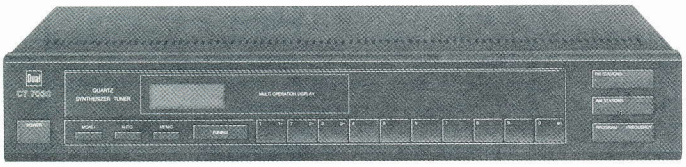
CT 7030



Service-Anleitung
Service Manual
Instructions de Service

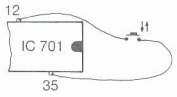
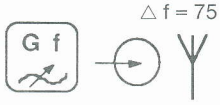
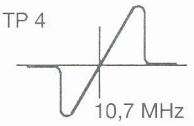
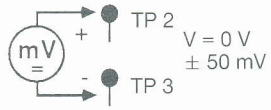
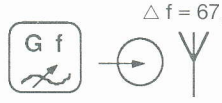
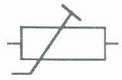
Technische Daten (typische Werte)	Technical data (typical value)	Caractéristiques techniques (valeur caractéristique)	CT 7030
Empfangsbereiche FM (UKW) MW LW	**Wave bands** FM (VHF) MW LW	**Gammes d'ondes** FM (O.U.C.) P.O. G.O.	 87,5– 108 MHz 520 –1619 kHz 150 – 283 kHz
Empfindlichkeit FM-Mono (75 Ohm, 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
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)	 70 dB
Klirrfaktor Stereo (1 kHz/46 kHz Hub)	**Harmonic distortion** Stereo (1 kHz/46 kHz)	**Taux de distorsion** Stéréo (1 kHz/46 kHz)	 0,25 %
Übersprechdämpfung bei 1 kHz	**Channel separation** at 1,000 Hz	**Diaphonie stéréo** (à 1 kHz)	45 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	 10 Hz–16 kHz
Trennschärfe	**Selectivity**	**Séléctivité**	70 dB
NF-Ausgangsspannung	**AF output level**	**Tension de sortie BF**	ca. 500 mV
Netzspannung	**Line voltage**	**Tension secteur**	230 V
Leistungsaufnahme	**Power requirement**	**Consommation**	12 Watt

