



THOMSON

AUDIO

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

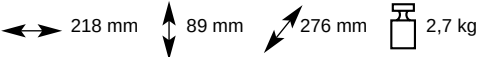
CS90

Version (PC*): A

*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**

Type of set : Radio / compact disc Type d'appareil : Radio / CD Geräteart : CD-Radio Portable Tipo d'apparecchio : Insieme radio / CD Tipo de aparato : Radio / CD		 218 mm 89 mm 276 mm  2,7 kg	
Power supply : Alimentation : 230 V ~ 50 Hz Stromversorgung : Alimentazione : Alimentación :		Nominal output power : Puissance nominale de sortie : 2 x 5 W (Rms) Nennausgangsleistung : 2 x 10 W (Music.) potenza nominale di uscita : Potencia nominal de salida :	
 FM - MF : 87,5 - 108 MHz MW - PO : 522 - 1611 kHz LW - GO : 150 - 283 kHz		Sensitivity : Sensibilité : FM - MF : 8 µV (S/N = 26 dB) Empfindlichkeit : MW - PO : 1000 µV/m (S/N = 20 dB) Sensibilità : LW - GO : 2500 µV/m (S/N = 20 dB) Sensibilidad :	
DAD Disc rotation speed : Vitesse de rotation du disque : 200 → 500 tr/m CD-Drehgeschwindigkeit : Velocità di rotazione del disco : Velocidad de rotación del disco :		Wave length : Longueur d'onde : Wellenlänge : 655 nm Lunghezza d'onda : Longitud de onda :	



WARNING : Before servicing this chassis please 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.

Code : 358 557 20 - 0205 / 3,7M - CRKD2141 Print.



CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1
APPARECCHIO CON LASER DI CLASSE 1
APARATO CON LASER DE CLASE 1

DANGER :

Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.

ATTENTION :

Le rayon laser est invisible. Eviter l'exposition directe lors de la maintenance.

VORSICHT BEI REPARATUREN :

Bei geöffneter Schublade und Defekt der Sicherheitsvorrichtungen besteht die Gefahr unsichtbaren Laserlichts. Niemals direkt in den Laserstrahl sehen.

ATTENZIONE :

Il raggio laser è invisibile. Evitare l'esposizione diretta durante la manutenzione.

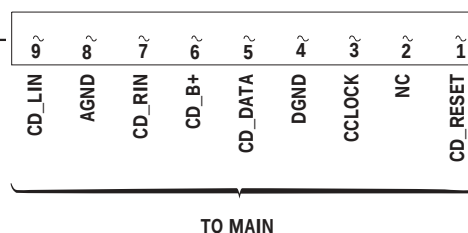
IMPORTANTE :

