

**NORDMENDE**  
THOMSON TECHNOLOGY

**SABA**

**TELEFUNKEN**

 THOMSON

**RUNDFUNK  
RADIO  
RADIO**

CS 3460  
HS 3400

Bestell-Nr. 101.767.10

# Telefunken-Compact 3400 CD

ACHTUNG! Ersatzteilbestellungen  
sind schneller und kostengünstiger über

**Fax 0511/418-1960**

**Service-Hinweise · Stromlaufplan · Lagepläne**  
**Service Instructions · Circuit Diagram · Component Layout Diagrams**  
**Instructions de service · Schéma des connexions · Schémas d'implantation**

### Technische Daten / Technical data / Caractéristiques principales

#### EMPFANGSTEIL / RADIO / RADIO

UKW ..... : 87,5 - 108 MHz  
MW ..... : 522 - 1611 kHz  
LW ..... : 146 - 290 kHz

#### VERSTÄRKER / AMPLIFIER PART / PARTIE AMPLIFICATEUR

Ausgangsleistung / output power / puissance de sortie  
(Musik / music / musique) ..... : 2 x 20 W  
(Spitze / peak / crête) ..... : 2 x 40 W  
Impedanz / Impedance / Impedance ..... : 8Ω

#### CASSETTENTEIL / CASSETTE PART / PARTIE MAGNETOPHONE

Bandsorten / tape select / types de bande ..... : Fe, CrO<sub>2</sub>, Me  
Bandgeschwindigkeit / tape speed / vitesse de défilement de la bande ..... : 4,75 cm/s

#### CD-SPIELER / CD-PLAYER / LECTEUR-CD

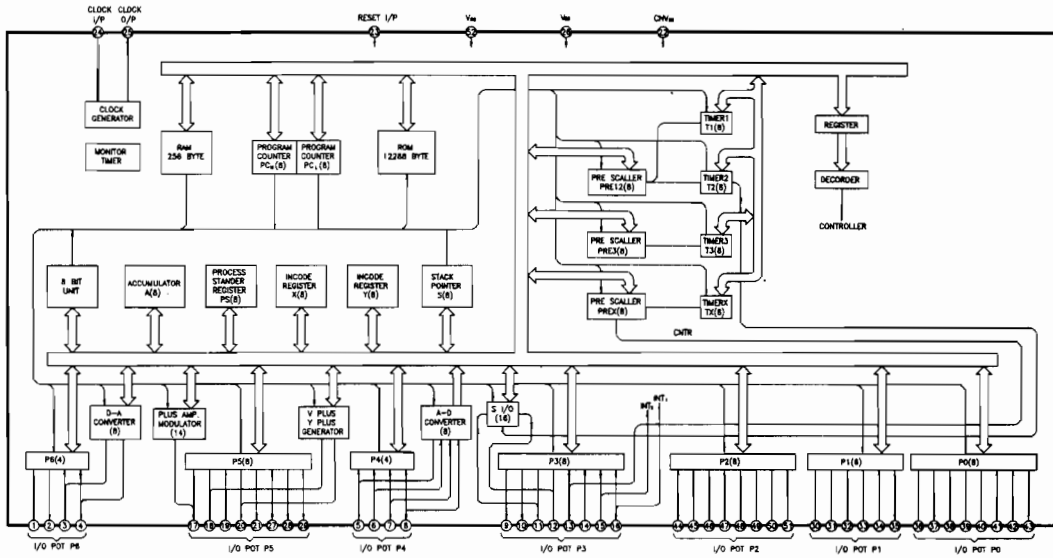
Samplingfrequenz / sampling frequency ..... : 44,1 kHz  
Übertragungsbereich / frequency response / coube de réponse ..... : 40 Hz - 20 kHz

#### VERSCHIEDENES / DIVERSE / DIVERS

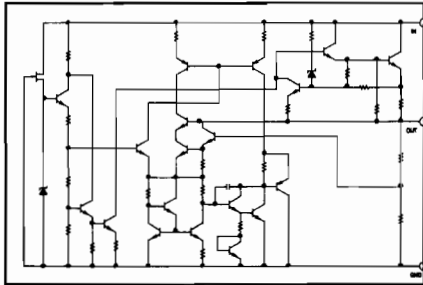
Netzteil / main / alimentation ..... : 230 V ~ 50 Hz  
Abmessungen (B x H x T) / dimensions (W x H x D) / dimensions (L x H x P) ..... : 280 x 380 x 310 mm  
Gewicht / weight / poids ..... : 5,5 kg