Dual GmbH · Postfach 1144 · 7742 St. Georgen/Schwarzwald

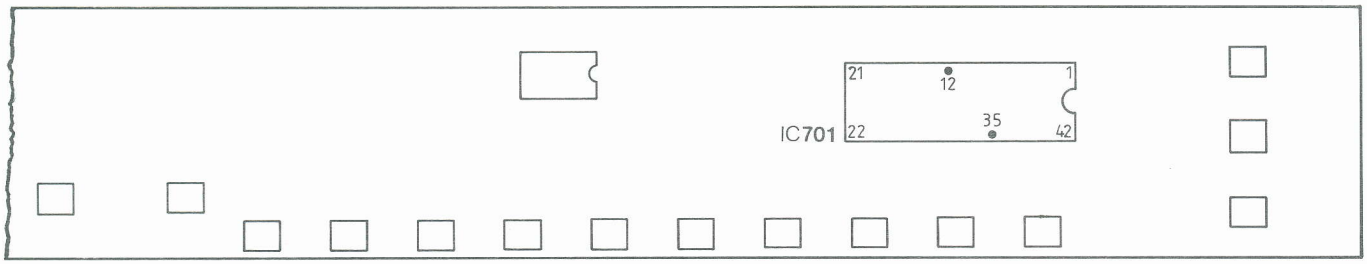
921 553 0987

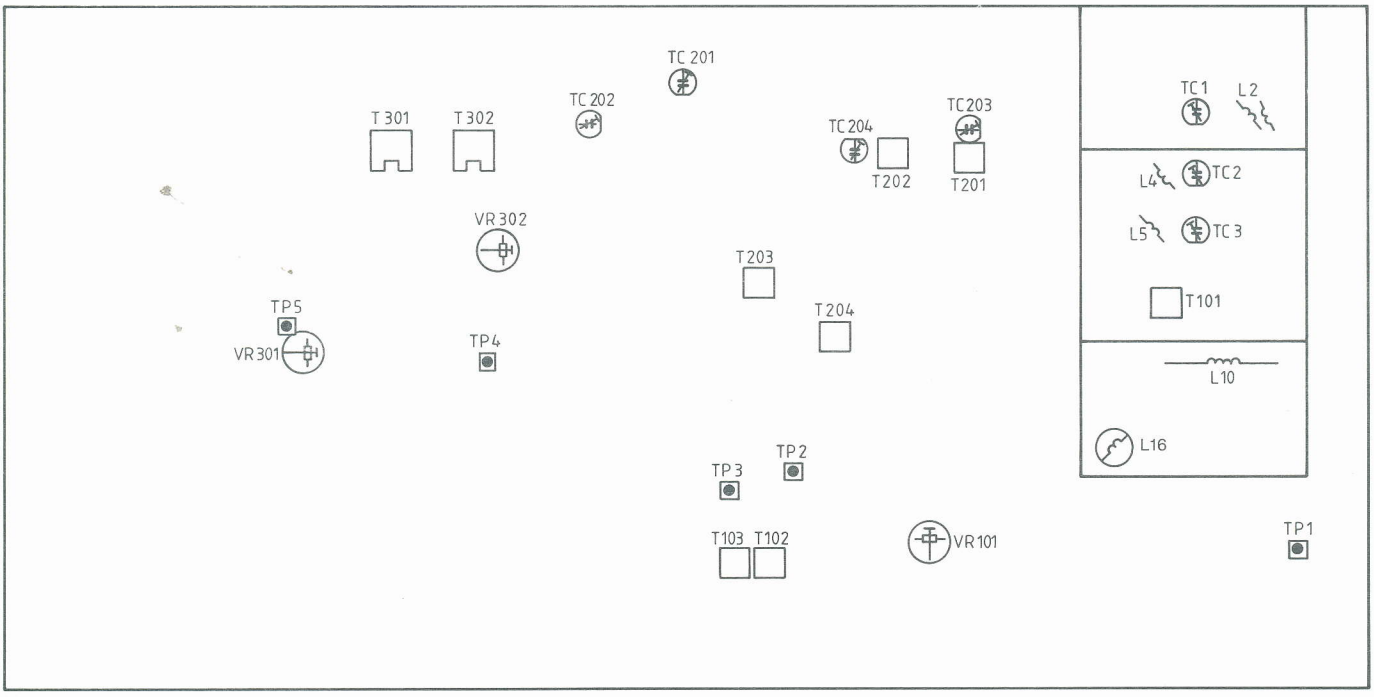
	Ⓓ Zeichenerklärung	ⒼⒷ Legend	Ⓕ Légende	Ⓔ Leyenda	Ⓘ Leggènda
	Ein	On	Marche	Encendido	Acceso
	Aus	Off	Arrêt	Apagado	Spento
	Ein-Aus	On-Off	Marche-Arrêt	Encendido-Apagado	Acceso-Spento
	Bereitschaft	Stand-by	Attente (veille)	Espera	Disponible
	Lautstärke	Volume	Volume	Volumen	Volumen
	Balance	Balance	Balance	Balance	Balance
	Höhen	Treble	Aiguës	Agudos	Alti
	Bässe	Bass	Graves	Graves	Bassi
	Lautsprecher	Loudspeaker	Haut-Parleur	Altavoz	Alto parlante
	Kopfhörer	Headphones	Casque	Auriculares	Cuffia
	Hörkapsel	Earphones	Ecouteur	Auricular	Cuffia
	Stummschaltung	Muting	Silencieux	Circuito silencioso	Sintonia Silenziosa
	Abstimmen	Tuning	Syntonisation	Sintonía	Sintonia
	Empfangsfrequenz-Regelung	Automatic frequency control	Contrôle automatique de fréquence	Control automático de frequencia	Controllo automatico delle frequenza
	Normal-Lauf	Normal-run	Défilement normal	Velocidad normal	Sfilamento normale
	Schnell-Lauf	Fast-run	Défilement rapide	Velocidad rapida	Sfilamento rapido
	Pause	Pause	Pause	Pausa	Pause
	Auswurf	Eject	Ejection	Expulsión	Eiezione
	Stop	Stop	Stop	Stop	Stop
	Stop / Eject	Stop / Eject	Stop / Eject	Stop / Eject	Stop / Eject
	Microphon	Microphone	Microphone	Micrófono	Microfono
	Tonbandgerät	Tape recorder	Magnétophone	Magnetófono	Magnetofono
	Aufnahme	Recording	Enregistrement	Grabación	Registrazione
	Wiedergabe	Play-back	Lecture	Reproducción	Riproduzione
	Antenne	Aerial	Antenne	Antena	Antenne
	Dipole	Dipole	Dipôle	Dipole	Dipole
	Tuner	Tuner	Radio-récepteur	Sintonizador	Tuner
	Plattenspieler	Pick-up	Lecteur de disques	Giradiscos	Giradischi
	Mono	Mono	Mono	Mono	Mono
	Stereo	Stereo	Stereo	Estereo	Stereo
	Uhr, Timer	Clock, Timer	Horloge, minuterie	Reloj, Timer	Orologio, Timer
	Output	Output	Sortie d'un signal	Salida de señales	Uscita di segnale
	Input	Input	Entrée d'un signal	Entrada de señales	Ingresso di segnale
	Trimmer	Trimmer	Trimmer	Trimmer	Trimmer
	Einstellregler	Adjuster	Potentiomètre ajustable	Potenciometro ajustable	Trimmer ohmico
	Abgleichbarer Kreis	Circuit can be aligned	Circuit à aligner	Circuito ajustable	Circuito a alineare
	L.E.D.	L.E.D.	L.E.D.	L.E.D.	L.E.D.
	Photodiode	Photodiode	Photodiode	Fotodiodo	Photodiodo
	Messpunkt	Test point	Point test	Punto de prueba	Punto di riferimento