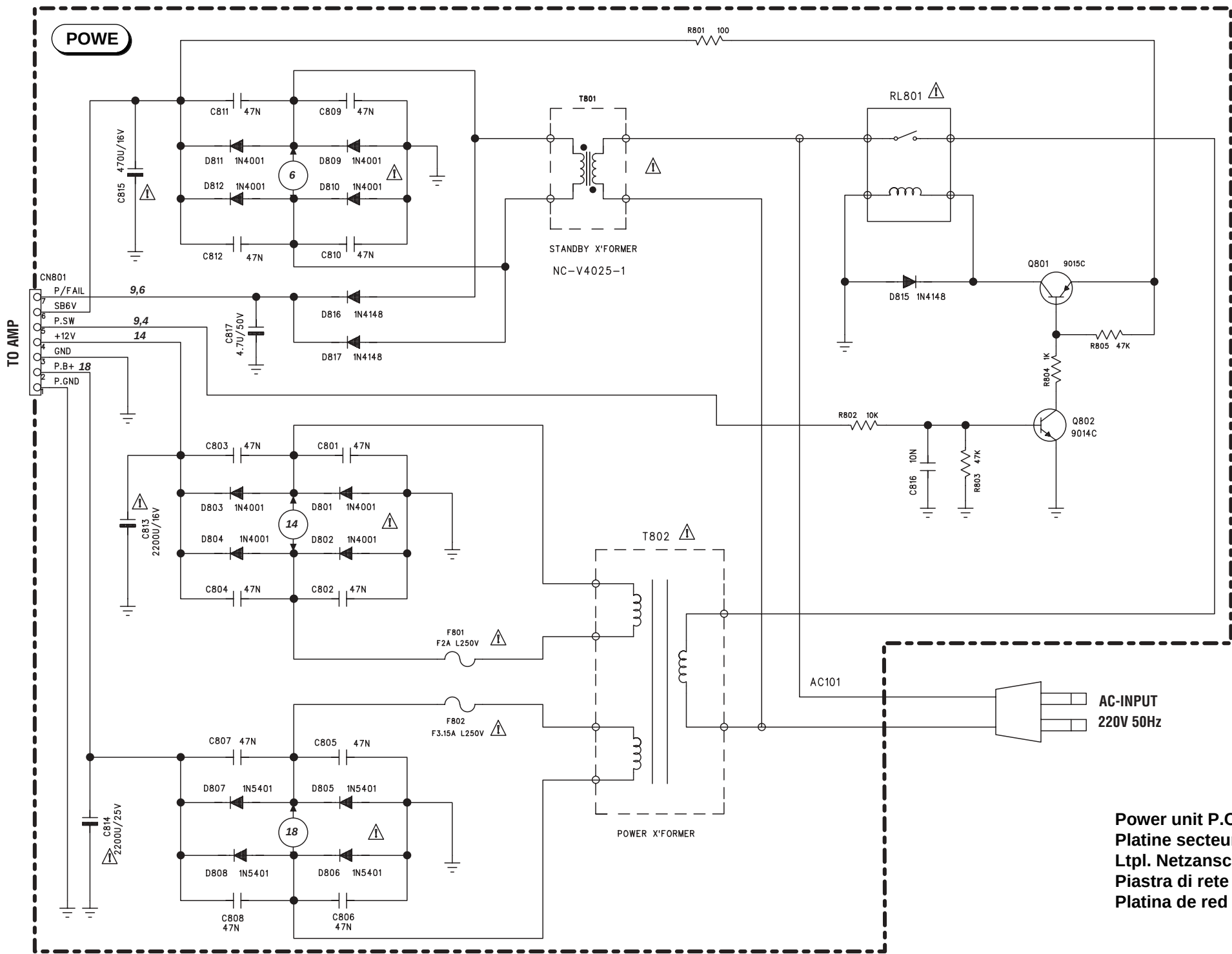
El rayo laser es invisible. Evitar la exposición directa en el momento del mantenimiento.

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

The complete Digital Processing Module is available from A.S.S. under Part Number :
En SAV, l'ensemble du module traitement digital est géré sous le code :
Die Service Bestell-Nr. für das Modul "Digital Processing kompl." ist :
Il codice del modulo completo di elaborazione digitale è :
En postventa, el modulo completo tratamiento digital lleva el código :

108 208 90

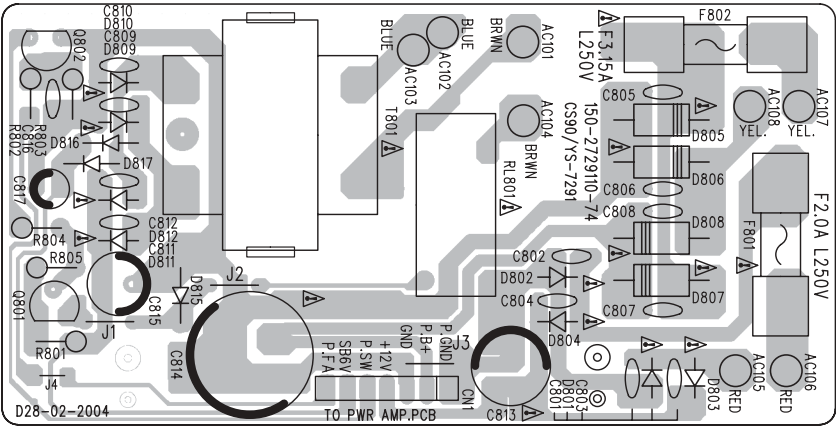
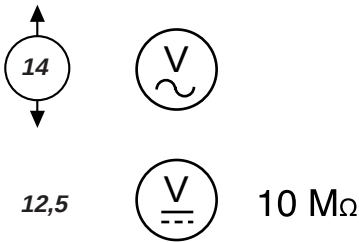




