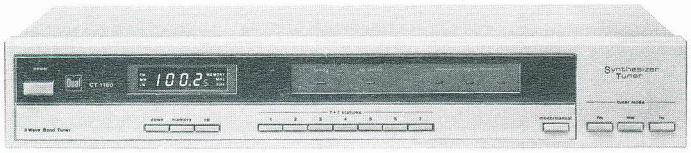
CT 1180



Service-Anleitung
Service Manual
Instructions de Service

Technische Daten (typische Werte)	Technical Data (typical value)	Caractéristiques techniques (valeur caractéristiques)	
Empfangsbereiche FM (UKW) MW LW	**Wave bands** FM (VHF) MW LW	**Gammes d'ondes** FM (O.U.C.) P.O. G.O.	 87,5– 108 MHz 522 –1611 kHz 155 – 353 kHz
Empfindlichkeit FM-Mono (75 Ohm, 26 dB Rauschabstand) FM-Stereo (75 Ohm, 46 dB Rauschabstand)	**Sensitivity** FM-mono (75 Ohm, signal-to-noise ratio 26 dB) FM-Stereo (75 Ohm, signal-to-noise ratio 46 dB)	**Sensibilité** FM-mono (75 ohms, rapport signal/bruit de 26 dB) FM-stéréo (75 ohms, rapport signal/bruit de 46 dB)	 1,0 μV 32 μV
Pilotton-Unterdrückung 19 kHz	**Pilot suppression** 19 kHz	**Suppression fréquence pilote** 19 kHz	52 dB
Geräuschspannungsabstand (IHF) Stereo (1 kHz/46 kHz Hub)	**Signal-to-noise ratio, weighted (IHF)** Stereo (1 kHz/46 kHz)	**Rapport signal/bruit (IHF)** Stéréo (1 kHz/46 kHz)	 60 dB
Klirrfaktor Stereo (1 kHz/46 kHz Hub)	**Harmonic distortion** Stereo (1 kHz/46 kHz)	**Taux de distorsion** Stéréo (1 kHz/46 kHz)	 0,4 %
Übersprechdämpfung bei 1 kHz	**Channel separation** at 1 kHz	**Diaphonie stéréo** (à 1 kHz)	35 dB
NF-Frequenzgang für Preemphasis 50 μs – 3 dB	**AF frequency response** for 50 μs pre-emphasis – 3 dB	**Bande passante BF** pour pré-emphasis 50 μs à 3 dB	 25 Hz–15 kHz
Trennschärfe (stat.)	**Selectivity (stat.)**	**Séléctivité**	80 dB
NF-Ausgangsspannung	**AF output level**	**Tension de sortie BF**	ca. 500 mV
Netzspannung	**Operating voltage**	**Tension de service**	230 Volt
Leistungsaufnahme (max.)	**Power consumption (maximum)**	**Consommation (maximale)**	7,5 Watt

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920 894 1284

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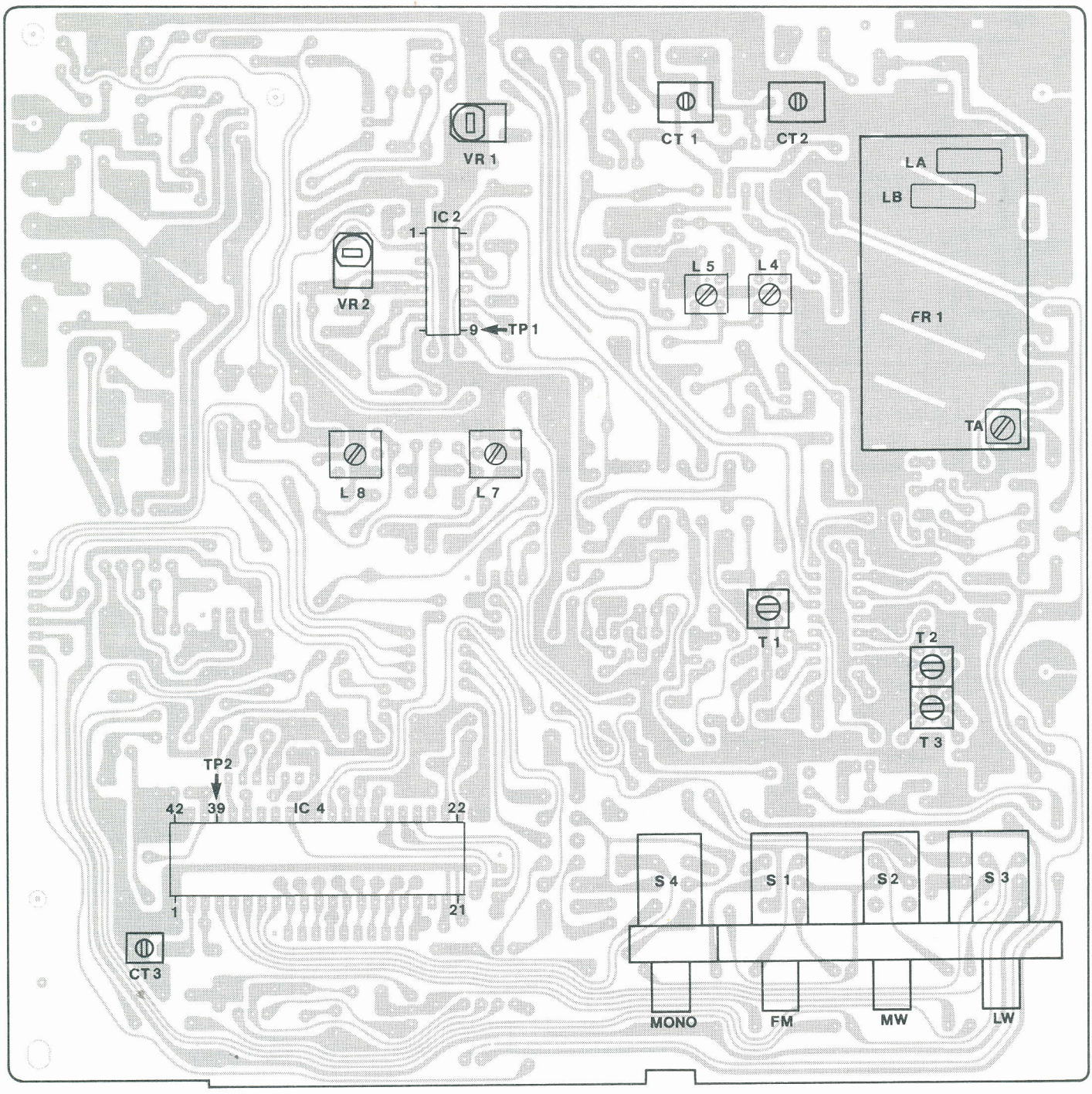
Abgleichanleitung CT 1180