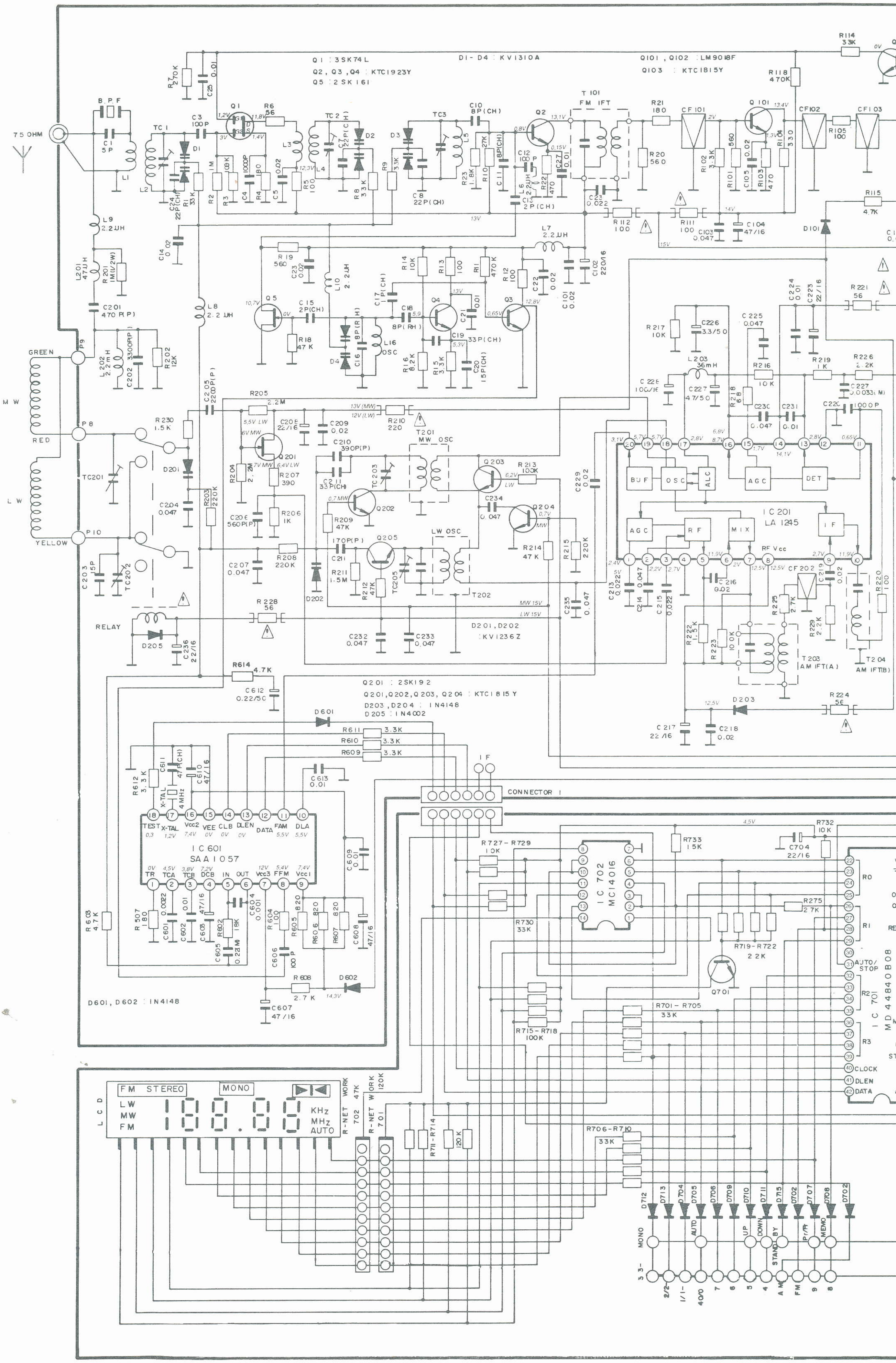
Abgleich / Alignment / Reglages

µP nach FM- und AM-Filter justieren (nur bei gelöschtem IC 701) · Adjust µP to FM- and AM filter (only with erased IC 701)						
	1	 (kurzschließen 1 s) · Short circuit longer then 1 s				
	2	FM-Taste drücken Press FM key	z.B. Keramikfilter „rot" e.g. Ceramic filter „red"	10,70 MHz	〈 man. tuning 〉 − +	
	3	AM-Taste drücken Press AM key		455 kHz		
	4	Netzschalter aus/ein Power switch off/on				
FM						
						
ZF	1	G f Ve ~ 1 mV	z.B. Keramikfilter „rot" e.g. Ceramic filter „red" 10,70 MHz	Senderfreie Frequenz Transmitting-free frequency z.B. 98 MHz	T 101, T 102, T 103	TP 4 
	2	Ve ~ 1 mV	98 MHz	98 MHz ▶ ◀	T 103	Klirrfaktor: Minimum distortion: minimum
IF	3	Antenne an 75 Ohm Antenneneingang Antenna to 75 ohms antenna input		Starken FM-Sender auf seiner Sollfrequenz empfangen tune noise free station to nom. transmitting frequency	T 102	
	4			108 MHz	L 10	TP 1 8,5 V ± 0,1
	5			87,5 MHz	Check	TP 1 2,5 V ± 0,1
	6	Ve ~ 1,5 µV	90 MHz	90 MHz	L2-L4-L5	↕ max.
	7		106 MHz	106 MHz	TC 1-TC 2-TC 3	
	8	Ve ~ 35 µV	98 MHz	98 MHz	VR 101	Display ▶ ◀
Decoder						
						
	1	with. Pilot Ve ~ 1 mV	98 MHz	98 MHz	VR 301	f = 76 kHz TP 5
	2	Ve ≃ 1 mV △ f = 40 kHz + 19 kHz Pil. R. Kanal modul. r. channel modul.	98 MHz	98 MHz	VR 302	l. ch. minimum
	3	Ve ≃ 1 mV 19 kHz Pilot ohne Mod. 19 kHz Pilot without mod.	98 MHz	98 MHz	T 301	l. ch. minimum
					T 302	r. ch. minimum