Power unit P.C.B.
Platine secteur
Ltpl. Netzanschluss
Piastra di rete
Platina de red

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

- NOTES:
1. Unless otherwise specified:
A. All resistor values are in ohms, 1/10W
B. All Capacitor values are in uF
 2. Voltages are positive with respect to ground under no signal conditions
 3. Replace transistors with type specified from replacement parts list
 4. Unless otherwise stated, all voltages taken in radio "on" position
 5. * and Δ indicates critical safety components. Replace only with those specified from replacement parts list to maintain proper performances and safety of this unit.



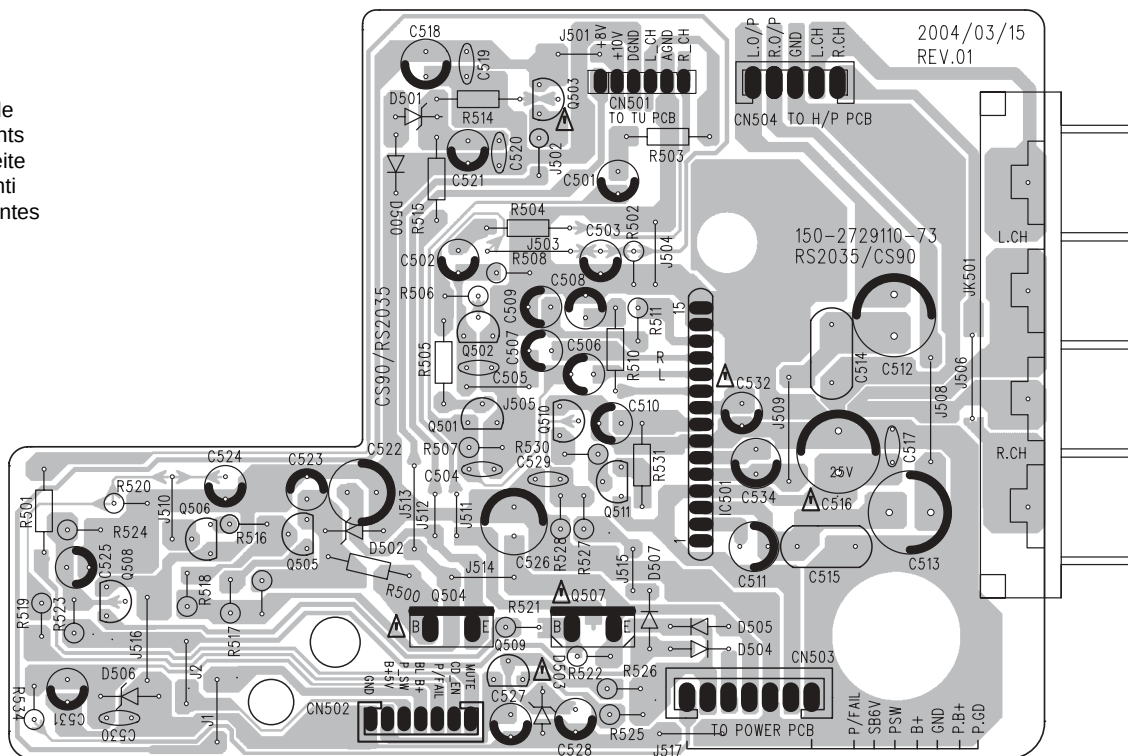
ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONI - AJUSTES

AM alignment							
		  	f		 	  	
MW	1	 	450 kHz	450 kHz	T201		max.
	2		522 kHz	522 kHz	L206	 Vt	$V = 1.1V \pm 0.1V$
	3		1620 kHz	1620 kHz		 Vt	$V = 7.5V \pm 0.5V$
	4		603 kHz	603 kHz	AM COIL (2)	 Vt	max.
	5		1404 kHz	1404 kHz	TC203		max.
LW	1	 	150 kHz		L205	 Vt	$V = 1.8V \pm 0.1V$
	2		283 kHz			 Vt	$V = 5.5V \pm 0.5V$
	3		164 kHz	164 kHz	LW coil (1)		max.
	4		272 kHz	272 kHz	TC202		max.