# IC-Applikationen / Applications

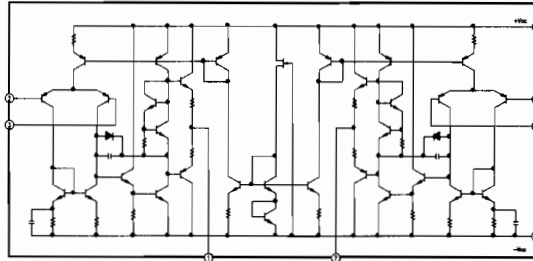
## M 37420 M 4-417 SP



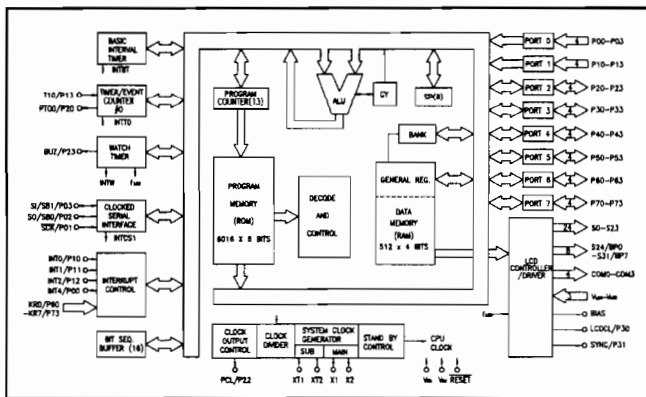
## NJM 78 M 05 FA



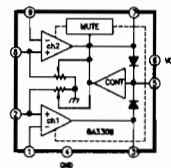
## M 5218 AL



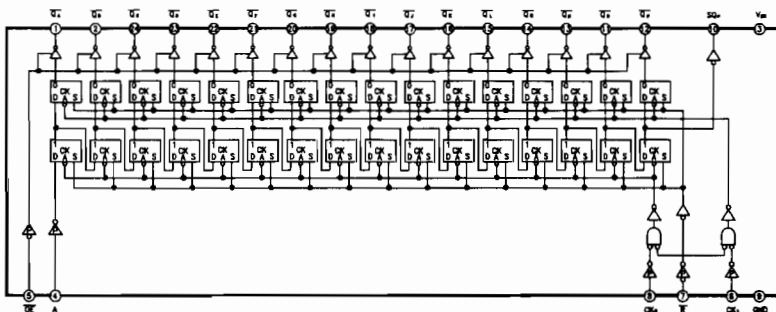
## UPD 75308 GF-K 13



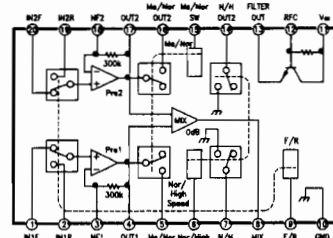
## BA 3308

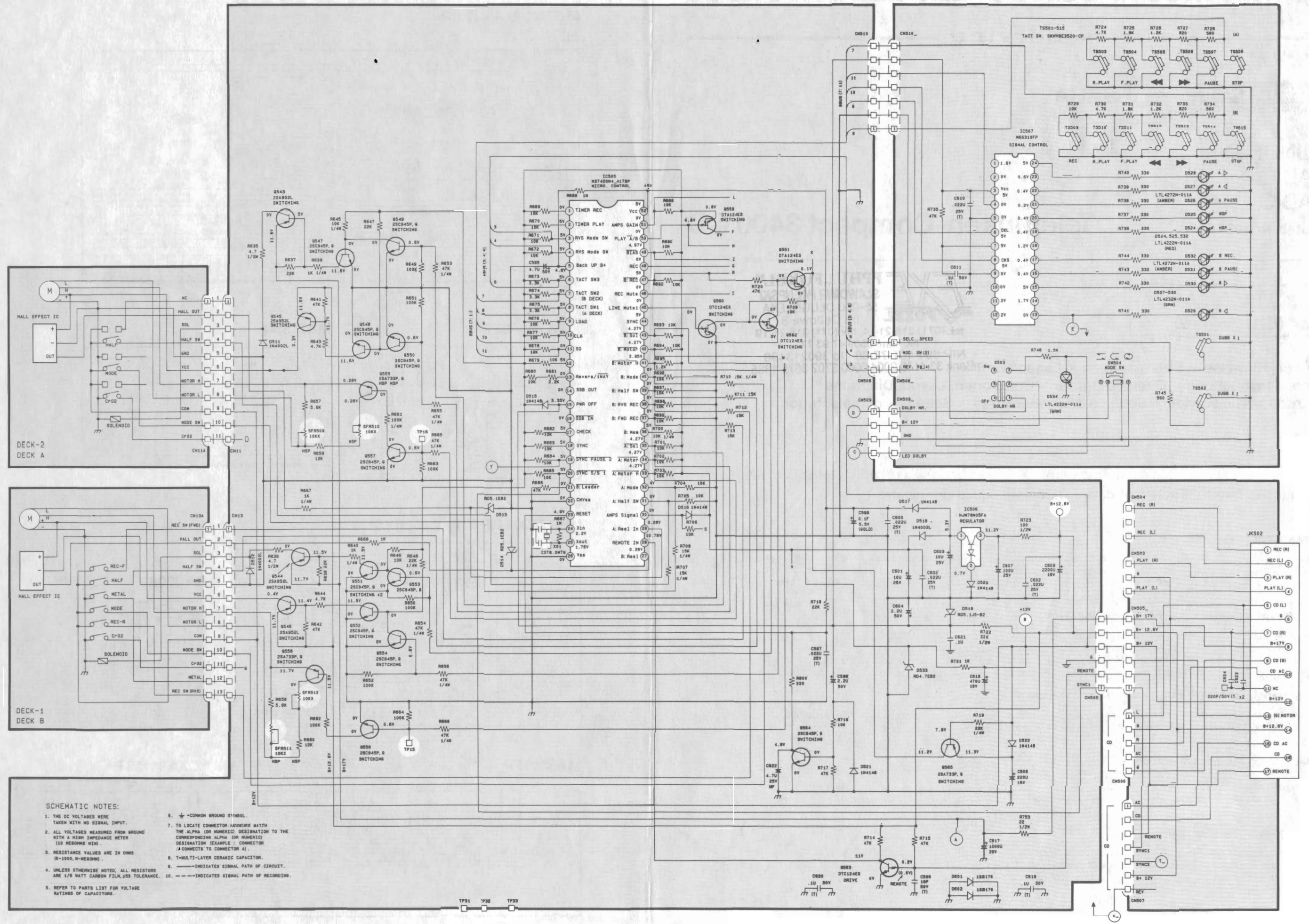


## M 66310 FP



## CXA 11158 P



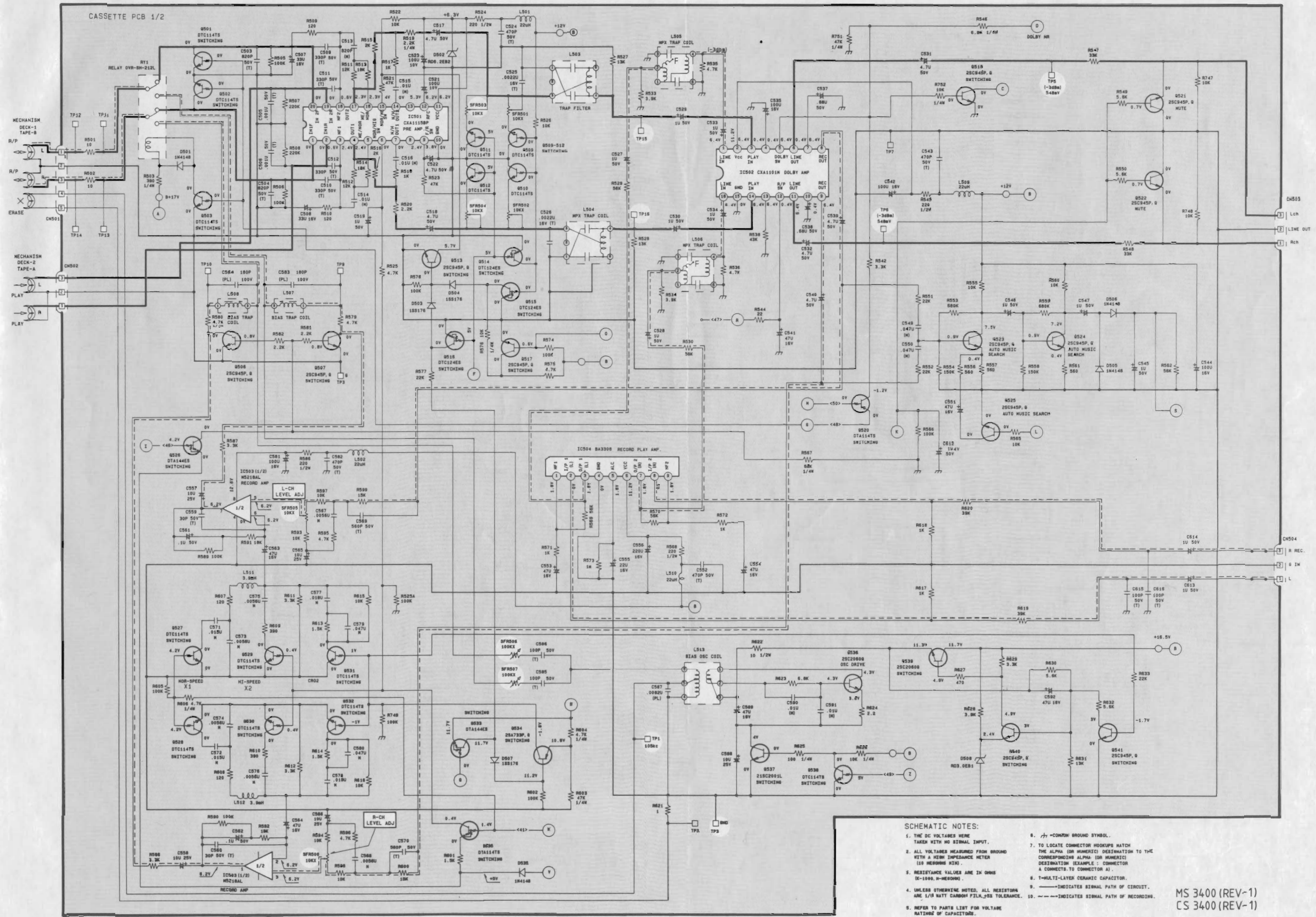


**SCHEMATIC NOTES:**

1. THE DC VOLTAGES WERE TAKEN WITH NO SIGNAL INPUT.
2. ALL VOLTAGES MEASURED FROM GROUND WITH A HIGH IMPEDANCE METER (50 MEGOHMS MIN).
3. RESISTANCE VALUES ARE IN OHMS (K=1000, M=MEGAS).
4. UNLESS OTHERWISE NOTED, ALL RESISTORS ARE 1/8 WATT CARBON FILM, 20% TOLERANCE.
5. REFER TO PARTS LIST FOR VOLTAGE RATINGS OF CAPACITORS.
6. ——— COMMON GROUND SYMBOL.
7. TO LOCATE CONNECTOR, INDICATORS MATCH THE ALPHA (OR NUMERIC) DESIGNATION TO THE CORRESPONDING ALPHA (OR NUMERIC) DESIGNATION (EXAMPLE: C CONNECTOR (CONNECTS TO CONNECTOR A)).
8. T=HALTI-LAYER CERAMIC CAPACITOR.
9. ——— INDICATES SIGNAL PATH OF CIRCUIT.
10. - - - - INDICATES SIGNAL PATH OF RECORDING.



# Hauptleiterplatte / Main board / Platine principale



- SCHEMATIC NOTES:**
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  2. ALL VOLTAGES MEASURED FROM GROUND WITH A HIGH IMPEDANCE METER (10 MEGOHMS MIN).
  3. RESISTANCE VALUES ARE IN OHMS (K=1000, M=MEGAS).
  4. UNLESS OTHERWISE NOTED, ALL RESISTORS ARE 1/8 WATT CARBON FILM, ±5% TOLERANCE.
  5. REFER TO PARTS LIST FOR VOLTAGE RATINGS OF CAPACITORS.
  6. ⚡ = COMMON GROUND SYMBOL.
  7. TO LOCATE CONNECTOR HOOKUPS MATCH THE ALPHA (OR NUMERIC) DESIGNATION TO THE CORRESPONDING ALPHA (OR NUMERIC) DESIGNATION (EXAMPLE: CONNECTOR A CONNECTS TO CONNECTOR A).
  8. T=MULTI-LAYER CERAMIC CAPACITOR.
  9. ——— INDICATES SIGNAL PATH OF CIRCUIT.
  10. - - - - - INDICATES SIGNAL PATH OF RECORDING.