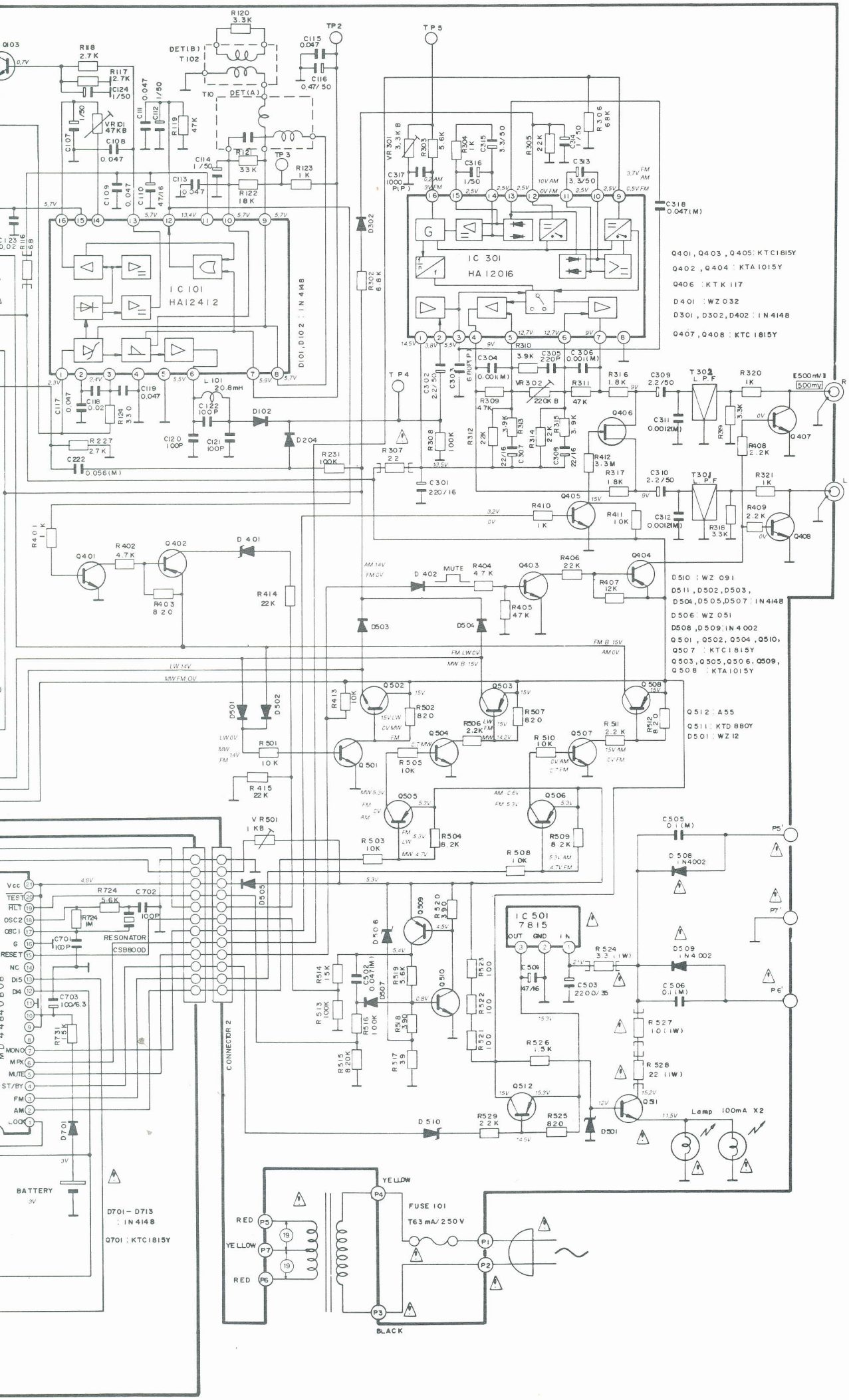
AM							
		30 % mod. 1000 Hz	f	19999 MHz			
ZF	1	10 – 100 mV			T 203	max.	
IF	2	455 kHz	455 kHz		T 204		
	3			520 kHz	T 201	0,6 V – 0,3 V	TP 1
	4			1619 kHz	TC 203	8,5 V + 1 V	
MW	5	Ve ~ 500 mV/m	600 kHz	600 kHz		max.	
	6		1400 kHz	1400 kHz	TC 201		
	7			150 kHz	T 202	1,5 V ± 0,1 V	TP 1
	8			283 kHz	TC 204	5,5 V ± 0,1 V	
LW	9	Ve ~ 1000 mV/m	150 kHz	150 kHz		max.	
	10		250 kHz	250 kHz	TC 202		