FM alignment							
		  	f		 	  	
Osc	2		87.5 MHz		L202	 Vt	$VT = 2.0V \pm 0.1$
	3		108.1 MHz				$VT = 6.5V \pm 7.5V$
RF	4	 $V_e = 1\text{ mV}$	90.1 MHz	90.1 MHz	L201		max.
	5		106.1 MHz	106.1 MHz	TC201		

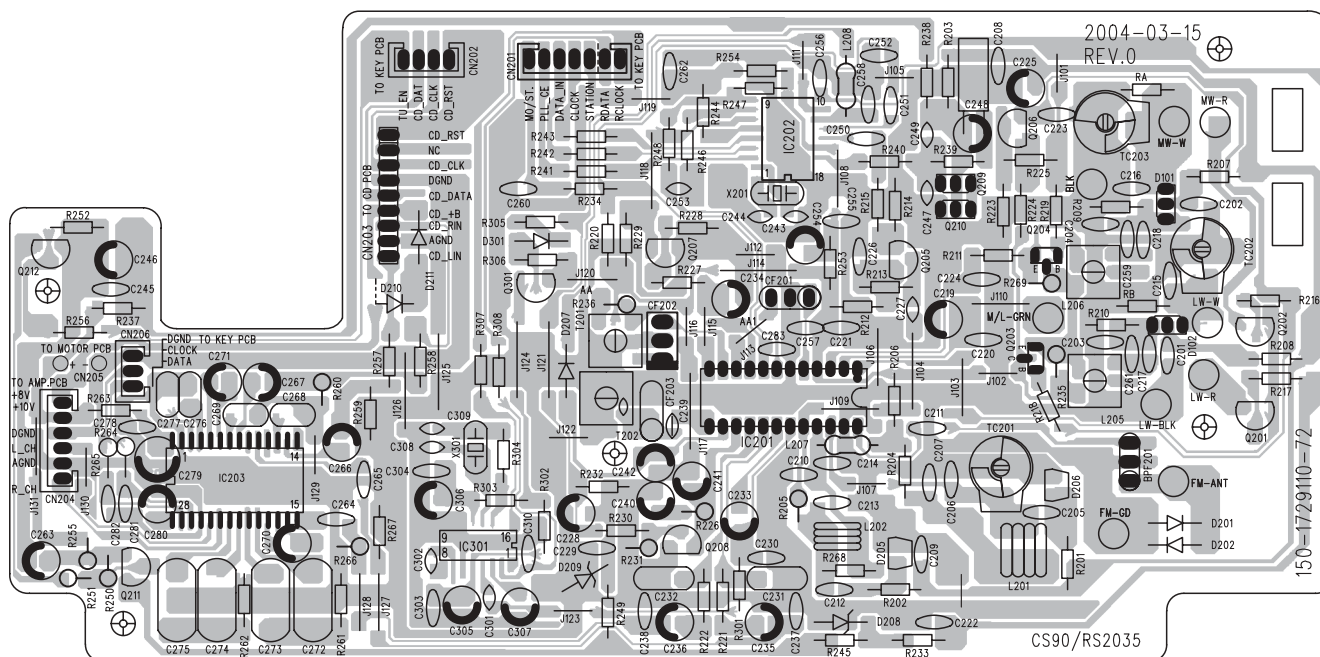
Amplifier P.C.B.
Platine amplificateur
Ltpl. Endverstärker
Piastra amplificatore
Platina amplificador

Component side
 Côté composants
 Bestückungsseite
 Lato componenti
 Lado componentes