Signalquelle	Einstellung Gerät	Einstellung Signalquelle	Meßgerät Anschluß	Abgleichposition	Abgleich, Bemerkung
FM–ZF, Vorkreis					
FM-Meßsender an 75 Ohm Antenneneingang	Senderfreie Frequenz ca. 100 MHz	0–10 mV Hub ± 40 kHz Mod. 1 kHz ca. 100 MHz auf Deckung	NF-Voltmeter Oszilloskop Klirrfaktormeßbrücke an NF-Ausgang	TA, T 2	NF: Maximum
				T 3	Klirrfaktor: Minimum
				LA, LB	NF: Maximum
					Kontrolle
FM–ZF-Feinabgleich					
Antenne an 75 Ohm Antenneneingang	Starken FM-Sender auf seiner Sollfrequenz empfangen			T 2	Bei ± 50 kHz (UP, DOWN) dürfen TUNING und SIGNAL-LED's nicht leuchten
Decoderabgleich					
FM-Meßsender an 75 Ohm Antenneneingang	Senderfreie Frequenz ca. 100 MHz	ca. 100 MHz auf Deckung 1–2 mV, Pilot aus	Frequenzzähler an IC 2, Pin 9 (TP 1)	VR 1	19 kHz ± 0,05 kHz
		ca. 100 MHz auf Deckung 1–2 mV, 19 kHz, Pilot ein Hub ± 40 kHz Mod. 1 kHz Abwechs. L oder R Kanal	NF-Voltmeter Oszilloskop an NF-Ausgang	VR 2	auf größte Kanaltrennung
Unterdrückung Pilottonreste 19 kHz					
FM-Meßsender an 75 Ohm Antenneneingang	Senderfreie Frequenz ca. 100 MHz	ca. 100 MHz auf Deckung 1–2 mV 19 kHz Pilot ein	NF-Voltmeter Oszilloskop an NF-Ausgang	L 7 (l.K) L 8 (r.K)	Minimum
AM–ZF, Vorkreis					
	MW: Ein 999 kHz		Frequenzzähler an IC 4, Pin 39 (TP 2)	CT 3	1449 kHz (Osz. Freq. + 450 kHz)
AM-Meßsender an 75 Ohm Antenneneingang	Ferritantenne ausklappen MW: Ein 999 kHz	10 µV–1 mV, 1 kHz Mod. 30% 999 kHz	NF-Voltmeter Oszilloskop an NF-Ausgang	T 1	Maximum
	612 kHz	612 kHz		L 4, L 2	
	1404 kHz	1404 kHz		CT 1	
	LW: Ein 164 kHz	164 kHz		L 5, L 3	
	335 kHz	335 kHz		CT 2	