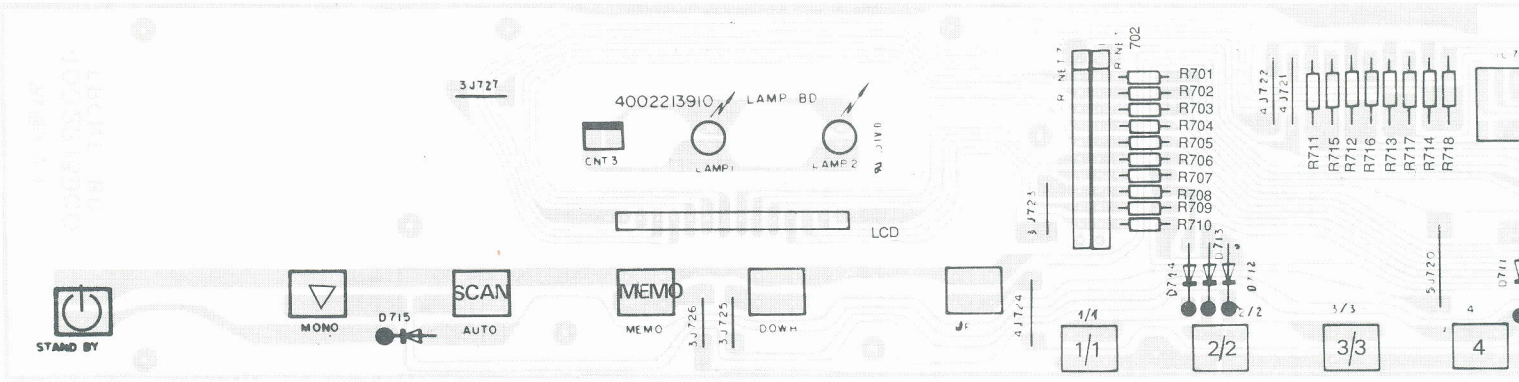




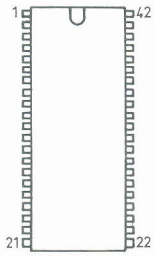


Q1 : 3SK74L
Q2, Q3, Q4 : KTC1923Y
Q5 : 2SK161
D1 - D4 : KV1310A
Q101, Q102 : LM9018F
Q103 : KTC1815Y
75 OHM
B.P.F
GREEN
RED
YELLOW
MW
LW
RELAY
T101 FM IFT
T201 MW OSC
LW OSC
T202
IC 201 LA 1245
BUF
OSC
ALC
AGC
DET
RF
MIX
IF
RF Vcc
T203 AM IFT(A)
T204 AM IFT(B)
CF101
CF102
CF103
CF202
Q201 : 2SK192
Q201, Q202, Q203, Q204 : KTC1815Y
D203, D204 : IN4148
D205 : IN4002
D201, D202 : KV1236Z
IC 601 SAA1057
TEST
X-TAL
Vcc2
VEE
CLB
DLEN
DATA
FAM
DLA
TR
TCA
TCB
DCB
IN
OUT
Vcc3
FFM
Vcc1
X-TAL 4MHz
D601, D602 : IN4148
CONNECTOR 1
IF
IC 702 MC14016
Q701
IC 701 MD44840B08
R0
R1
R2
R3
AUTO/STOP
CLOCK
DLEN
DATA
LCD
FM STEREO
MONO
LW
MW
FM
KHz
MHz
AUTO
R-NET WORK 702
R-NET WORK 701
MONO
AUTO
UP
DOWN
STAND BY
Pr/Fr
MEMO
AM
FM

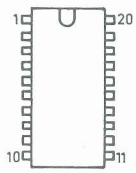

IC 101
HA12412
IC 301
HA 12016
IC 501
7815
RESONATOR
CSB800D
CONNECTOR 2
FUSE 101
T63mA/250V
BATTERY
Lamp 100mA X2
Q401, Q403, Q405: KTC1815Y
Q402, Q404 : KTA1015Y
Q406 : KTK117
D401 : WZ032
D301, D302, D402 : IN4148
Q407, Q408 : KTC1815Y
D510 : WZ091
D511, D502, D503,
D504, D505, D507 : IN4148
D506 : WZ051
D508, D509 : IN4002
Q501, Q502, Q504, Q510,
Q507 : KTC1815Y
Q503, Q505, Q506, Q509,
Q508 : KTA1015Y
Q512 : A55
Q511 : KTD880Y
D501 : WZ12
D701 – D713
: IN4148
Q701 : KTC1815Y
YELLOW
RED
YELLOW
RED
BLACK



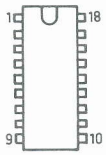
Frontplatte
PCB board front
Platine frontale



