

# CT 1210

Service-Anleitung  
Service Manual  
Instructions de Service














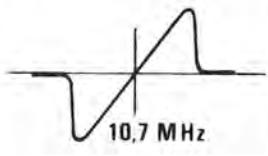


















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













Technische Daten (typische Werte)	Technical Data (typical value)	Caractéristiques techniques (valeur caractéristiques)	
<b>Empfangsbereiche</b> FM (UKW) MW LW	<b>Wave bands</b> FM (VHF) MW LW	<b>Gammes d'ondes</b> FM (O.U.C.) P.O. G.O.	87,5- 108 MHz 520 -1620 kHz 150 - 350 kHz
<b>Empfindlichkeit</b> FM-Mono (75 Ohm, 26 dB Rauschabstand) FM-Stereo (75 Ohm, 46 dB Rauschabstand)	<b>Sensitivity</b> FM-Mono (75 Ohm, signal-to-noise ratio 26 dB) FM-Stereo (75 Ohm, signal-to-noise ratio 46 dB)	<b>Sensibilité</b> FM-mono (75 ohms, rapport signal/bruit de 26 dB) FM-stéréo (75 ohms, rapport signal/bruit de 46 dB)	1,0 $\mu$ V 35 $\mu$ V
<b>Geräuschspannungsabstand (IHF)</b> Stereo (1 kHz/46 kHz Hub)	<b>Signal-to-noise ratio, weighted (IHF)</b> Stereo (1 kHz/46 kHz)	<b>Rapport signal/bruit (IHF)</b> Stéréo (1 kHz/46 kHz)	68 dB
<b>Klirrfaktor</b> Stereo (1 kHz/46 kHz Hub)	<b>Harmonic distortion</b> Stereo (1 kHz/46 kHz)	<b>Taux de distorsion</b> Stéréo (1 kHz/46 kHz)	0,25 %
<b>Übersprechdämpfung</b> bei 1 kHz	<b>Channel separation</b> at 1000 Hz	<b>Diaphonie stéréo</b> (à 1 kHz)	45 dB
<b>NF-Frequenzgang</b> für Preemphasis 50 $\mu$ s - 3 dB	<b>AF frequency response</b> for 50 $\mu$ s pre-emphasis - 3 dB	<b>Bande passante BF</b> pour pré-emphasis 50 $\mu$ s à 3 dB	15 Hz-16 kHz
<b>Trennschärfe</b>	<b>Selectivity</b>	<b>Sélectivité</b>	65 dB
<b>NF-Ausgangsspannung</b>	<b>AF output level</b>	<b>Tension de sortie BF</b>	ca. 500 mV
<b>Betriebsspannung</b>	<b>Operating voltage</b>	<b>Tension de service</b>	18 V DC, 250 mA

	Ⓓ 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	Disponibile
▲	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	Círculo silencioso	Sintonia Silenziosa
📺	Abstimmen	Tuning	Syntonisation	Sintonía	Sintonia
📻	Empfangsfrequenz-Regelung	Automatic frequency control	Contrôle automatique de fréquence	Control automático de frecuencia	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	Potenciómetro 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

**Ableich · Alignment · Reglages · Reglajes · Regolazione**

FM						
		 	f			  
	1	 TP 14 			PH001	V = 1 V = ± 10 mV
IF	2	  Ve ≈ 100 μV	10,7 MHz		PH002 (Amp)	 10,7 MHz
	3				LH015 (sym)	
FI						
ZF						
FM	4	 Ve ≈ 1,5 μV	87,45 MHz		LH009	TP11 Max.
	5		108,15 MHz		CH021	
MF	6		90 MHz	90 MHz 	LH002/3, LH005/6/7/10	
	7		101 MHz	 101 MHz	CH004/13/14	

Decoder						
		 	f			  
	1	Ve ≈ 1 mV stéréo	98 MHz	98 MHz 	PD003	 TP6 → 228 kHz ± 2 kHz
	2		98 MHz	98 MHz 	PD001	TP11 Übersprechen min.
	3		98 MHz	98 MHz 	PD002	TP11 19 kHz min.