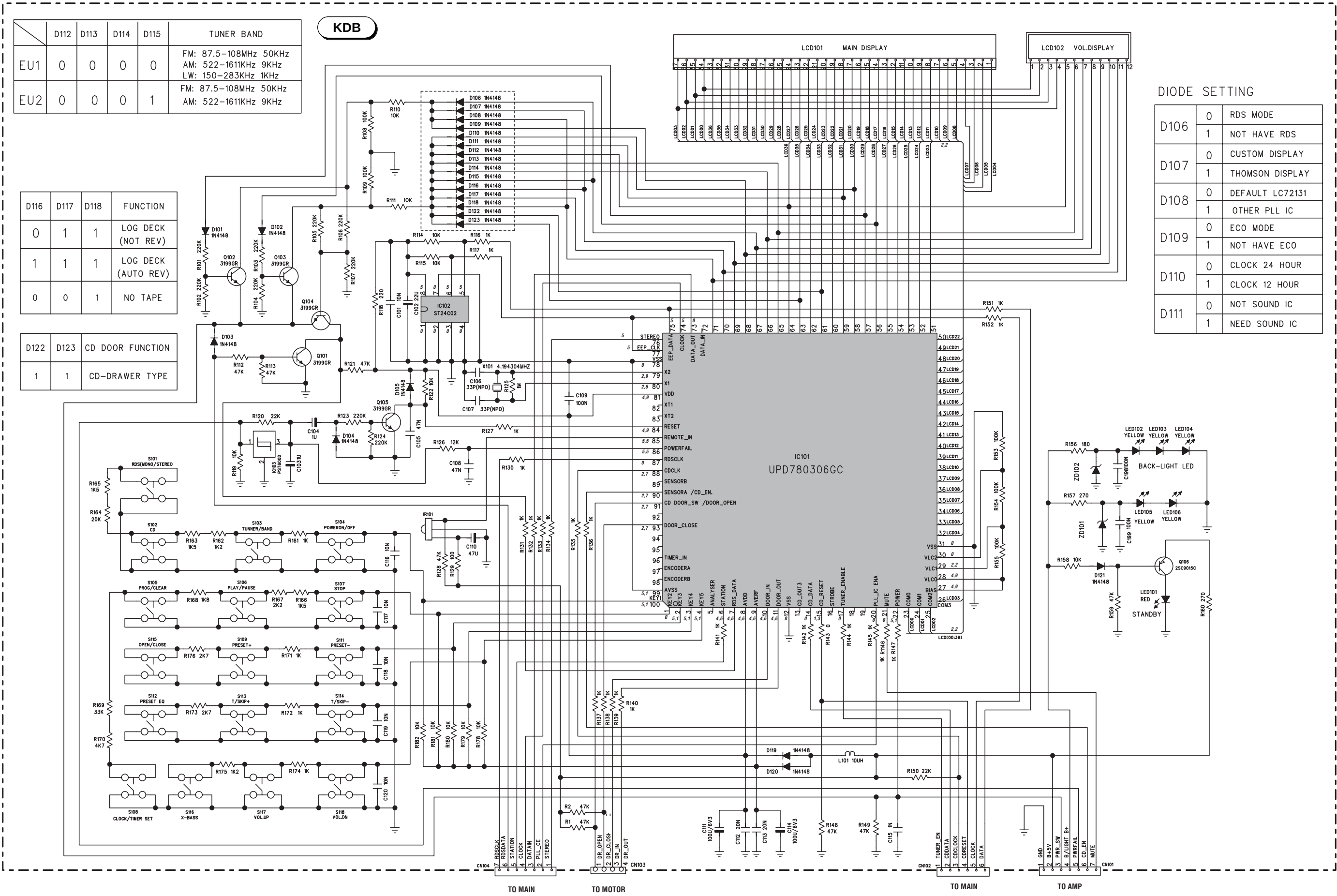


Main P.C.B.
Platine principale
Grundplatte
Piastra principale
Platina principal

Component side
 Côté composants
 Bestückungsseite
 Lato componenti
 Lado componentes