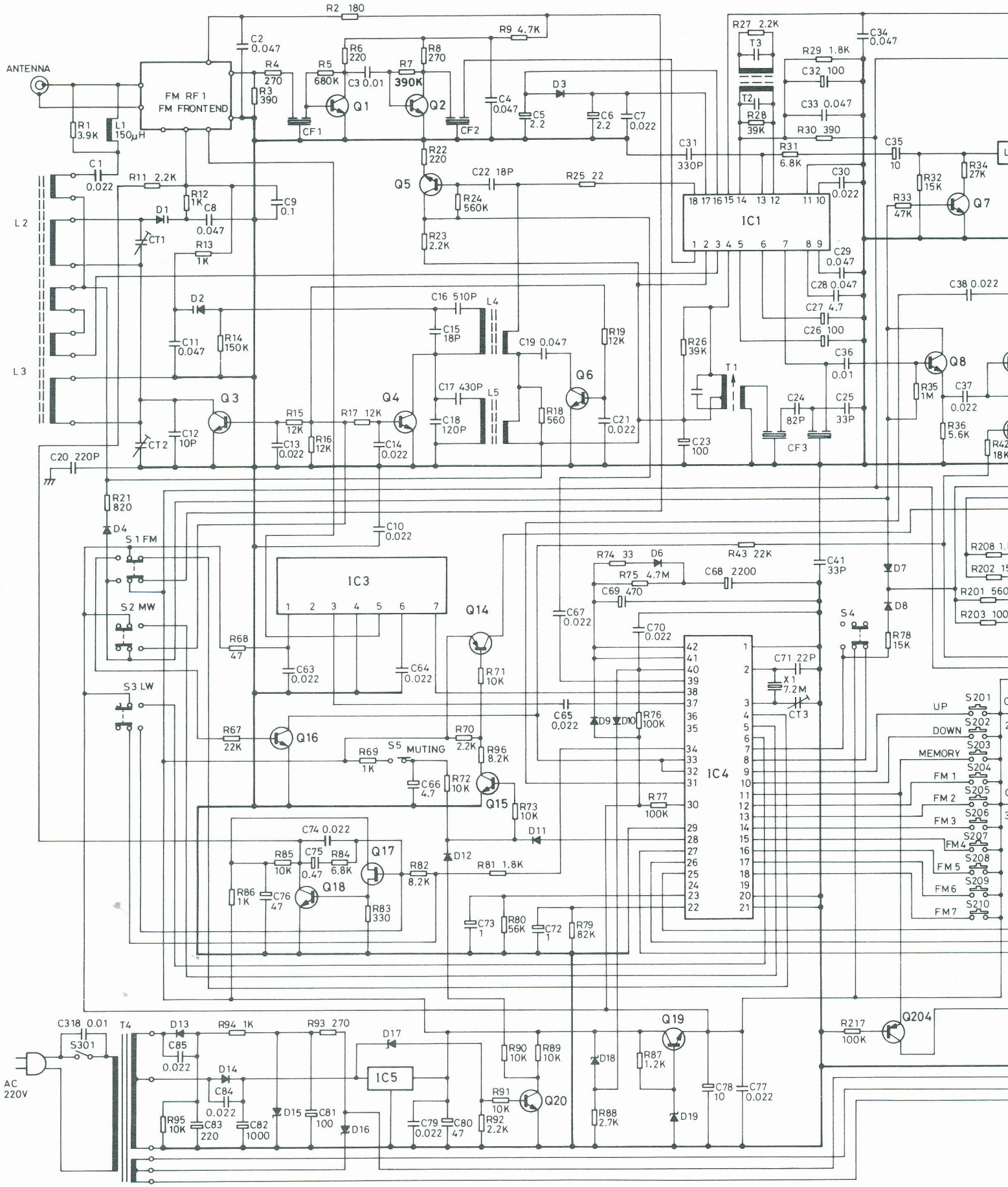
Alignment instruction CT 1180

Signal source	Unit adjustment	Signal source adjustment	Testgear connection	Alignment position	Alignment
FM–IF-aerial circuit					
FM-generator to 75 ohms FM-antenna input	Transmitting free frequency approx. 100 MHz	0–10 mV Dev. ± 40 kHz Mod. 1 kHz tune to approx. 100 MHz	AF-voltmeter Oscilloscope distortion meter to AF-output	TA, T 2	AF: Maximum
				T 3	distortion Minimum
				LA, LB	AF: Maximum
					Chek
FM–IF-vernier alignment					
Antenna to 75 ohms antenna input	tune noise free station to nom. transmitting frequency			T 2	at ± 50 kHz (up, down) TUNING and SIGNAL-LED's must not light up
Decoder-alignment					
FM-generator to 75 ohms FM-antenna input	Transmitting-free frequency approx. 100 MHz	tune to approx. 100 MHz without pilotton 1–2 mV	frequency counter to IC 2, pin 9, (TP 1)	VR 1	19 kHz ± 0,05 kHz
		tune to approx. 100 MHz 1–2 mV, 19 kHz, Pilot on Dev. ± 40 kHz Mod. 1 kHz only left or right channel	AF-voltmeter Oscilloscope to AF-output	VR 2	Channel seperation to Maximum
Pilot-suppression 19 kHz					
FM-generator to 75 ohms FM-antenna input	Transmitting-free frequency approx. 100 MHz	tune to approx. 100 MHz 1–2 mV 19 kHz, Pilot on	AF-voltmeter Oscilloscope to AF-output	L 7 (l.ch) L 8 (r.ch)	Minimum
AM–IF-aerial circuit					
	MW: on 999 kHz		frequency counter to IC 4, pin 39 (TP 2)	CT 3	1449 kHz (Osz. freq. + 450 kHz)
AM-generator to 75 ohms AM-antenna input	swing out the ferrit antenna MW: on 999 kHz	10 µV–1 mV, 1 kHz Mod. 30% 999 kHz	AF-voltmeter Oscilloscope to AF-output	T 1	Maximum
	612 kHz	612 kHz		L 4, L 2	
	1404 kHz	1404 kHz		CT 1	
	LW: on 164 kHz	164 kHz		L 5, L 3	
	335 kHz	335 kHz		CT 2	

Abgleichpositionen / Alignment positions / Position d'alignment



Schaltbild / Wiring diagramm / Schéma d'électrique



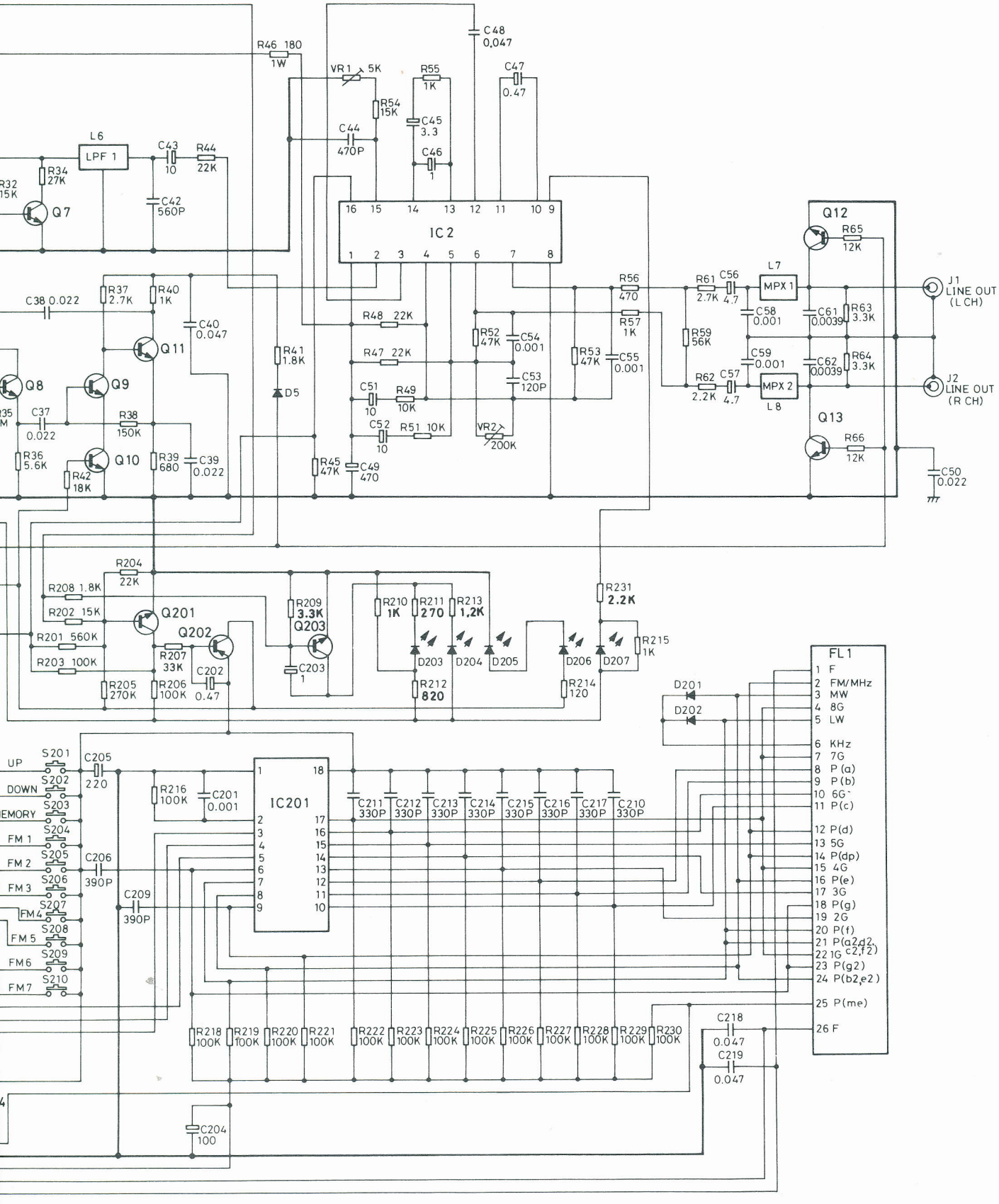
IC 1 ---- AN7273
IC 2 ---- μPC1161C3
IC 3 ---- TD6104P
IC 4 ---- TC9147BP
IC 5 ---- AN78M15
IC201 --- TC9158P