MD 44840B08

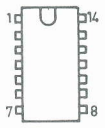


LA 1245



SAA1057

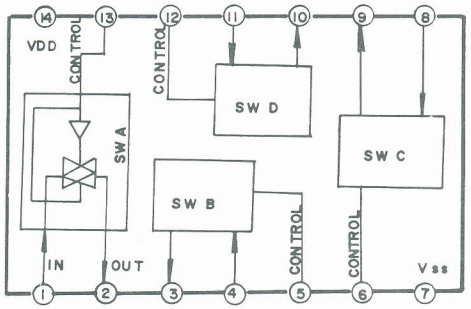
HA12412
HA12016



MC 14016

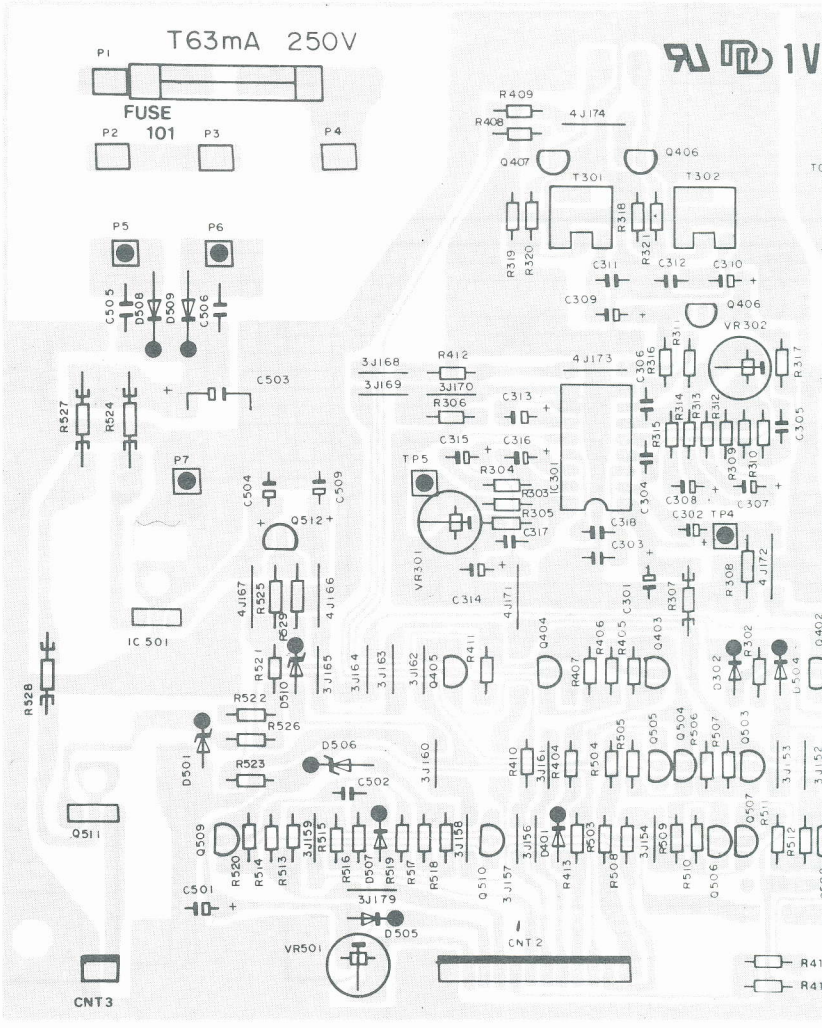
LM19018F
MPS A55

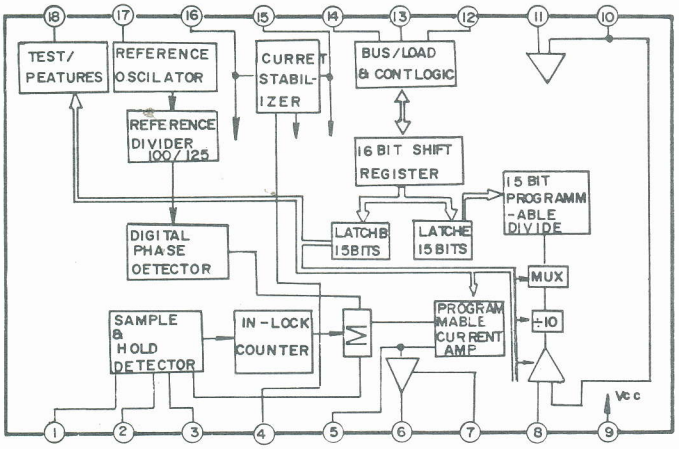
KTC 18
KTA 10
KTC192



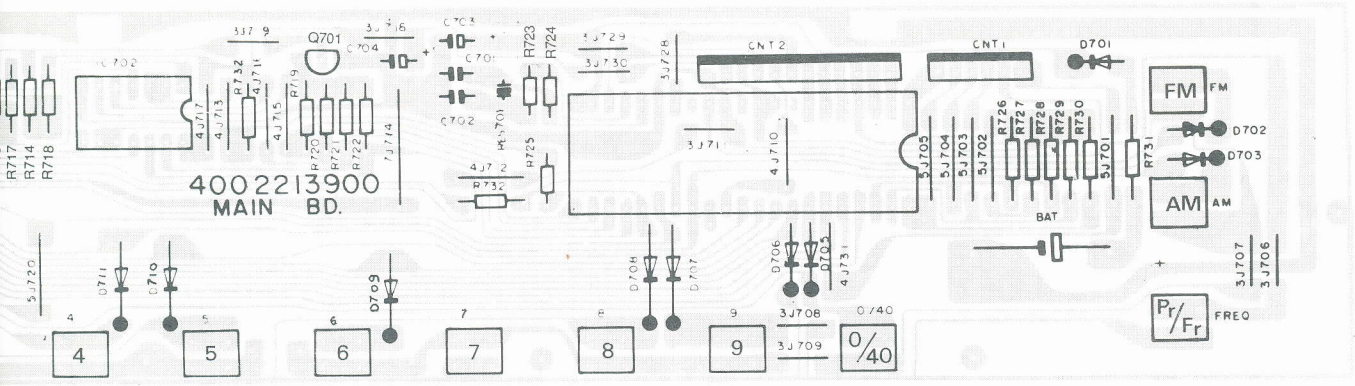
MC 14016B

Grundplatte
Main board
Platine principale





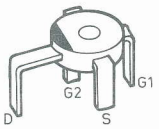
SAA 1057



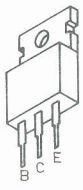
KTC 1815Y
KTA 1015Y
KTC1923Y

KTK 117

KTK 161GR
KTK 192GR



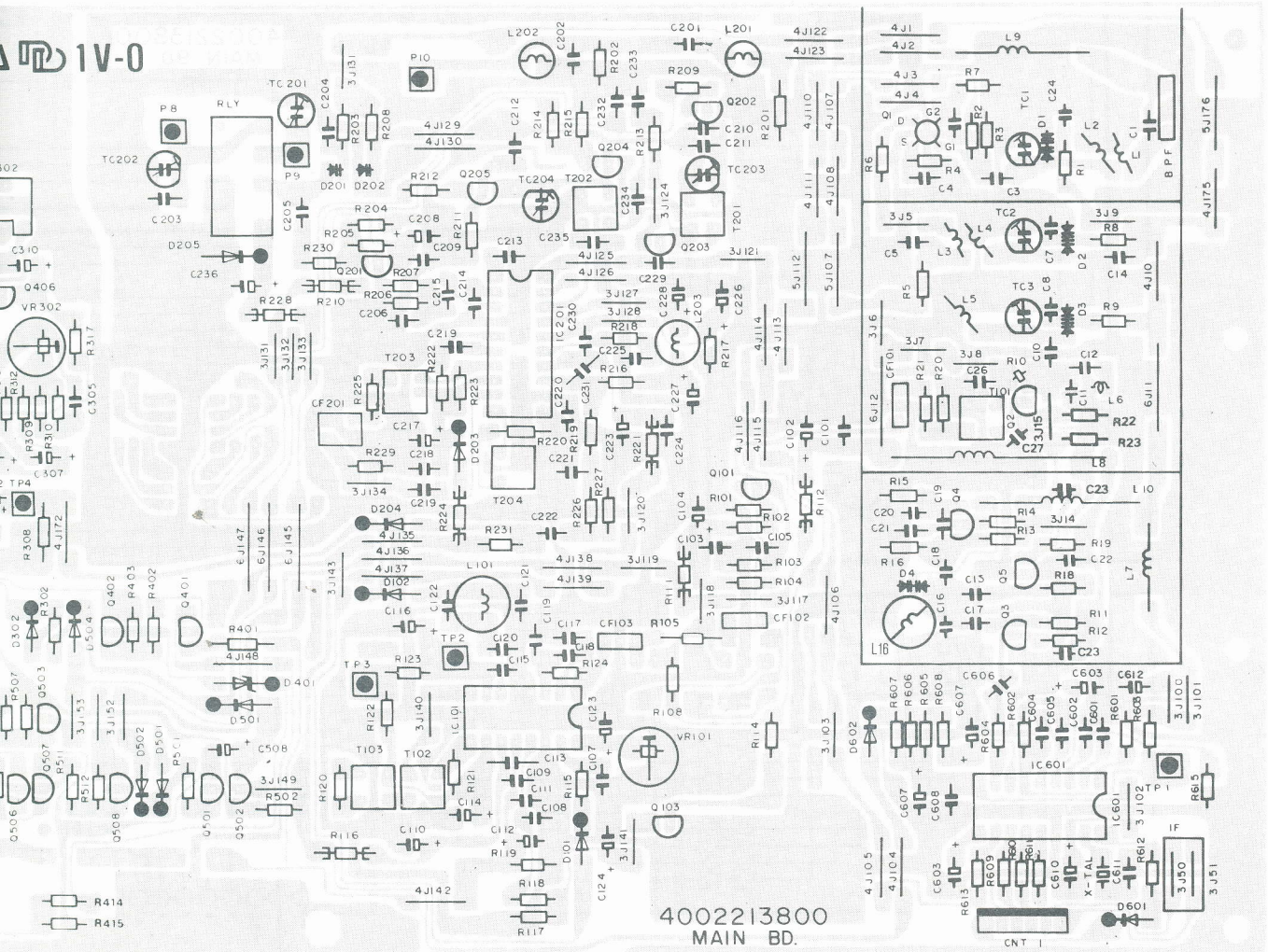
3 SK74L



KTD 88OY

7815

Bestückungsseite
Component side
Côté composants



Ersatzteile · Replacement parts · Pièces détachées · CT 7030

Pos.	Art.-Nr.	Stck	Bezeichnung
1	282331	1	Gehäuseblech
2	282353	1	Frontblende
3	282354	1	Fenster
4	282108	1	Druckknopf Power
5	282109	1	Druckfeder
6	282338	1	Taste Man. Tuning / Auto Scan
7	282356	1	Taste Mono, Scan, Memory
8	282339	1	Taste Station 1–5
9	282340	1	Taste Station 6–0
10	282341	1	Taste FM Stations
11	282342	1	Taste AM Stations
12	282343	1	Taste Program Frequency
13	282215	1	Display
17	282344	2	Lampe
18	282345	1	Taster Power
19	282127	18	Taster
22	282346	1	Antennenbuchse
27	282347	1	Cinchbuchse 1-fach
36	282120	4	Fuß
37	282121	4	Fußdämpfer
39	282359	1	Rückwand
40	243750	1	Netzkabel Europa
42	282349	1	Antennenhalter
