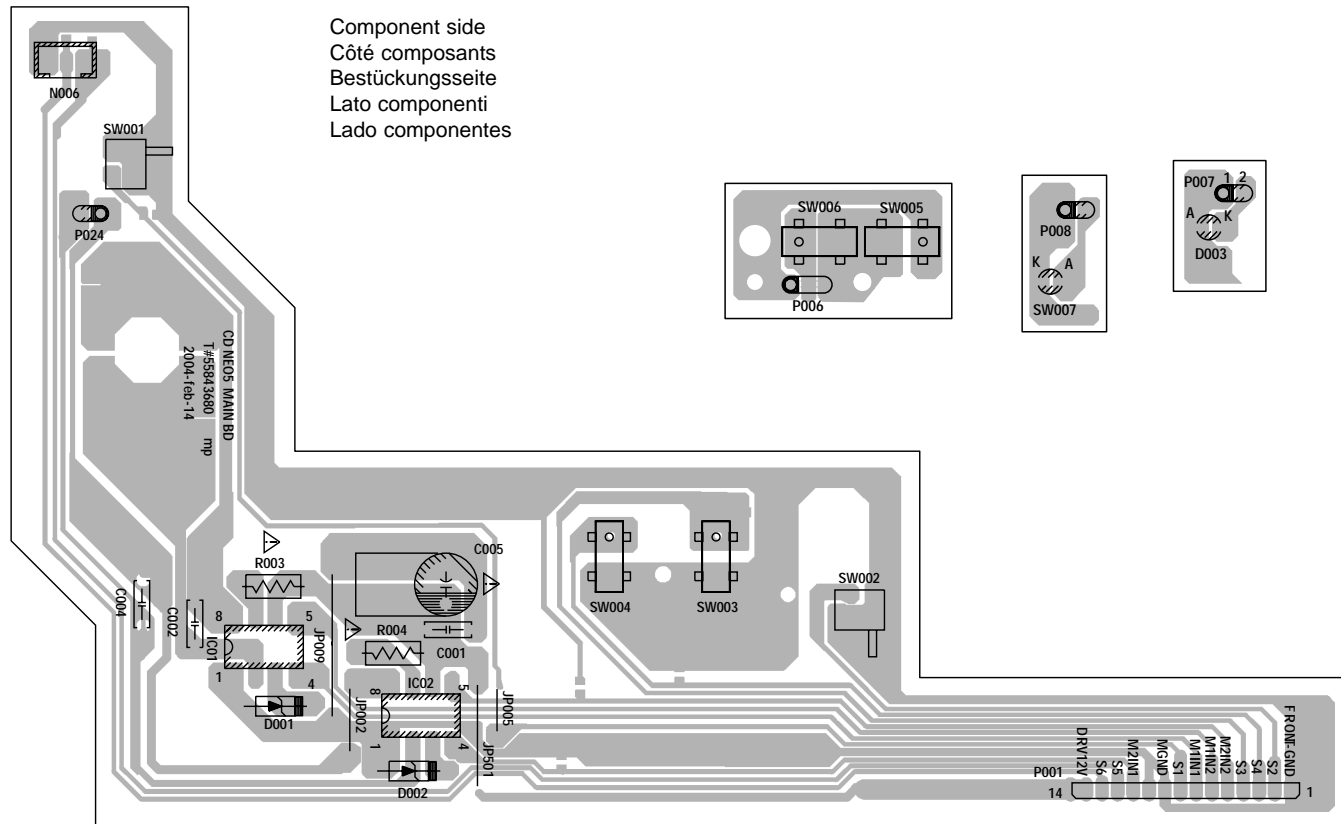


Solder side  
 Côté soudure  
 Lötseite  
 Lato saldature  
 Lado del cobre

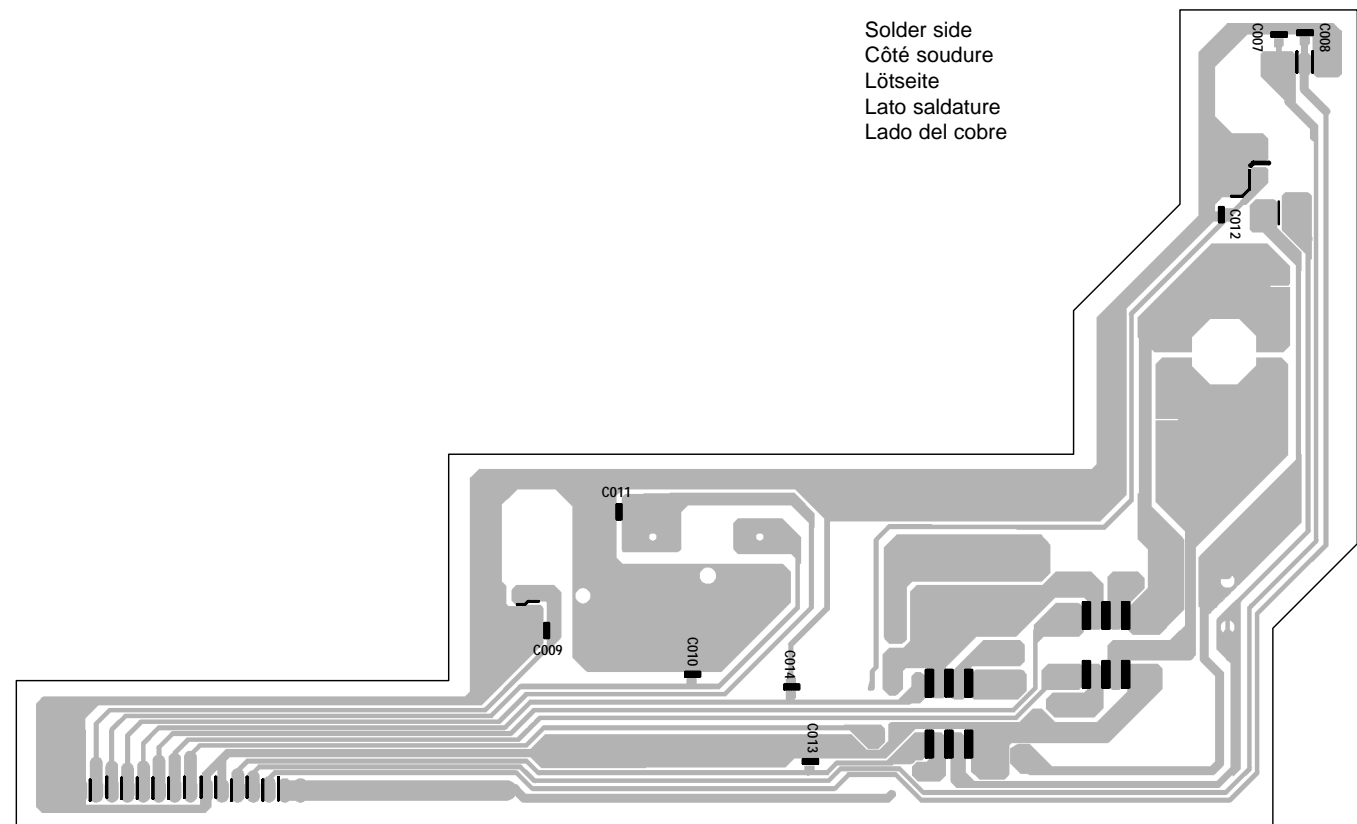


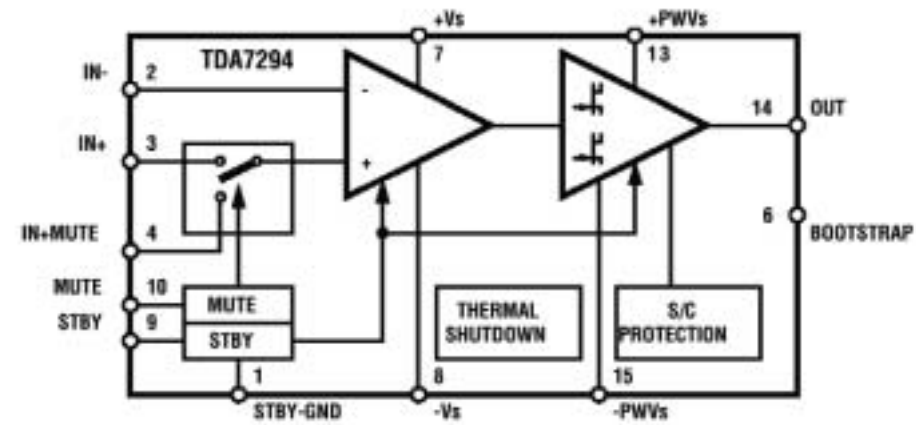
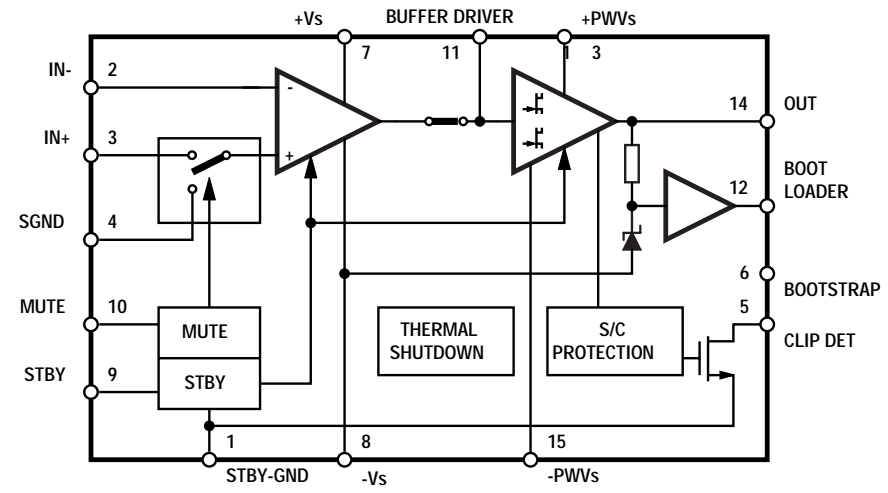
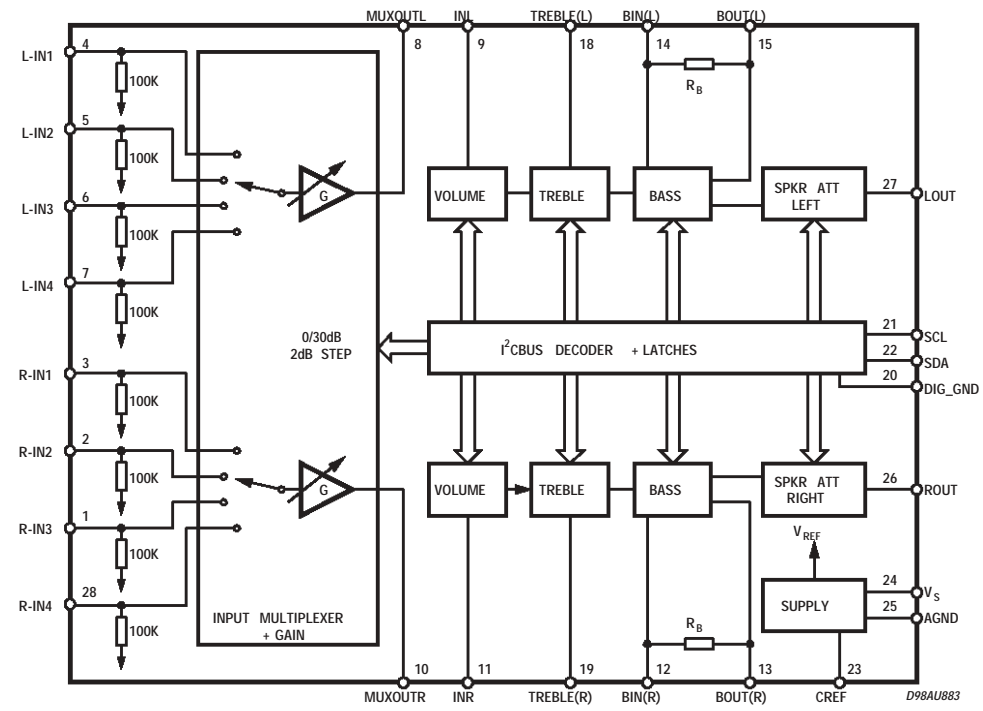
**CD motor control P.C.B.**  
**Platine commandes moteurs CD**  
**Ltpl. CD wechsler-motor**  
**Piastra comandi motori CD**  
**Platina mandos motores CD**

Component side  
 Côté composants  
 Bestückungsseite  
 Lato componenti  
 Lado componentes



Solder side  
 Côté soudure  
 Lötseite  
 Lato saldature  
 Lado del cobre





## Abbreviations - Abreviations - Abkürzungen - Abbreviazioni - Abreviaciones

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

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