Q1,2 ---------- 2SC1675-K
Q 3 ---------- 2SD1302-S
Q4~13,15,16,18~20,201 -- 2SC1815-GR
Q14,202,204 ------- 2SA1015-GR
Q17 ---------- 2SK246-Y
Q203 ---------- 2SC1815-BC

D1,2 ------ KV1236Z
D 3 ------- M27W
D4~12,201,202 -- US1035
D13,14 ------ SR1K-2
D15 ------- UZ-24B
D16 ------- UZ-3.9B

D17 ------- UZ-15BL
D18 ------- UZ-9.1B
D19 ------- UZ-6.2BL
D203~206 --- LN216RP
D207 ------ LN316GP

S1 (FM)]
S2 (MW)] BAND SELECTOR SW
S3 (LW)]
S4 ---- AUTO STEREO/MANUA
(AUTO STEREO POSIT
S5 ---- MUTING SWITCH

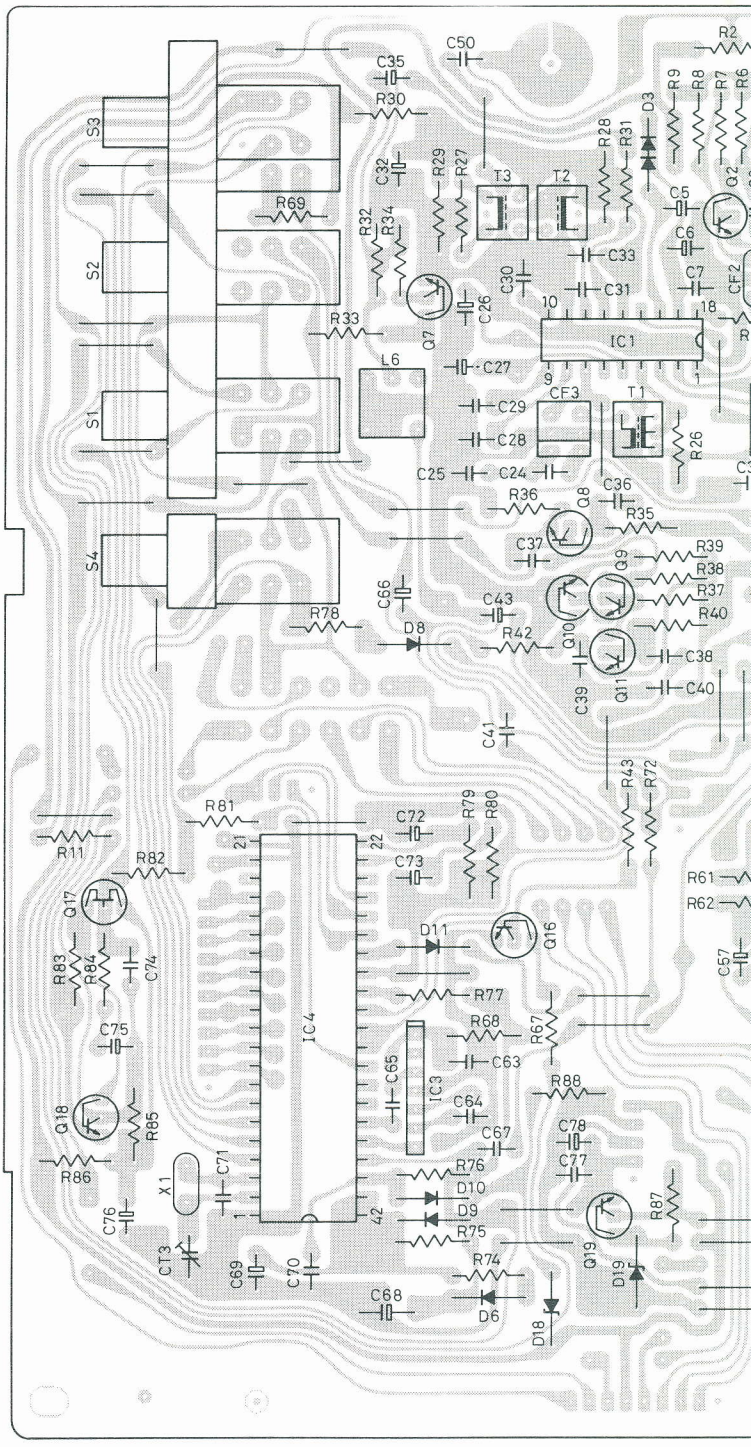


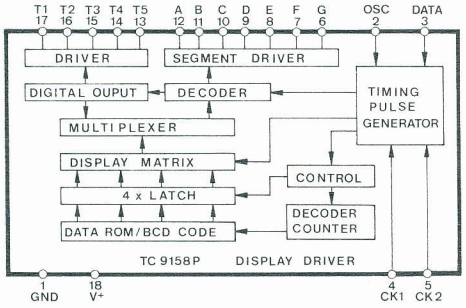
ND SELECTOR SWITCH (FM POSITION)