43	282350	1	MW / LW Antenne
46	282135	4	Schraube 4×8
50	282523	12	Schraube 3×8
55	282216	1	Transformator
56	282209	1	**Grundplatte CT 7030**
57	282357	1	**Frontplatte CT 7030**
58	282358	1	**Lampenplatte**
D 1	282320	4	Diode KV 1310 A-3
D 4	282320	4	Diode KV 1310 A-3
D 101	223906	14	Diode 1 N 4148
D 102	223906	14	Diode 1 N 4148
D 201	282223	2	Diode KV 1236
D 202	282223	2	Diode KV 1236
D 203	223906	14	Diode 1 N 4148
D 204	223906	14	Diode 1 N 4148
D 302	223906	14	Diode 1 N 4148
D 401	282078	1	Diode DZ 3,3 B
D 402	223906	14	Diode 1 N 4148
D 501	223906	14	Diode 1 N 4148
D 501	282063	1	Diode DZ 12 BM
D 505	223906	14	Diode 1 N 4148
D 506	282174	1	Diode DZ 5,1 BM
D 507	223906	14	Diode 1 N 4148
D 510	282062	1	Diode DZ 9,1 BM
D 601	223906	14	Diode 1 N 4148
D 602	223906	14	Diode 1 N 4148
F 101	242478	1	Sicherung 0,063 A T
L 1	282329	1	Spule
L 2	282221	3	Spule
L 3	282330	1	Spule
L 4	282221	3	Spule
L 5	282221	3	Spule
L 6	282324	1	Spule 2,2 UH
L 7	282191	4	Spule 2,2 UH
L 10	282191	4	Spule 2,2 UH
L 16	282328	1	Spule
L 101	282194	1	Spule 20,8 UH
L 201	282192	1	Spule 47 UH
L 202	282195	1	Spule 2,2 MH
L 203	282325	1	Spule 36 MH
L 9997	282222	1	Filter
L 9998	282350	1	MW / LW Antenne
L 9999	282206	1	Quarz CSB 800 D
Q 1	282210	1	Transistor 3 SK 74 L
Q 2	282171	3	Transistor KTC 1923 Y
Q 3	282171	3	Transistor KTC 1923 Y
Q 4	282171	3	Transistor KTC 1923 Y