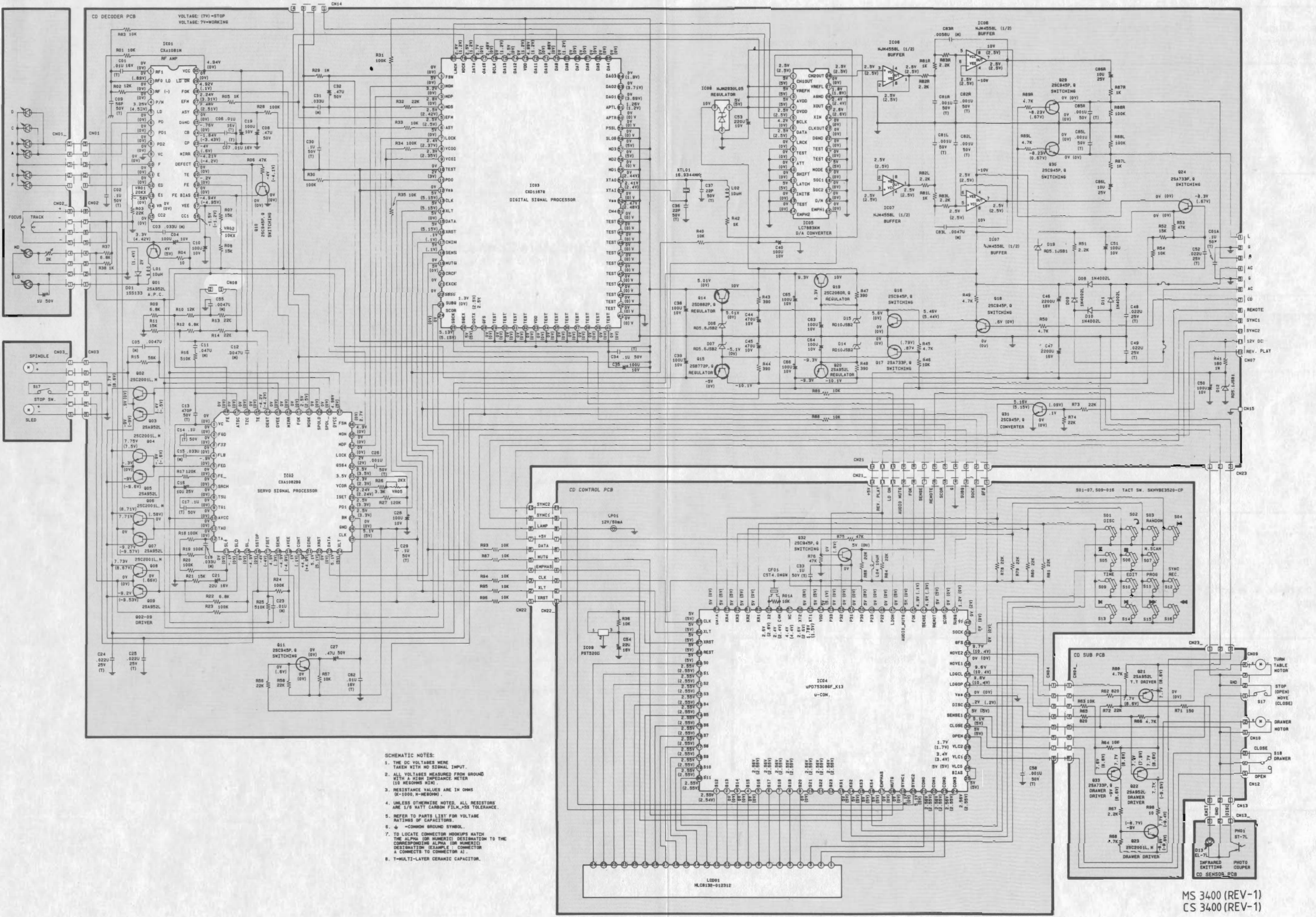
MS 3400 (REV-1)  
CS 3400 (REV-1)







CD-Spieler / CD-Player



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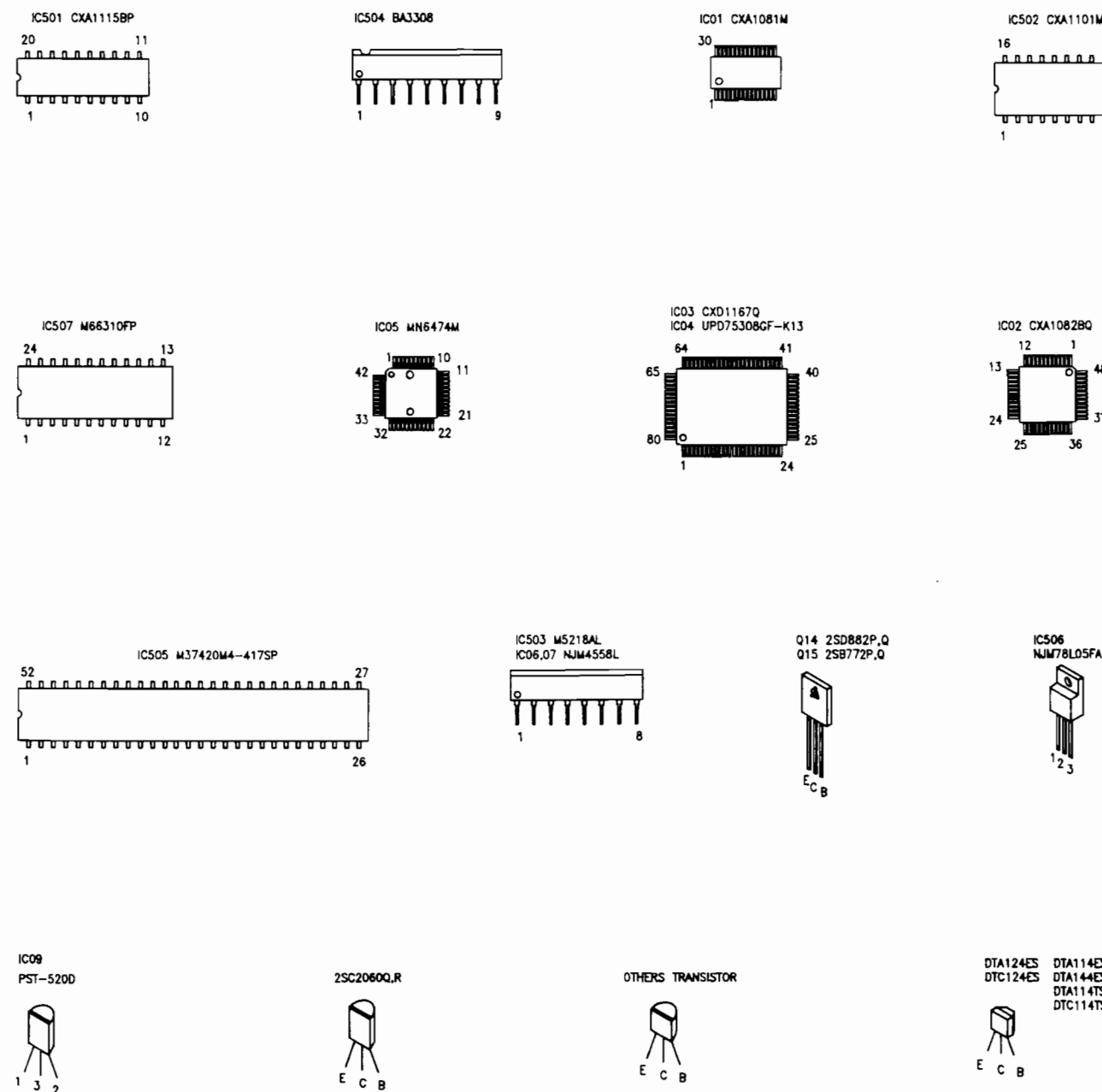
MS 3400 (REV-1)  
CS 3400 (REV-1)

# Abgleich Cassette / Tape-Alignment / Cassette-Alignement

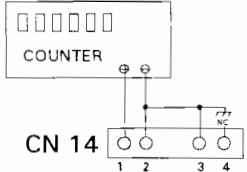
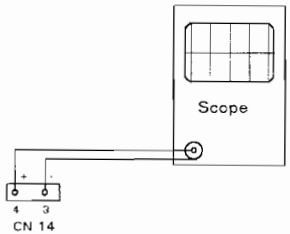
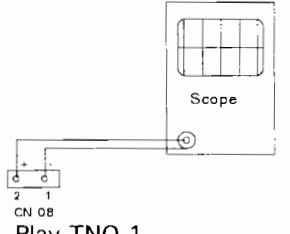
Einstellungen Adjustments Règlage	Beschreibung Description	Sollwert Nominal value	Einsteller Adjustment
Azimuth-Einstellung Azimuth adjustment Règlage d'azimut	<p>Tape A + B Azimuth</p>	Max. ( R = L )	
Oszillator Oscillator Oscillateur	<p>Tape A / B</p> <p>Beat-switch OFF;</p>	105kHz ± 5Hz	L 513
Bandgeschwindigkeit Normal Speed Vitesse normale	<p>Tape A / B MTT-111</p> <p>Shorted ( ONLY FOR HIGH-SPEED MODE )</p> <p>TP15 ( Deck 1 ) GND TP16 ( Deck 2 ) GND</p>	Normal speed: Tape 1/2 = 2,94 - 3,09 kHz	Tape1 : SFR 512  Tape 2 : SFR 510
		High speed: Tape 1/2 = 5,34 - 5,49 kHz	Tape1 : SFR 511  Tape 2: SFR 509
Dolby - Pegel Dolby level adjustment Alignement de la sortie Dolby	<p>MTT - 150 ( Play - Mode )</p>	548mV ± 1dB	Tape1 : SFR501 (L) SFR502 (R)  Tape2 : SFR503 (L) SFR504 (R)
Sperrkreis - Abgleich Trap adjustment Circuit de rjection - alignement	<p>Tape 1 MTT - 5521 ( Record - Mode )</p> <p>Tape 2 MTT - 118 ( Play - Mode )</p> <p>Normal dubbing,</p>	Min. output	Left channel: L 503  Right channel: L 504