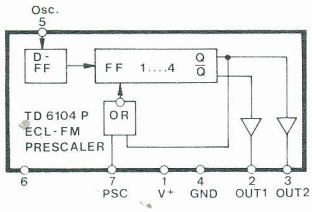
STEREO/MANUAL MONO SWITCH
O STEREO POSITION)
NG SWITCH

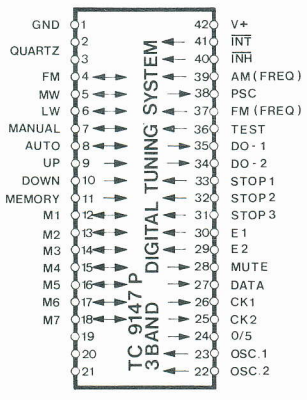
L = Leiterseite / Wiring side / Côté de conducteur

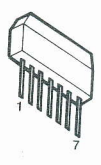
Tunerplatte / Tunerboard / Plaque de tuner **L**







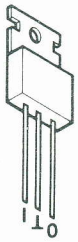




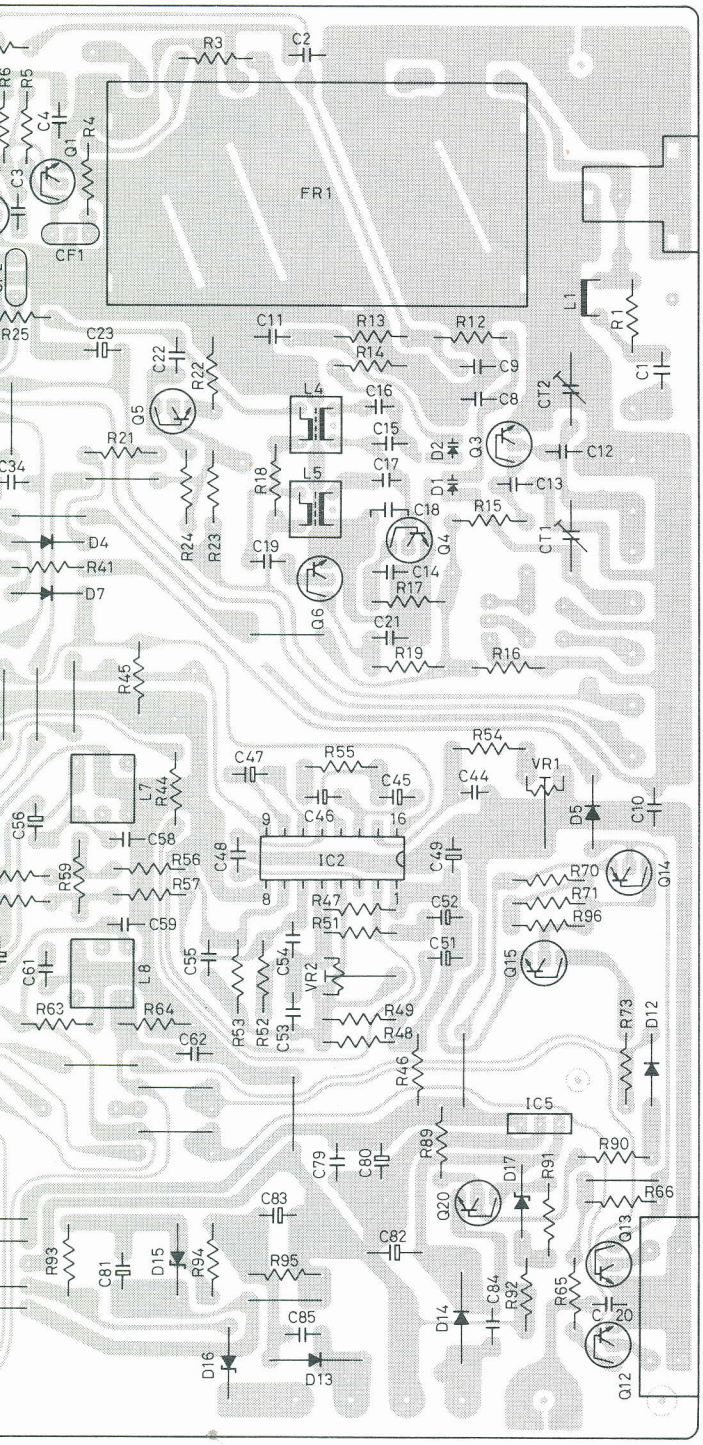
TD 6104 P

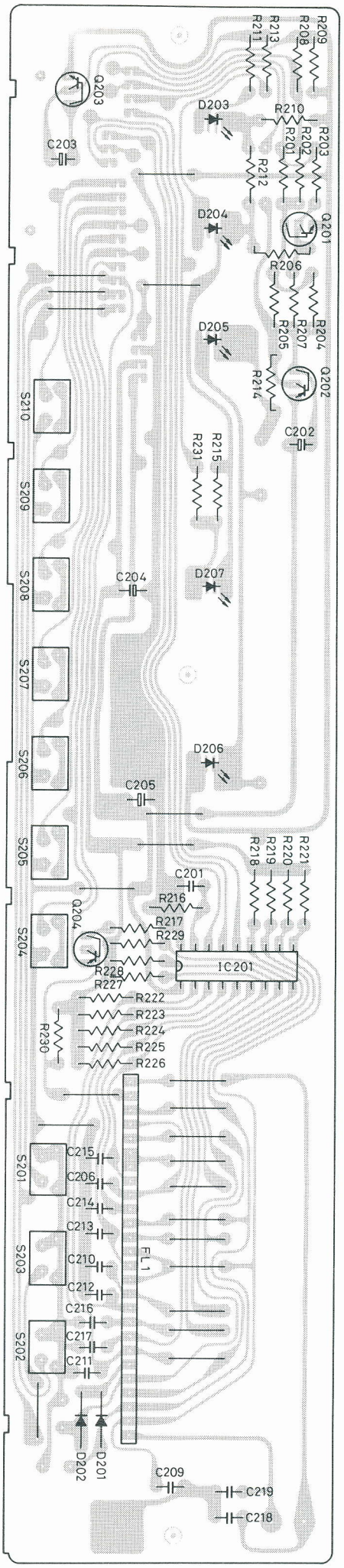
2 SA 1015 GR
2 SC 1675 K
2 SC 1815 BC
2 SC 1815 GR
2 SC 1302 S