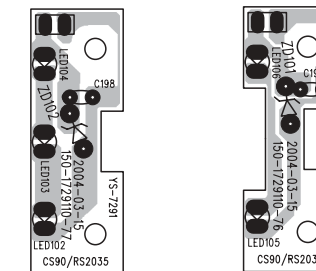
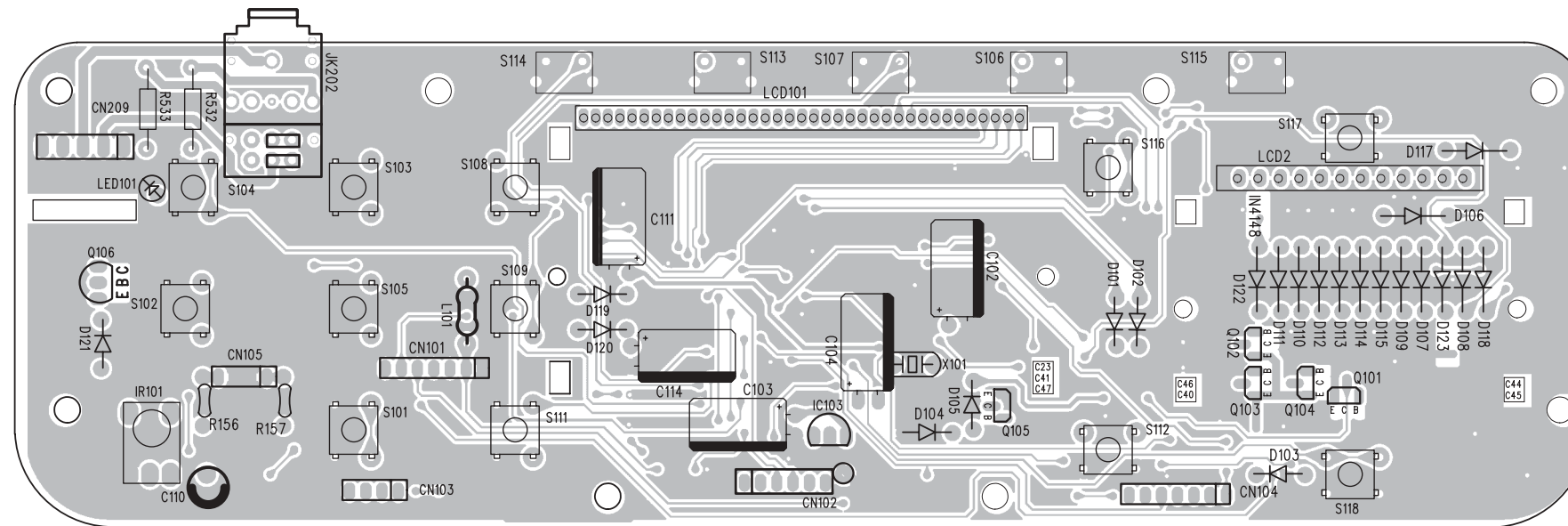




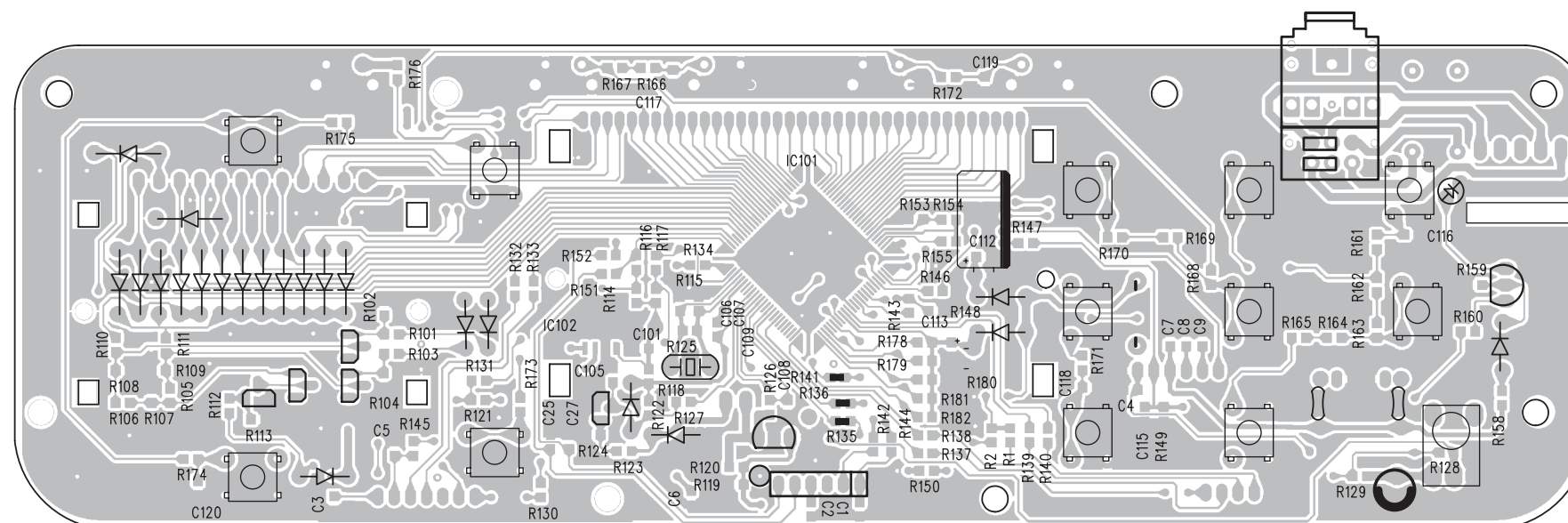
Controls / display P.C.B.
Platine commandes / afficheurs
Ltpl. Bedienteil / Anzeige
Piastra comandi / indicatore
Platina de mandos / indicadores