Pos.	Art.-Nr.	Stck	Bezeichnung
Q 5	282169	1	Transistor KTK 161 Y
Q 101	282172	1	Transistor LM 9018 F
Q 103	282076	15	Transistor KTC 1815 Y
Q 201	282076	1	Transistor KTC 1815 Y
Q 201	282170	1	Transistor 2 SK 192 GR
Q 202	282076	15	Transistor KTC 1815 Y
Q 205	282076	15	Transistor KTC 1815 Y
Q 401	282076	15	Transistor KTC 1815 Y
Q 402	282077	7	Transistor KTA 1015 Y
Q 403	282076	15	Transistor KTC 1815 Y
Q 404	282077	7	Transistor KTA 1015 Y
Q 405	282076	15	Transistor KTC 1815 Y
Q 406	282075	1	Transistor 2 SK 117 Y
Q 407	282076	15	Transistor KTC 1815 Y
Q 408	282076	15	Transistor KTC 1815 Y
Q 501	282076	15	Transistor KTC 1815 Y
Q 502	282076	15	Transistor KTC 1815 Y
Q 503	282077	7	Transistor KTA 1015 Y
Q 504	282076	15	Transistor KTC 1815 Y
Q 505	282077	7	Transistor KTA 1015 Y
Q 506	282077	7	Transistor KTA 1015 Y
Q 507	282076	15	Transistor KTC 1815 Y
Q 508	282077	7	Transistor KTA 1015 Y
Q 509	282077	7	Transistor KTA 1015 Y
Q 510	282076	15	Transistor KTC 1815 Y
Q 511	282057	1	Transistor KTD 880 Y
Q 512	282060	1	Transistor MPS A 55
Q 701	223906	14	Diode 1 N 4148
Q 713	223906	14	Diode 1 N 4148
Q 715	223906	14	Diode 1 N 4148
R 205	226501	3	Diode 1 N 4002
R 508	226501	3	Diode 1 N 4002
R 509	226501	3	Diode 1 N 4002
R 701	282213	1	Netzwerk 11×124 G
R 702	282214	1	Netzwerk 11×473 G
T 101	282322	1	Spule
T 102	282183	1	Spule
T 103	282184	1	Spule
T 201	282326	1	Spule
T 202	282327	1	Spule
T 203	282189	1	Spule
T 204	282188	1	Spule
T 302	282321	2	Spule
T 303	282321	2	Spule
X 1	282175	1	Quarz 4 MHz
BA 1	282207	1	Akku CR 2439-8
CF 101	282212	3	Keramikfilter SFE 10,7 MS
CF 102	282212	3	Keramikfilter SFE 10,7 MS
CF 103	282212	3	Keramikfilter SFE 10,7 MS
CF 202	282198	1	Keramikfilter SFP 455
IC 101	268204	1	IC HA 12412
IC 201	282167	1	IC LA 1245
IC 301	264541	1	IC HA 12016
IC 501	238347	1	IC MC 7815
IC 701	281970	1	IC UP HD 44840 / B 08
IC 702	261874	1	IC MC 14016 BCP MOS
LD 1	282215	1	Display
RL 1	282176	1	Relay RZ 12
TC 1	282177	4	Trimmer TZ 03 7110 F
TC 2	282177	4	Trimmer TZ 03 7110 F
TC 3	282177	4	Trimmer TZ 03 7110 F
TC 201	282178	2	Trimmer TZ 03 R 200 F
TC 202	282178	2	Trimmer TZ 03 R 200 F
TC 203	282177	4	Trimmer TZ 03 7110 F
VR 101	282201	1	Steller 22 kΩ
VR 301	282219	1	Steller 3,3 k
VR 401	282220	1	Steller 220 k
VR 501	282204	1	Steller 1 kΩ
9900	281425	1	Bedienungs-Anleitung CT 7030
9901	282525	1	Verpackung kpl. CT 7030

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