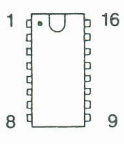
2 SK 246 Y



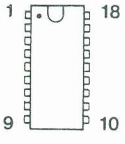
AN 78 M 18



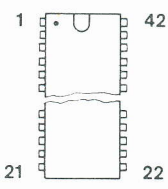




uPC1161

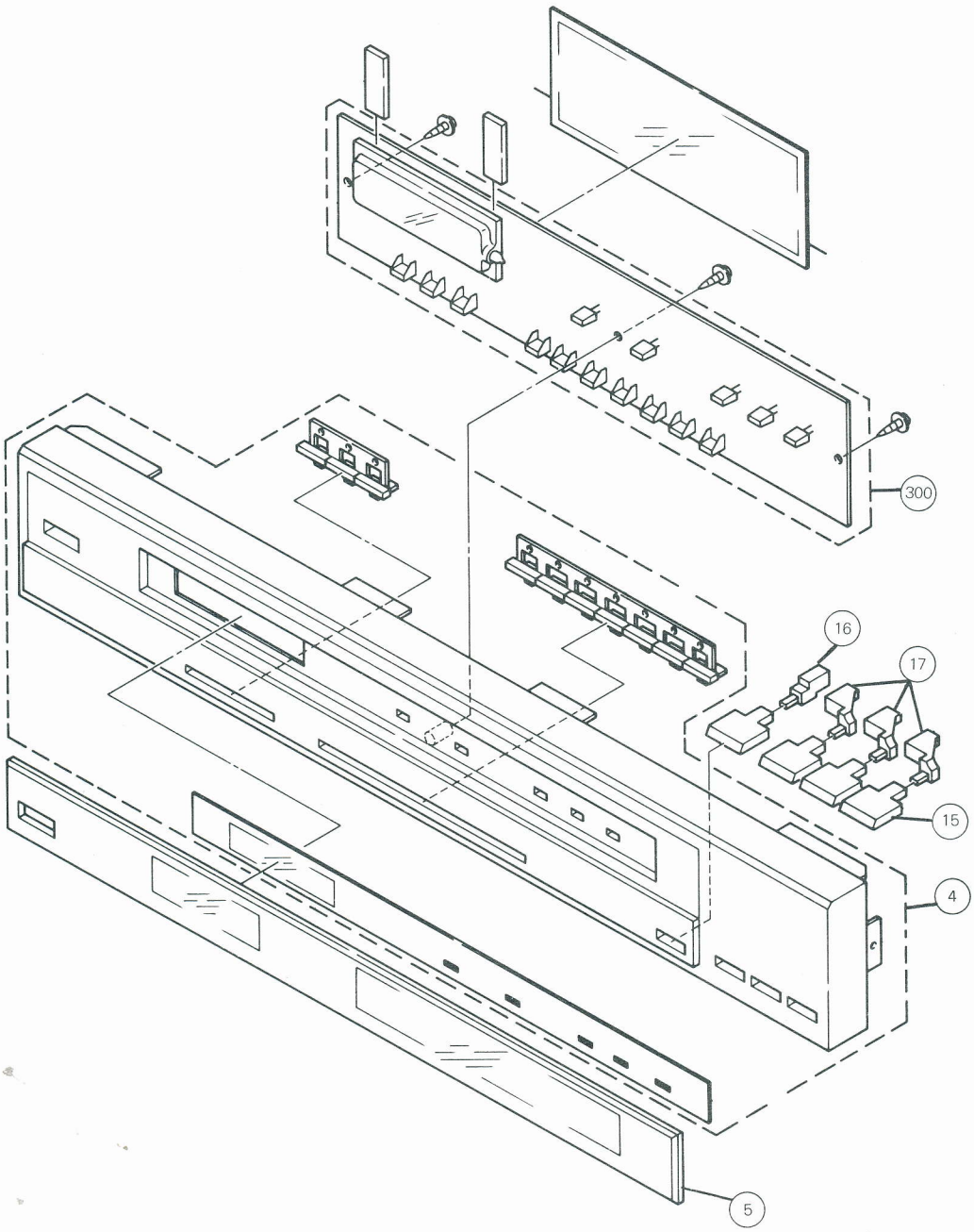


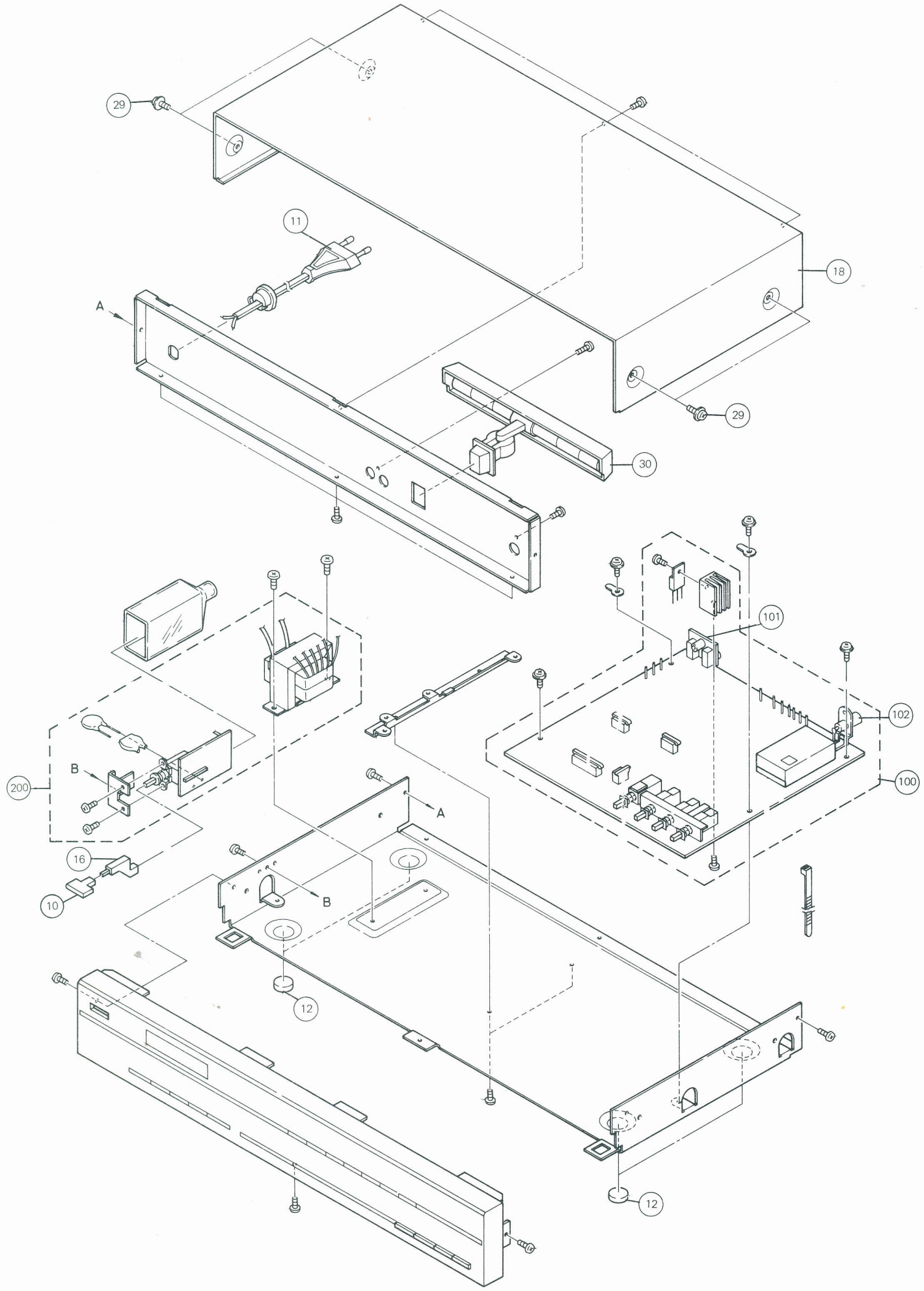
AN7273
TC9158P



TC9147BP

Explosionszeichnung / Exploded view / Vue explosée



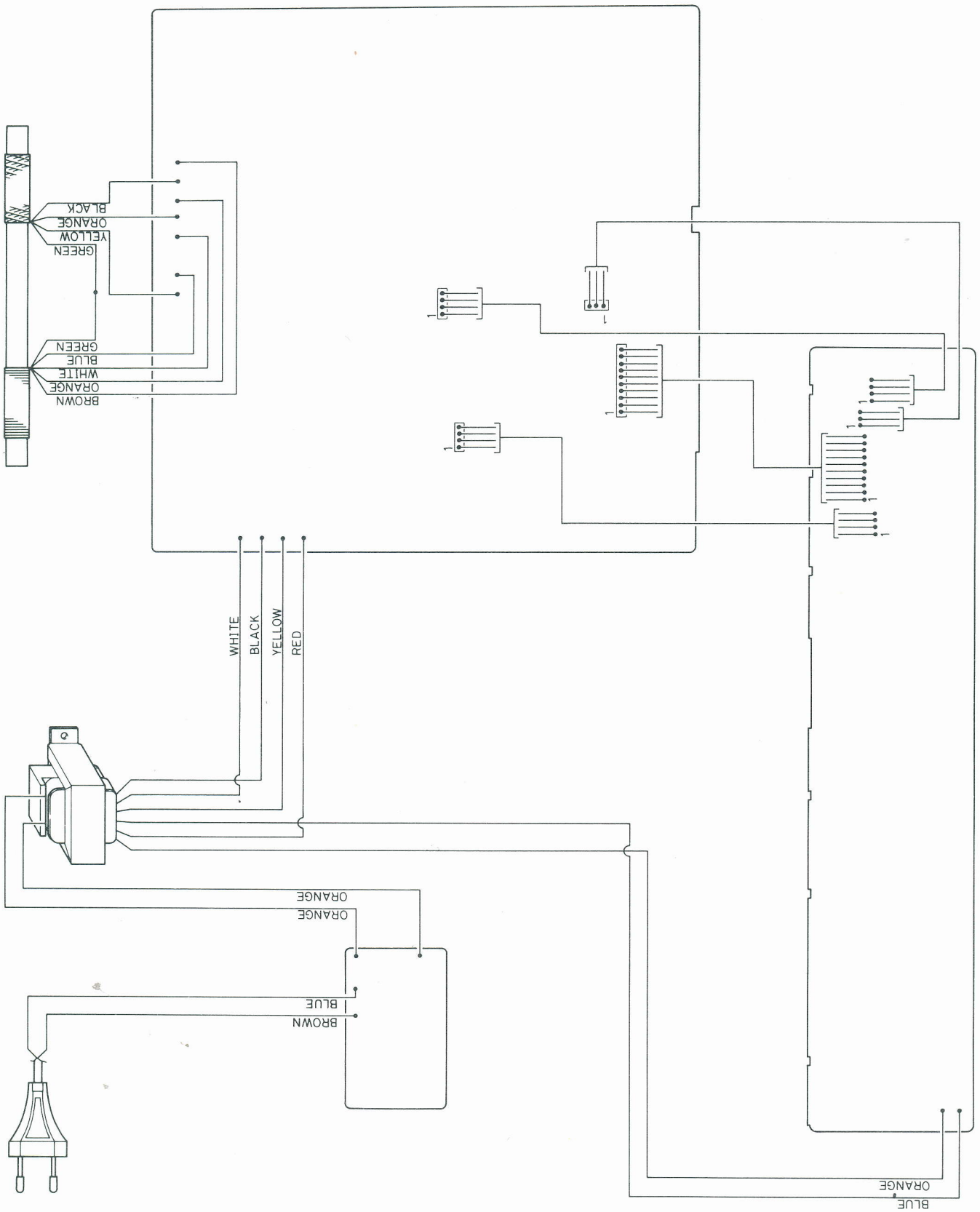

29
11
18
A
29
30
101
102
100
200
B
A
16
10
B
12
12

Ersatzteile · Replacement parts · Pièces détachées · CT 1180

Pos.	Art.-Nr.	Stck	Bezeichnung
4	278315	1	Frontblende SM
4	278316	1	Frontblende AM
5	278322	1	Fenster
10	278011	1	Power Knopf SM
10	278306	1	Power Knopf AM
11	243750	1	Netzkabel Europa
12	278265	4	Gerätefuß
15	277830	4	Taste SM
15	278305	4	Taste AM
16	278268	2	Tastenverlängerung A
17	278321	3	Tastenverlängerung B
18	278317	1	Gehäuseblech SM
18	278318	1	Gehäuseblech AM
29	278311	4	Befestigungsschraube SM
29	278312	4	Befestigungsschraube AM
30	278030	1	Antenne (L 2/3)
100	278027	1	Tunerplatte
101	278041	1	Anschlußbuchse (Cinch)
102	278042	1	Antennenbuchse
D 1	278054	1	Diode VC KV 1236 Z
D 3	277871	1	Diode MA 27 W-A
D 4	271099	9	Diode US 1035