Vormagnetisierung Bias adjustment Prémagnétisation	Tape A Beat - Switch OFF Rec. - and Play - Mode DC → TP 13 ( R ) TP 14 ( R ) TP 11 ( L ) TP 12 ( L )	11mV  11mV	SFR508 ( R )  SFR507 ( L )
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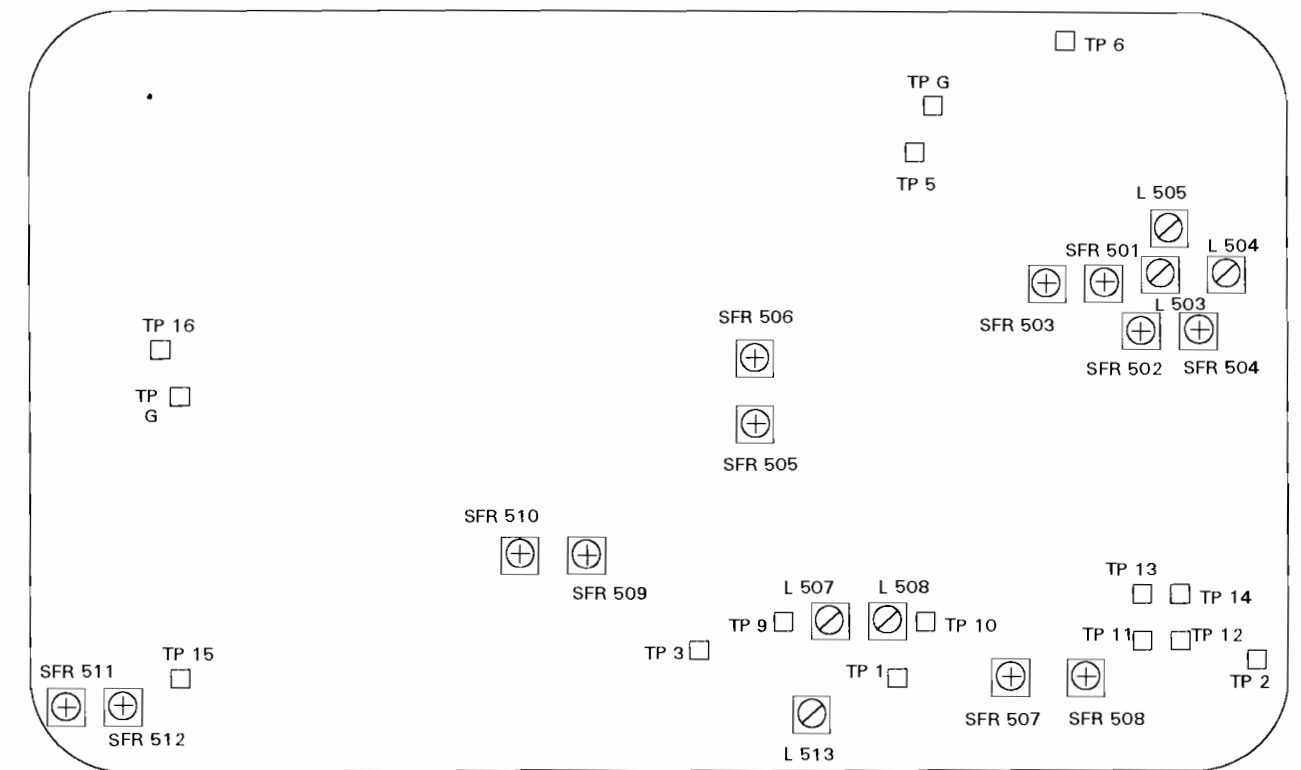
## IC-Transistors Connection:



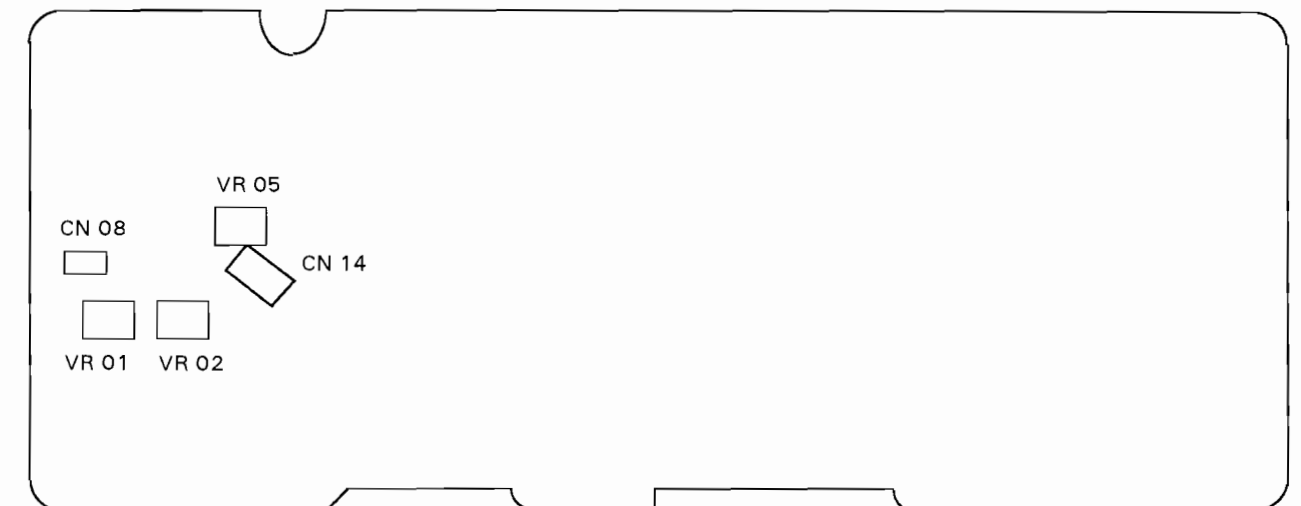
## CD-Abgleich / CD-Alignment / CD-Alignement

Abgleich Adjustments Règlage	Beschreibung Description Description	Einsteller Adjustment Règlage	Sollwert Nominal value Valeur standart
Abgleichvorbereitung Alignment - preparation Préparation d` compensation	<p>CD - Fach öffnen; Beide Sicherungsschrauben ( M64 ) lösen und Schublade entfernen; Führungshebel ( M117 ) nach Außen drücken und Drehteller entfernen.</p> <p>Open CD chassis; Loose 2 screws ( M64 ) and pull out the CD - chassis; Remove the turntable by sliding the guide plate( M117 ) outward.</p> <p>Ouvrir le CD - tiroir; detacher les deux vis de blocade et enlever le tiroir; presser la manette-guide au dehors et enlever la plaque tournante.</p>		
PLL (VCO)	<p>Stop,</p>  <p>CN 14</p>	VR05	4,35MHz ± 10 kHz
Focus Offset	 <p>Play;</p> <p>( Phillips 5A Track 1 )</p>	VR 02	Maximal AC-Pegel
Tracking Offset	 <p>Play TNO 1,</p>	VR 01	0 V , ± 20 mV DC