AM						
		  30% mod 1000 Hz	f			  
IF	1	TP15 Ve ≈ 100 μV	≈ 460 kHz		QH001R	TP11 Max.
FI					QH001B	
ZF						
MW	2	TP15 Ve ≈ 100 μV	510 kHz		LH012	TP11 Max.
	3		1630 kHz		CH039	
PO	4	TP15 Ve ≈ 10 μV	600 kHz	600 kHz 	LH021	
	5		1500 kHz	 1500 kHz	CH032	
LW	6	TP15 Ve ≈ 100 μV	145 kHz		LH013	TP11 Max.
						
GO	7	TP15 Ve ≈ 10 μV	150 kHz	150 kHz 	LH023	
						

## Ersatzteile · Replacement parts · Pièces détachées · CT 1210

Pos.	Art.-Nr.	Stck	Bezeichnung
1	280 428	1	Gehäuseblech GM
1	280 435	1	Gehäuseblech PM
2	280 431	1	Frontblende GM
2	280 436	1	Frontblende PM
3	280 429	1	Zierrahmen
4	280 426	1	Zeiger
5	280 427	1	Knopf (Sender)
6	279 856	1	Taste (Power)
7	279 835	1	Feder (Power)
8	279 833	1	Tastenverlängerung (Power)
9	280 433	5	Taste (Mono/Wellenbereich/Festsender)
10	279 831	5	Tastenverlängerung (Mono/Festsender)
11	280 430	1	Knopf mit Rolle
12	280 409	1	Rolle
13	280 410	1	Feder
14	280 407	1	Plastikachse
15	280 196	1	Ferritantenne
16	280 408	1	Reflektor
17	280 434	1	Abdeckklappe (Festsender)
18	280 432	8	Taste (Festsender)
20	280 437	1	<b>Festsendereinstellplatte</b>
22	280 438	1	<b>Grundplatte</b>
BH 2	280 225	1	Stecker 4-pol. (Ferritantenne)
BH 3	280 168	1	Buchse 7-pol. (DIN)
CH 4	280 419	3	Trimmer 2,5/20 PF
CH 13	280 419	3	Trimmer 2,5/20 PF
CH 14	280 419	3	Trimmer 2,5/20 PF
CH 32	280 219	2	Trimmer 2/22 PF
CH 39	280 219	2	Trimmer 2/22 PF
DD 1	223 906	6	Diode 1 N 4148
DD 2	280 420	1	Diode BZX 46 C4 V7
DE 1	223 906	6	Diode 1 N 4148
DH 1	275 858	4	Diode 1 SV 68
DH 2	275 858	4	Diode 1 SV 68
DH 3	275 858	4	Diode 1 SV 68
DH 4	275 858	4	Diode 1 SV 68
DH 5	275 854	1	Diode BA 223
DH 6	275 855	2	Diode SVC 321
DH 7	275 855	2	Diode SVC 321
DH 8	223 906	6	Diode 1 N 4148
DH 9	223 906	6	Diode 1 N 4148
DH 10	280 214	1	IC ZTK 9
DH 11	223 906	6	Diode 1 N 4148
DH 13	223 906	6	Diode 1 N 4148
GD 1	279 523	2	LED TLHR 6200
GE 1	279 523	2	LED TLHR 6200
GE 2	279 820	4	LED TLHR 6102
GE 3	279 820	4	LED TLHR 6102
GE 4	279 820	4	LED TLHR 6102
GT 1	279 820	4	LED TLHR 6102
ID 1	280 215	1	IC TEA 5580
IE 1	236 299	1	IC RC 4558 D
IH 1	280 216	1	IC TDA 1574
IH 2	280 217	1	IC TDA 1220 B
IH 4	279 927	1	IC LM 317
IH 5	261 333	1	IC LM 340 T
LD 1	280 227	2	Drossel