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

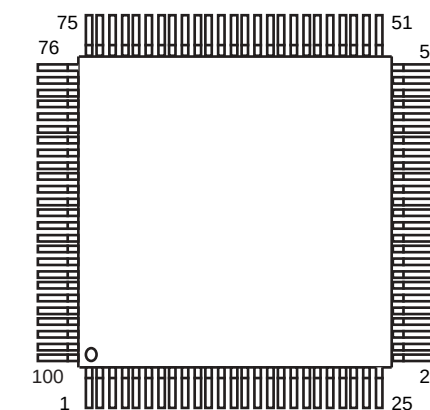
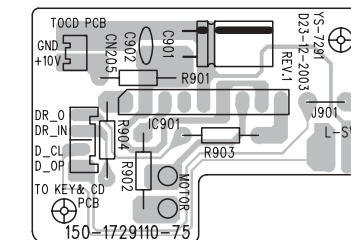
Led P.C.B.
Platine Led
Ltpl. Led
Piastra Led
Platina Led



**Motor P.C.B.
Platine moteur
Motorplatte
Piastra motore
Platina motor**



Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre



UPD780306QC

Abbreviations - Abreviations - Abkürzungen - Abbreviazioni - Abreviaciones

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

This technical documentation is for use by maintenance technicians only
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Thomson Sales UK Limited
Bath Road
West Drayton
Middlesex UB7 0DB (England)

**Thomson multimedia
Scandinavia AB**
Florettgatan 29 C
S-25467 Helsingborg (Sweden)
Tel. : 042 25 75 00

**Thomson multimedia
Sales Germany GmbH & Co oHG**
Karl-Wiechert-Allee 74
30625 Hannover

**Thomson
Consumer Electronics Poland**
ul. Gen. L. Okulickiego 7/9
05-500 Piaseczno (Varsovie)
Tel. : (22) 757 10 80

**Thomson multimedia
Sales France**
46, quai Alphonse Le Gallo
92648 Boulogne cedex
Tel. : 01 41 86 60 00
Internet : www.thomson-network.com

**Thomson multimedia
Czech s.r.o.**
ul. Dopravaku - dum Genius 1
Dolní Chabry
CZ - 18400 Prague 8
Tel. : (2) 688 67 70

**Thomson multimedia
Switzerland**
Seewenweg 5
CH-4153 Reinach
Tel. : (61) 716 96 60

**Thomson multimedia
Hungary KFT**
Lajos u. 78. II.em.
H-1036 Budapest
Tel. : 00 36 14 5334/80

**Thomson multimedia
Sales Portugal**
Avenida da Boavista, 3521
4106 Porto
Tel. : (2) 26 18 76 41

**Thomson multimedia
Sales Spain**
Avenida Isla Graciosa, 1
Edificio Ancora
Parque Empresarial La Marina
28700 San Sebastián de los Reyes (Madrid)
Tel. : (91) 384 14 19

**Thomson multimedia
Sales Italy S.p.A.**
Via Leonardo da Vinci, 43
20090 Trezzano sul naviglio (Milano)
Tel. : (02) 48 414 111