## Abgleichpunkte Tape / Alignment-points Tape

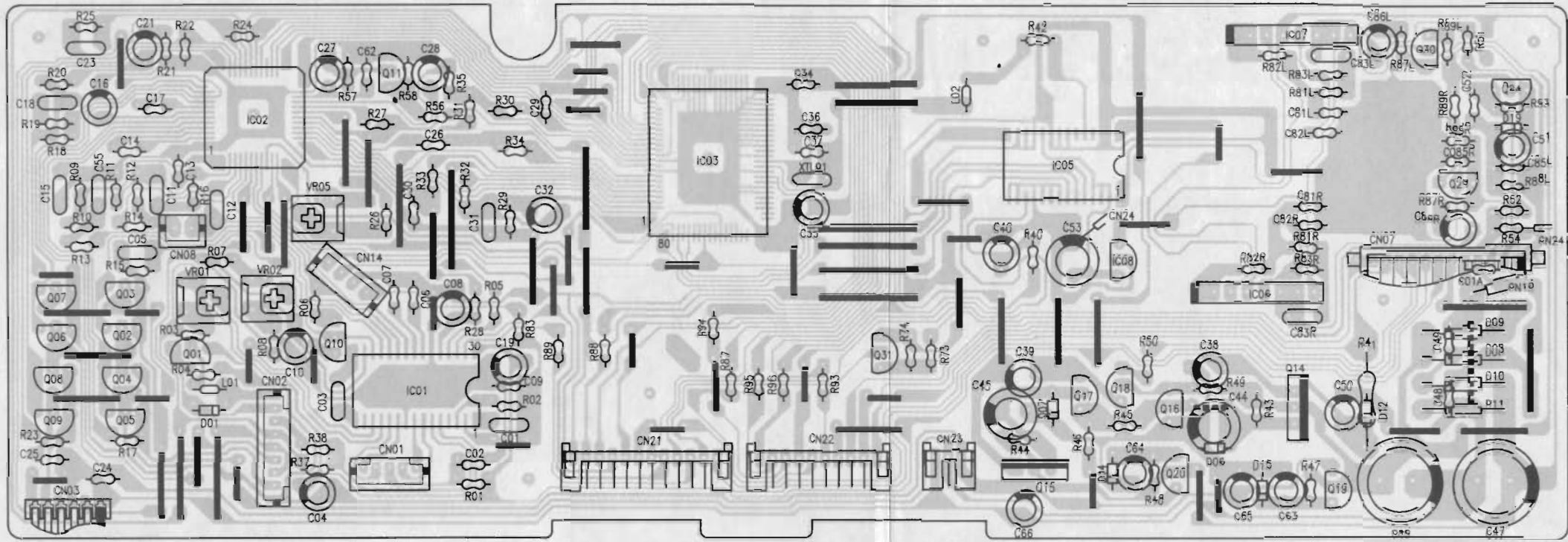


## Abgleichpunkte CD / Alignment-points CD

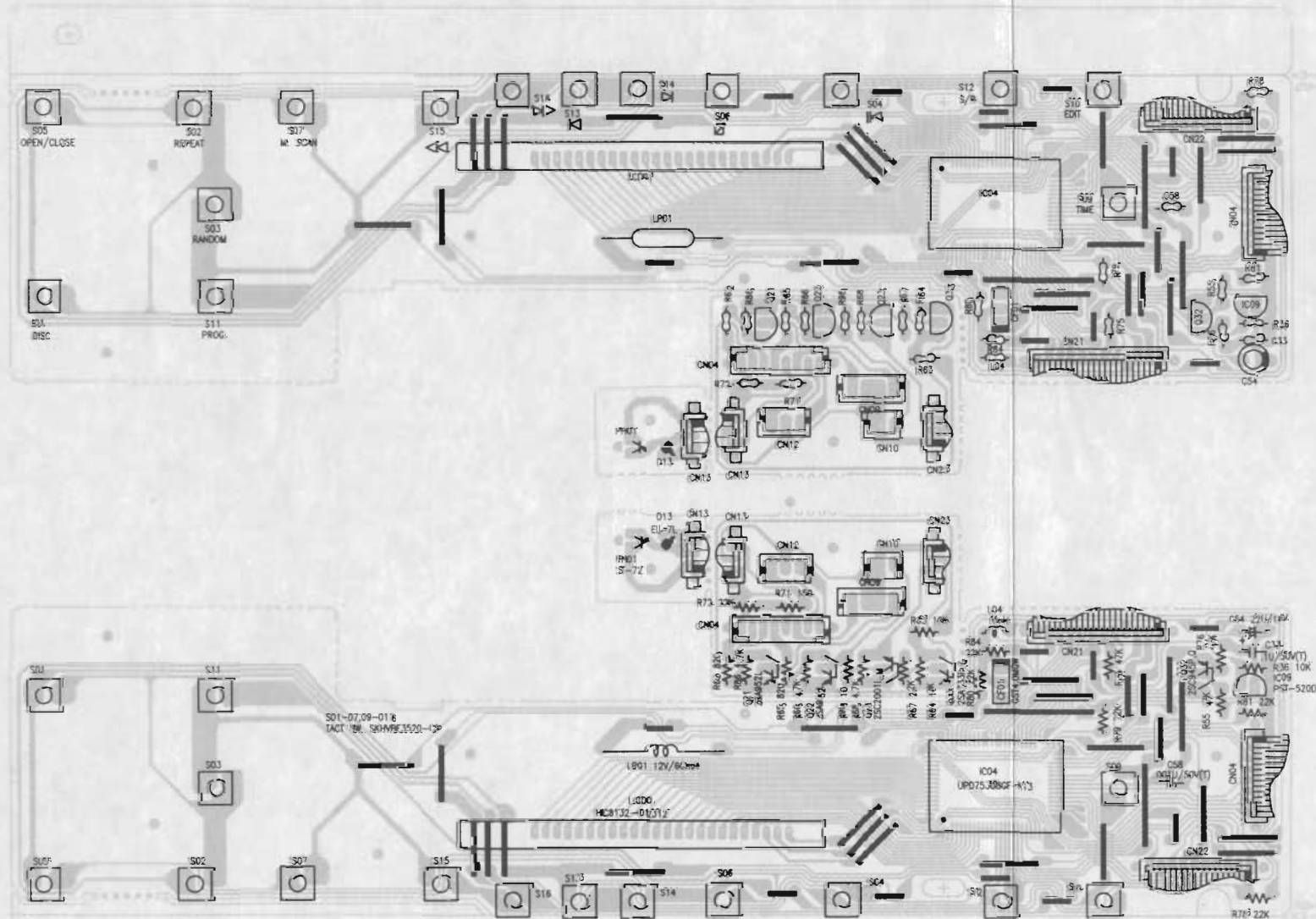




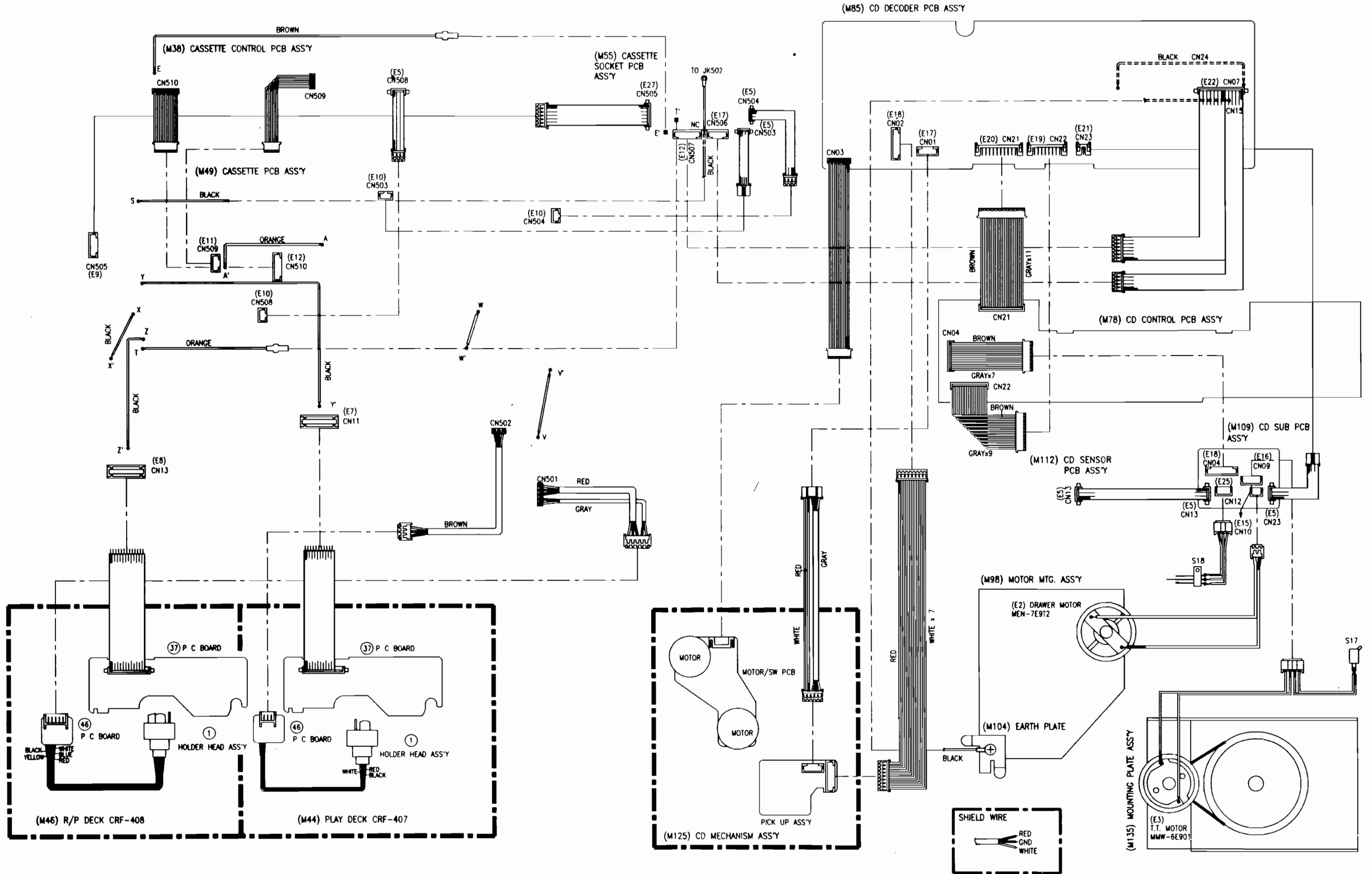
CD-Spieler / CD-Player



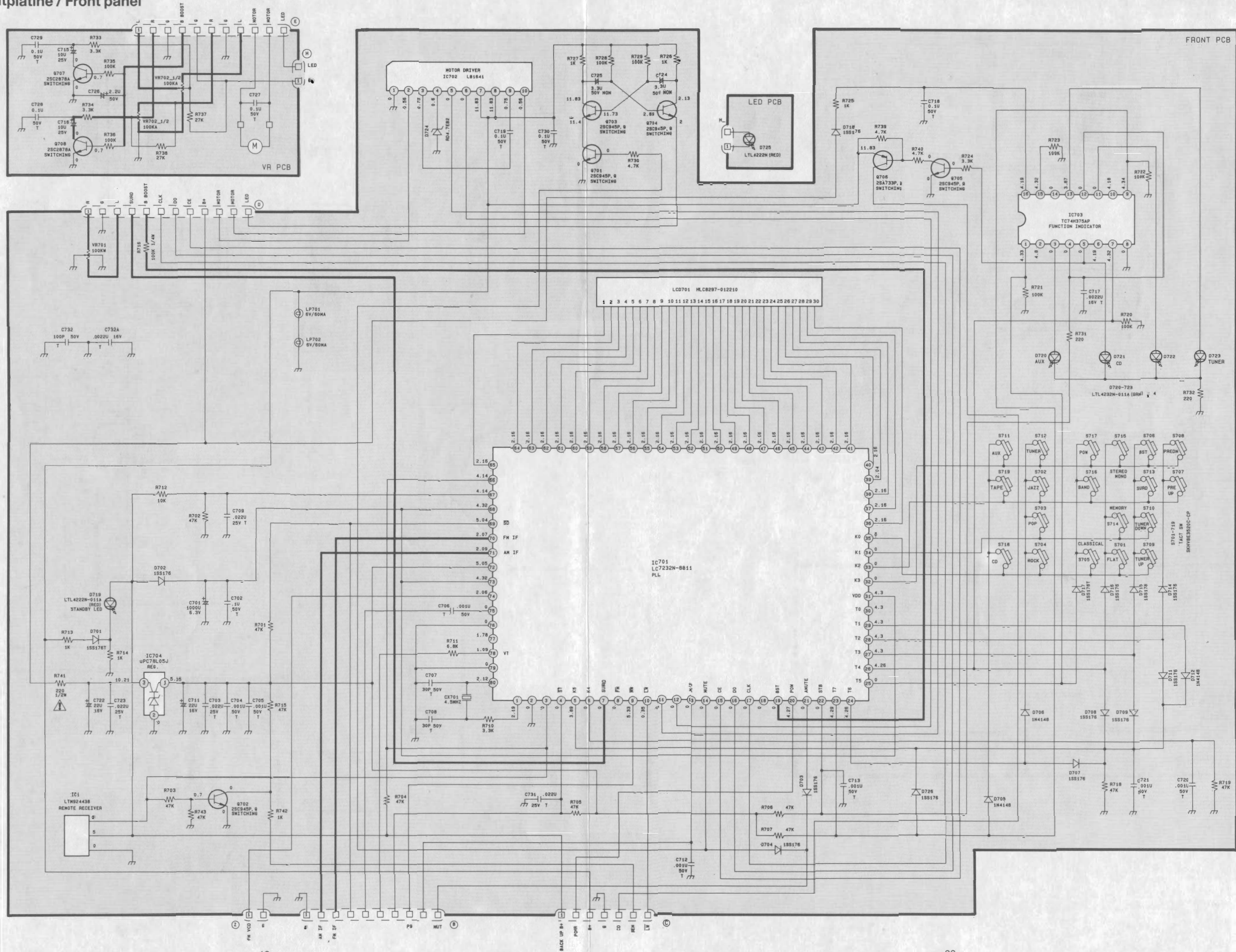
CD-Bedienteil / CD-Control board