Pos.	Art.-Nr.	Stck	Bezeichnung
LD 2	280 227	2	Drossel
LD 3	280 228	1	Drossel
LH 1	280 207	3	Spule
LH 2	280 423	1	Drossel
LH 3	280 413	1	Spule
LH 4	280 207	3	Spule
LH 5	280 424	1	Drossel
LH 6	280 414	2	Spule
LH 7	280 414	2	Spule
LH 8	280 207	3	Spule
LH 9	280 208	1	Spule
LH 10	280 209	1	Spule
LH 12	280 415	1	Spule
LH 13	280 416	1	Spule
LH 14	280 417	1	Spule
LH 15	280 213	1	Spule
LH 16	280 229	1	Drossel
LH 17	280 425	1	Drossel
LH 20	280 439	1	Drossel
LH 21	280 231	1	Drossel
NH 1	280 411	1	Senderspeicher
PD 1	280 222	2	Steller 22 k $\Omega$
PD 2	280 223	1	Steller 470 k $\Omega$
PD 3	280 222	2	Steller 22 k $\Omega$
PH 1	280 421	1	Steller 220 $\Omega$
PH 2	280 224	1	Steller 10 $\Omega$
PT 1	280 422	1	Steller 100 $\Omega$
QH 1	280 220	1	Filter 455 kHz
QH 2	280 221	2	Keramikfilter
QH 3	280 221	2	Keramikfilter
SH 1	279 837	1	Schalter (Power)
SH 2	280 418	1	Schalter 5-fach
SH 4	280 412	1	Schalter 8-fach (Festsender)
TD 1	276 032	2	Transistor BC 558 C
TD 2	276 032	2	Transistor BC 558 C
TD 3	244 715	2	Transistor BC 548 C
TD 4	244 715	2	Transistor BC 548 C
TE 1	240 786	7	Transistor BC 548 B
TH 1	248 800	1	Transistor BF 961
TH 2	240 787	4	Transistor BC 558 B
TH 3	240 786	7	Transistor BC 548 B
TH 4	240 787	4	Transistor BC 558 B
TH 5	240 786	7	Transistor BC 548 B
TH 6	228 223	1	Transistor BF 245 A
TH 7	240 786	7	Transistor BC 548 B
TH 8	240 787	4	Transistor BC 558 B
TH 9	226 898	1	Transistor BC 550 C
TH 10	275 802	1	Transistor BC 560 B
TH 11	240 787	4	Transistor BC 558 B
TH 12	240 786	7	Transistor BC 548 B
TH 13	240 786	7	Transistor BC 548 B
TH 14	240 786	7	Transistor BC 548 B
	280 531	4	Gerätefuß
	280 170	1	DIN-Kabel 7-pol.
	280 440	1	Behelfsantenne
	279 859	1	Verpackung kpl.
	278 650	1	Bedienungsanleitung

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

# Allgemeine Information General Information Information générale

## Dual



Datum Date Date 17.03.1987	Zeichen Ref. N/réf KD/Ku - Wa	Geräte Nr. Serial number No de l'appareil	No A 188
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CT 1210, 1230, 150, 1280

**Erscheinung:** Trotz exakter Einstellung auf einen Stereosender, schaltet das Gerät nicht auf Stereo.

**Abhilfe** : Decoder neu abgleichen.

**Symptom** : Although a stereo station is exact tuned in the unit is not switching to stereo..

**Remedy** : Re-alignment of decoder

Decoder CT 1210							
				f			
1	$V_e \approx 1 \text{ mV mono}$			98 MHz	98 MHz	PD003	TP6 $\rightarrow 228 \text{ kHz} \pm 2 \text{ kHz}$
2	$V_e \approx 1 \text{ mV stéréo}$			98 MHz	98 MHz	PD001	TP11 max. ch. separation
3				98 MHz	98 MHz	PD002	TP11 19 kHz min.

Decoder CT 1230/150							
				f			
1	$V_e \approx 1 \text{ mV mono}$			98 MHz	98 MHz	PD 003	TP 6 F = $228 \text{ kHz} \pm 2 \text{ kHz}$
2	$V_e \approx 1 \text{ m stereo}$			98 MHz	98 MHz	PD 001	TP11 max. ch. separation
3				98 MHz	98 MHz	PD 002	19 kHz min.

CT 1280		$V_e \approx 1 \text{ mV mono}$	f	f			f = 228 kHz
	11		98 MHz	98 MHz	PD 002		
	12	$V_e = 1 \text{ mV}$ $\Delta f = 40 \text{ kHz} + 6.75 \text{ kHz Pil.}$			PD 001		MP 24 min.

**Hinweis:** Bitte Service-Anleitung korrigieren

Please correct the Service-manual