bis			
D 12	271099	9	Diode US 1035
D 13	263036	2	Diode SR 1-K-2
D 14	263036	2	Diode SR 1-K-2
D 15	278050	1	Diode UZ 24 B
D 16	263032	1	Diode UZ 039
D 17	278053	1	Diode UZ 15 BH
D 18	278052	1	Diode UZ 9,1 B
D 19	278051	1	Diode UZ 6,2 BL
L 1	278055	1	Spule
L 4	278037	1	OSC. Spule
L 5	278038	1	OSC. Spule
L 6	277888	1	Low Pass Filter
L 7	277885	2	MPX Filter
L 8	277885	2	MPX Filter
Q 1	277868	2	Transistor 2 SC 1675 K
Q 2	277868	2	Transistor 2 SC 1675 K
Q 3	274774	1	Transistor 2 SD 1302 T
Q 4	247647	16	Transistor 2 SC 1815 GR
bis			
Q 13	247647	1	Transistor 2 SC 1815 GR
Q 14	271118	1	Transistor 2 SA 1015 GR
Q 15	247647	1	Transistor 2 SC 1815 GR
Q 16	247647	16	Transistor 2 SC 1815 GR
Q 17	273904	1	Transistor 2 SK 246 Y
Q 18	247647	16	Transistor 2 SC 1815 GR

Pos.	Art.-Nr.	Stck	Bezeichnung
Q 19	247647	16	Transistor 2 SC 1815 GR
Q 20	247647	16	Transistor 2 SC 1815 GR
S 1	277881	1	Schalter (Select)
S 4	277883	1	Schalter (Stereo/Mono)
T 1	278036	1	Spule
T 2	278035	1	Spule
T 3	278034	1	Spule
X 1	278043	1	Kristall
CF 1	278044	2	Keramikfilter
CF 2	278044	2	Keramikfilter
CF 3	278045	1	Keramikfilter
CT 1	277878	1	Trimmer