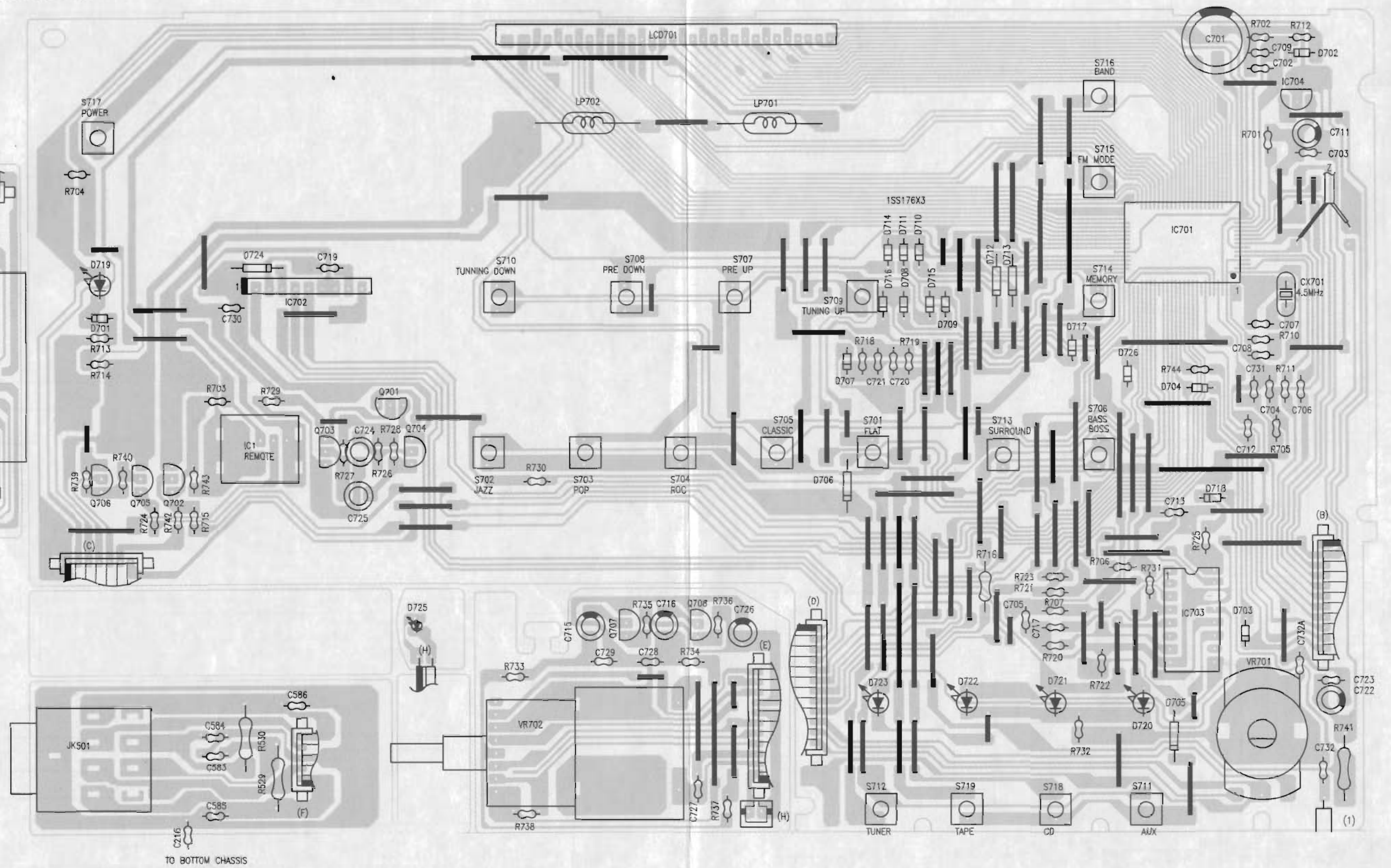
Verdrahtungsplan / Wiring Diagram



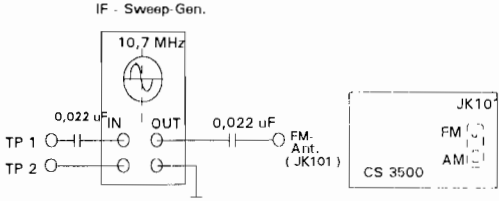
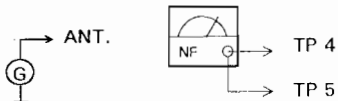
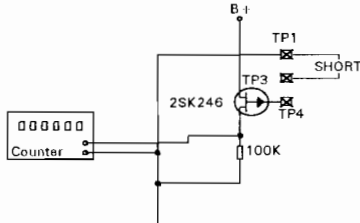
Frontplate / Front panel







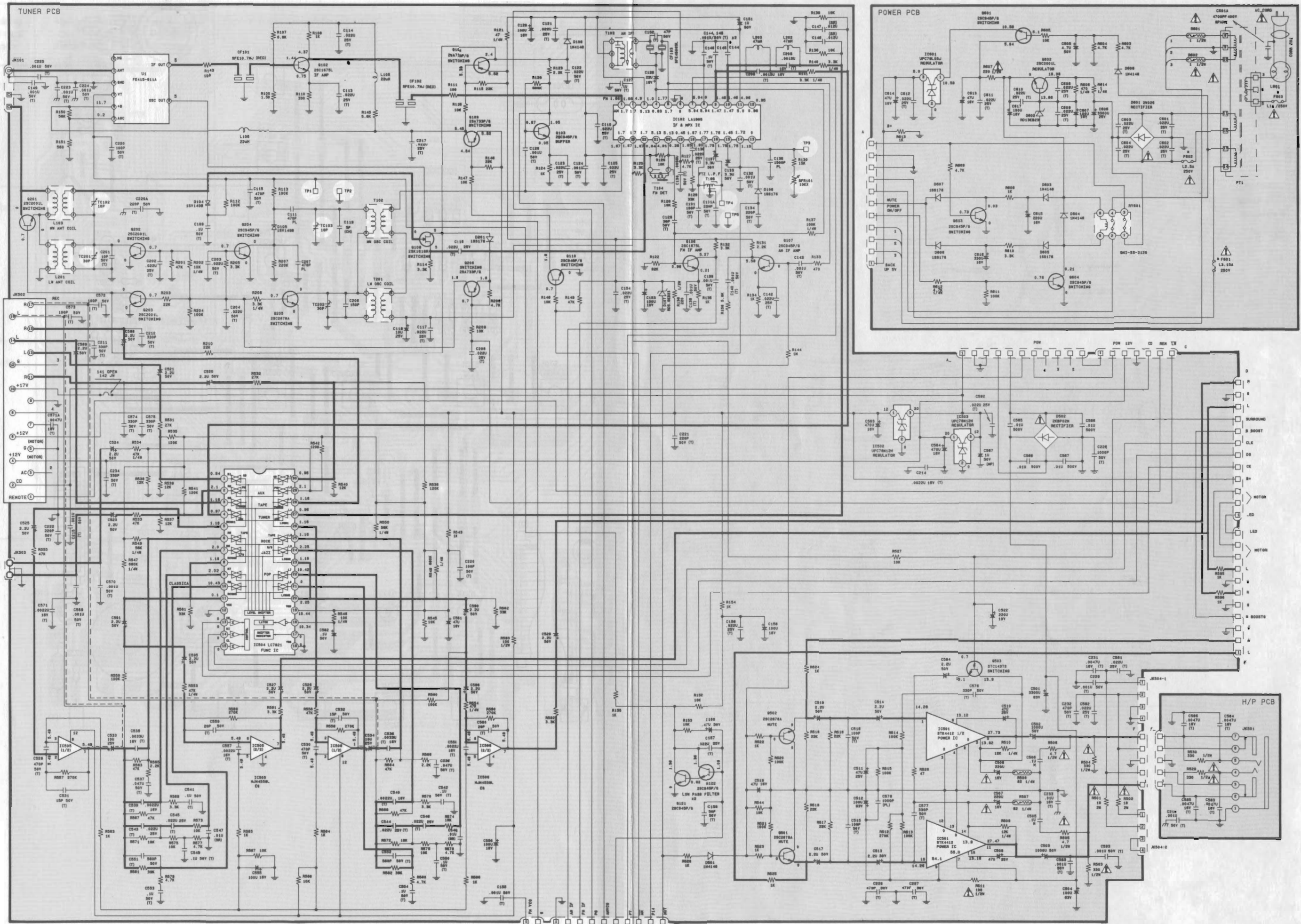
# FM-Abgleich / FM-Alignment / FM-Alignement

Einstellung Adjustment Réglages	Meßsender Generator Générateur	Empfänger Receiver Récepteur	Beschreibung, Description, Description	Einsteller Adjustment Réglage
ZF	10,7 MHz gewobbelt sweep	94 MHz	<p>IF - Sweep-Gen.</p> 	T 104
Oszillator	87,5 MHz	87,5 MHz	 <p>1,6 V ± 0,05 V</p>	
	108 MHz	108 MHz	7,5 V	
Stereo	98 MHz	98 MHz	<p>BAND SWITCH : FM FM-MODE SWITCH : OFF</p>  <p>COUNTER : 76kHz ± 100 Hz</p>	SFR 101 + T 105

# AM-Abgleich / AM-Alignment / AM-Alignement

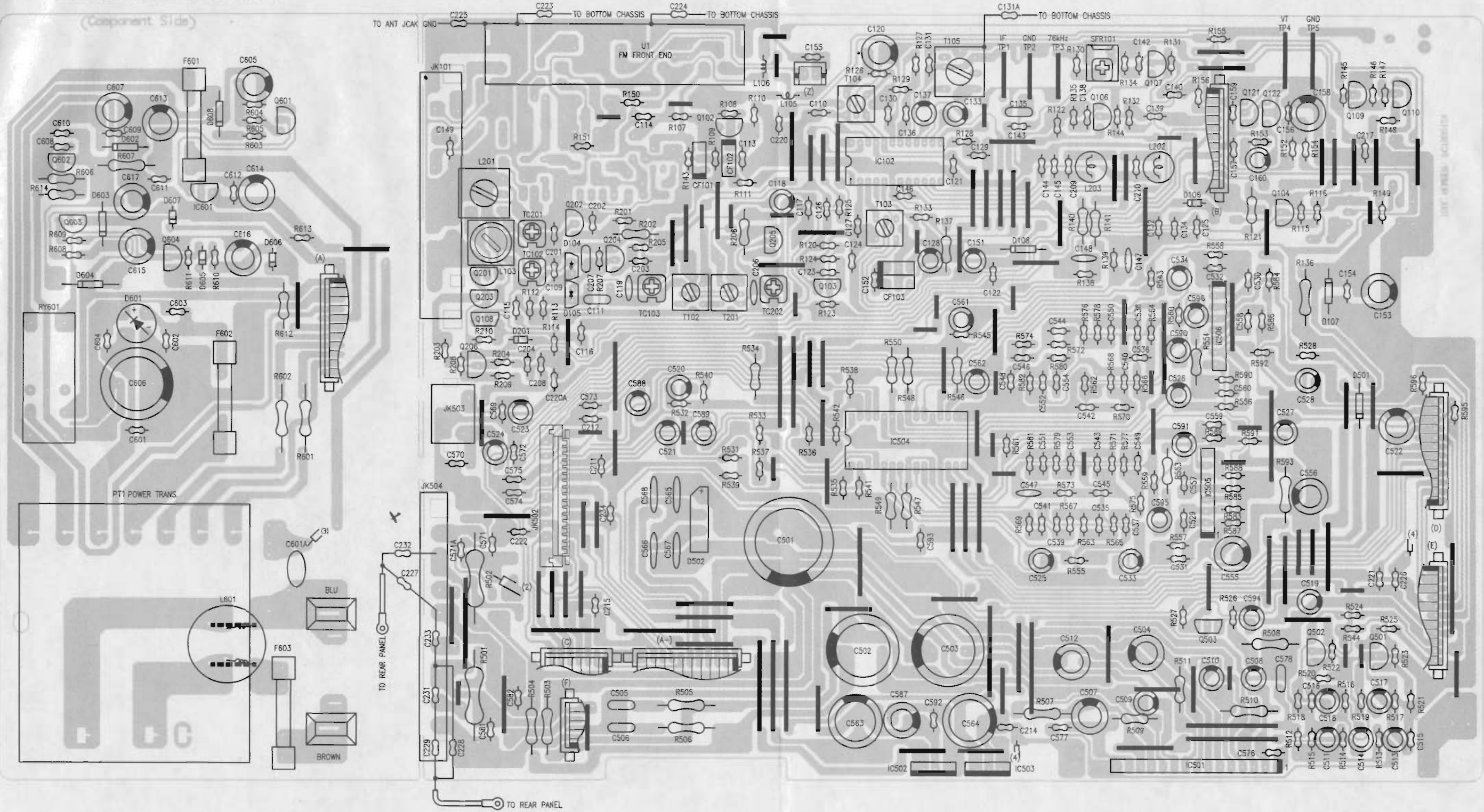
Einstellung Adjustment	Meßsender Generator	Empfänger Receiver	Beschreibung, Description,	Einsteller Adjustment
ZF IF	450 kHz gewobbelt sweep, ( < 25Hz)	MW		T 103
MW Oszillator Oscillator	---	522 kHz	Abstimmspannung: $1,2 \pm 0,02 \text{ V}$ ( Tuning-Voltage )  	T 102
	---	1611 kHz	$7,2 \pm 0,02 \text{ V}$	TC 103
HF - MW RF - MW	603 kHz	603 kHz	max. ampl.	L103
	1404 kHz	1404 kHz	max. ampl.	TC102
LW Oszillator	---	146 kHz	$0,9 \pm 0,05 \text{ V}$	T201
	---	290 kHz	$5,5 \pm 0,05 \text{ V}$	TC202
HF - LW RF - LW	160 kHz	160 kHz	max. ampl.	L201
	260 kHz	260 kHz	max. ampl.	TC201