CT 2	278040	1	Trimmer
CT 3	278039	1	Trimmer
FR 1	277884	1	UKW-Teil
IC 1	277870	1	IC AN 7273
IC 2	277869	1	IC UPC 1161 C 3
IC 3	278047	1	IC TD 6104 P
IC 4	278048	1	IC TC 9147 BP
IC 5	278049	1	IC AN 78 M 15
VR 1	270193	1	Steller 5 kΩ
VR 2	263223	1	Einstellregler 200 K
200	278028	1	Netzschalterplatte
201	278031	1	Netztrafo
S 301	277989	1	Schalter
300	278029	1	Controlplatte
D 201	271099	2	Diode US 1035
D 202	271099	2	Diode US 1035
D 203	277867	4	LED LN 316 GP
bis			
D 207	277866	4	LED LN 216 RP
Q 201	247647	1	Transistor 2 SC 1815 GR
Q 202	271118	2	Transistor 2 SA 1015 GR
Q 203	273293	1	Transistor 2 SC 1815 BL
Q 204	271118	2	Transistor 2 SA 1015 GR
S 201	277164	10	Taster
bis			
S 210	277164	10	Taster
FL 1	278056	1	Display
IC 201	278057	1	IC TC 9158 P
	277963	1	Bedienungsanleitung CT 1180
	278033	1	Verpackungskarton SM
	278319	1	Verpackungskarton AM
	278323	1	Seitenteil L
	278324	1	Seitenteil R

Änderungen vorbehalten! / Subject to change! / Sous réserve de modification!


BAR ANTENNA
BLACK
ORANGE
YELLOW
GREEN
BROWN
ORANGE
WHITE
BLUE
GREEN
POWER TRANS
WHITE
BLACK
YELLOW
RED
ORANGE
ORANGE
AC CORD
BLUE
BROWN
ORANGE
BLUE