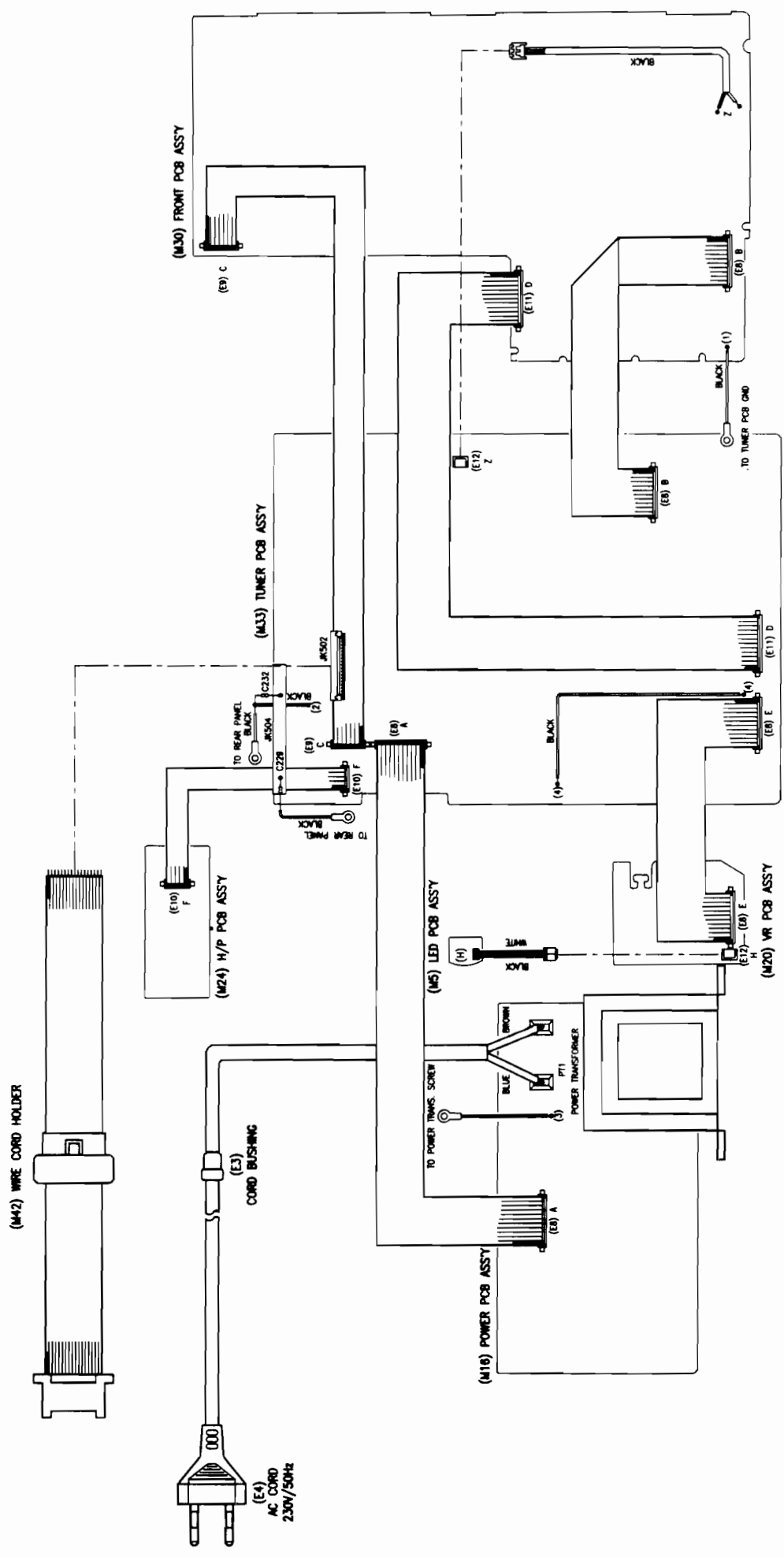




Tuner-Netzteil / Tuner-Power supply

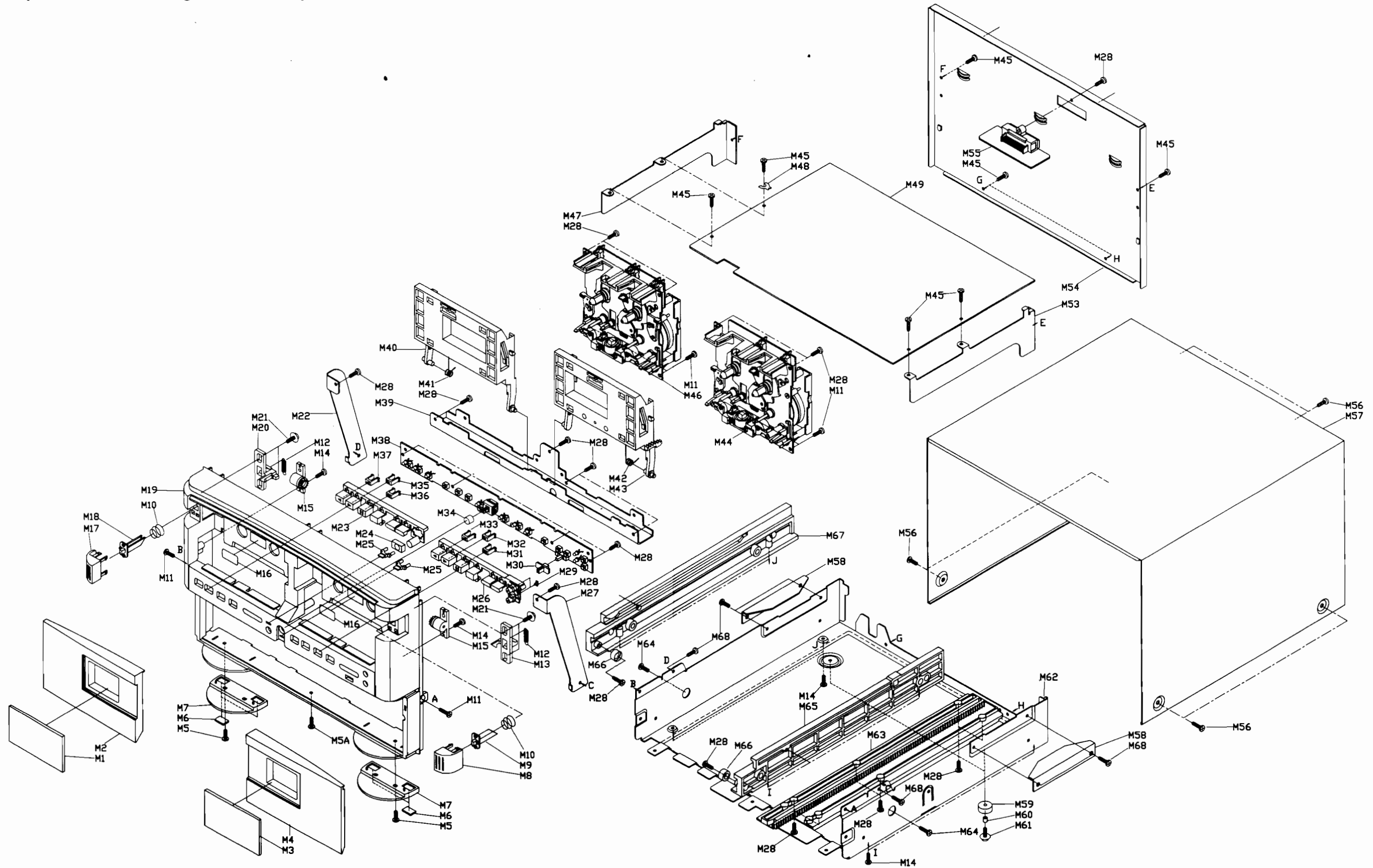


# Verdrahtungsplan / Wiring Diagram

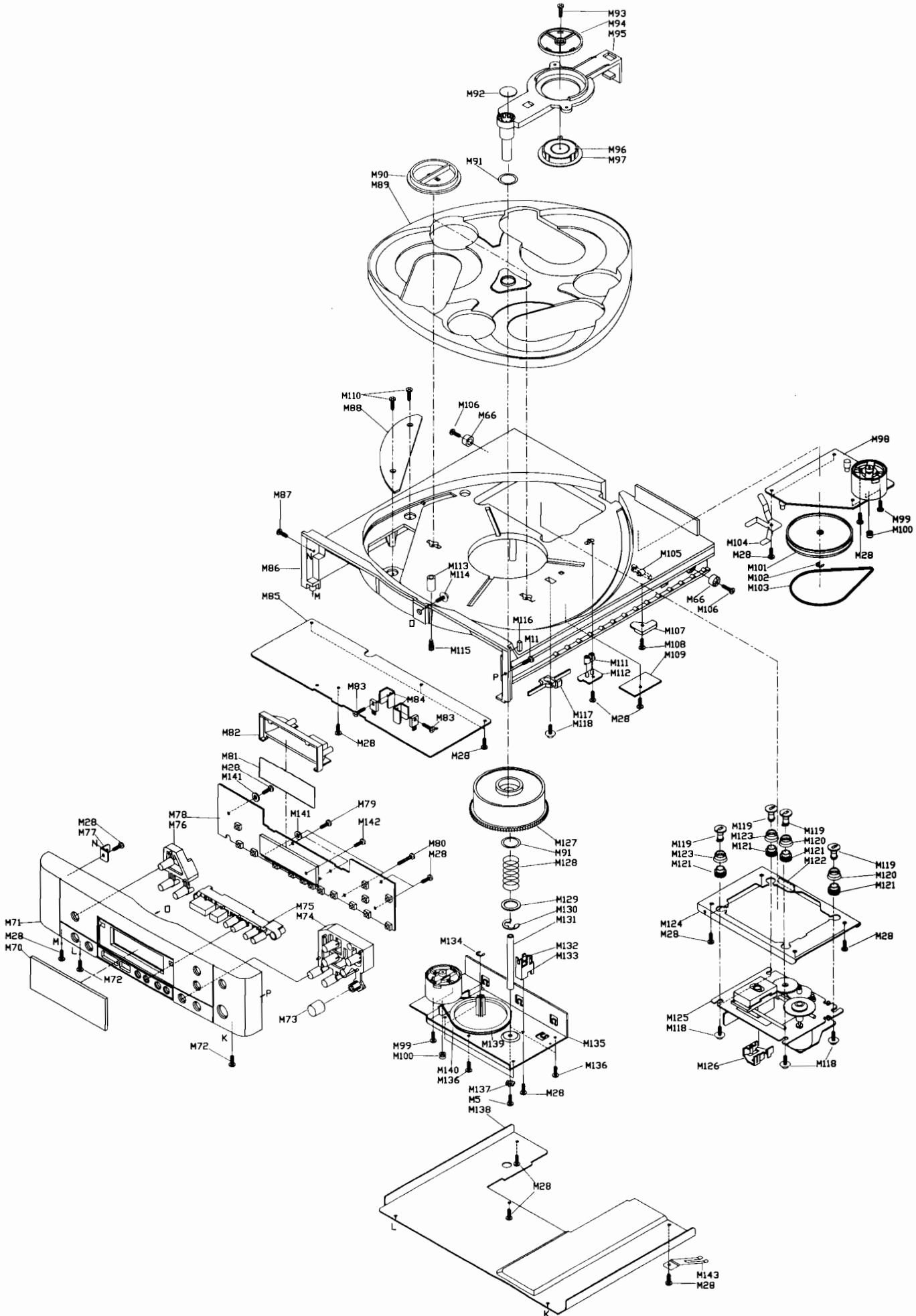




Explodierte Darstellung Cassette / Exploded View-Cassette



# Explodierte Darstellung CD-Laufwerk / Exploded View CD-Player



Explodierte Darstellung Verstärker-Tuner / Exploded View Amplifier

