

# Radio recorder D7180/00R/01R/02R/05R/10R/17R

Service  
Service  
Service

D7182/00R



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For repair information of the cassette mechanism see Service Manual of Recorders tape deck RX-4

For -/17 service parts please read 4H i.s.o. 4822 and 3H i.s.o. 5322

# Service Manual

## SPECIFICATIONS

	: 120 V 60 Hz (-/17R) 220 V/240 V 50 Hz (other version) (serviceable) 120 V/220 V/240 V 50 Hz/60 Hz (-/01R) (voltage selector)	FM : 87.5-108 MHz MW : 526.5-1606.5 kHz LW : 150-255 kHz Tape speed : 4.76 cm/sec ± 3% Wow and flutter : < 0.35% Signal to noise ratio : > 30 dB Freq. response : 250-6300 kHz (within 8 dB)
	: 6 V (4xR20)	
	: ~ 0.5 W-1 dB -II-0.5 W-1 dB	4Ω d= 10%
AM-IF	: 468 kHz 455 kHz (-/10R)	
FM-IF	: 10.7 MHz	

### GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.  
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

### ESD



### NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).  
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.  
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

### F ATTENTION

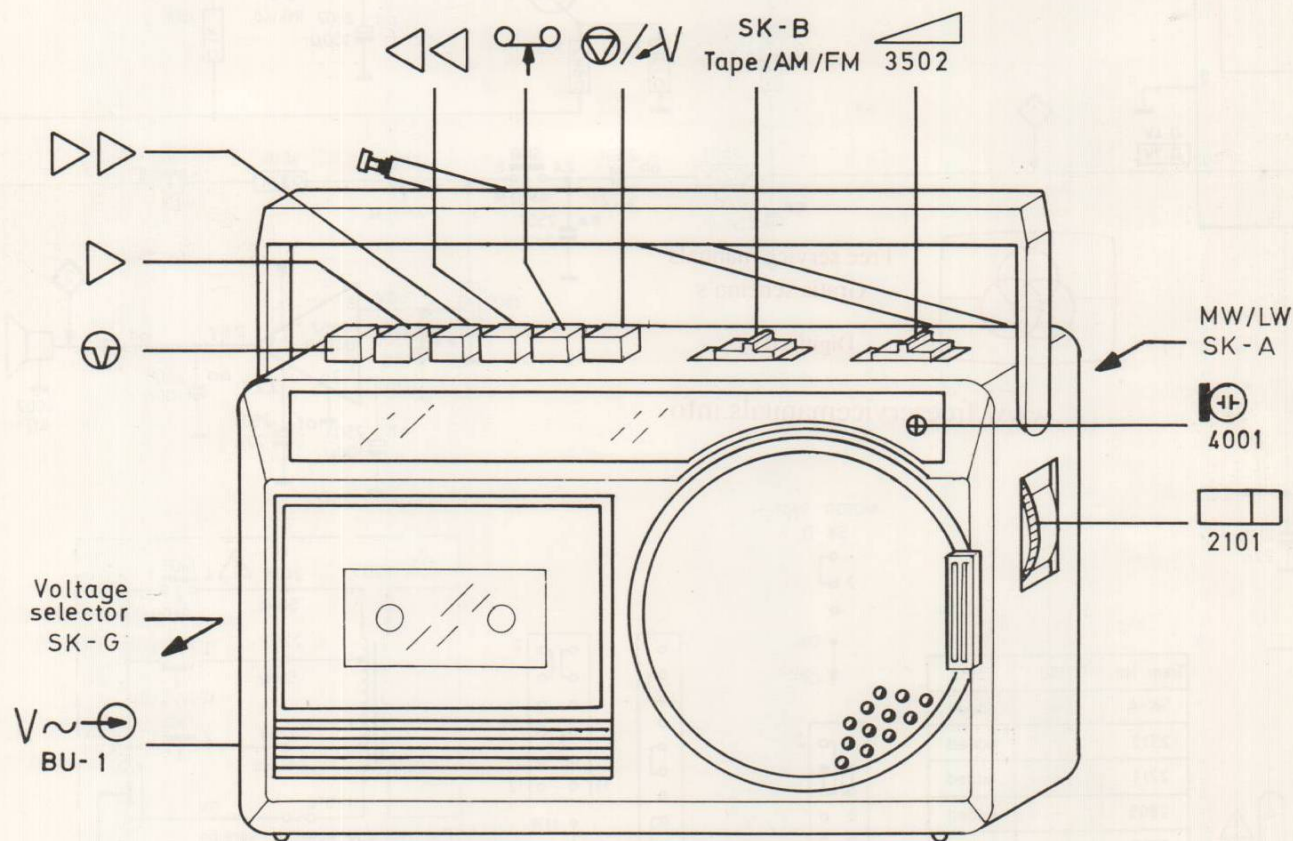
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Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.  
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet serti d'une résistance de sécurité.  
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

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Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.  
Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.  
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

### I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).  
La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione.  
Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.  
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.



26642

Adjustment	Cassette	Recorder in position	Measure on	Read on	Adjust with	Adjust to
Tape speed	3150 Hz of SBC420*	Play	Speaker terminals	Wow and flutter meter	Preset in motor	**a
Azimuth R/PB head	8 KHz of SBC420*	Play	Speaker terminals	mV - meter	Left screw R/PB head	Max. output

\* SBC420: 4822 397 30071.

\*\*a The maximum permissible speed deviation is 3%. Moreover, the wow and flutter value can be read. This value should not exceed 0.35%.



\*Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne.

Subject to modification

4822 725 21782

Printed in The Netherlands

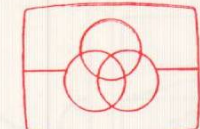
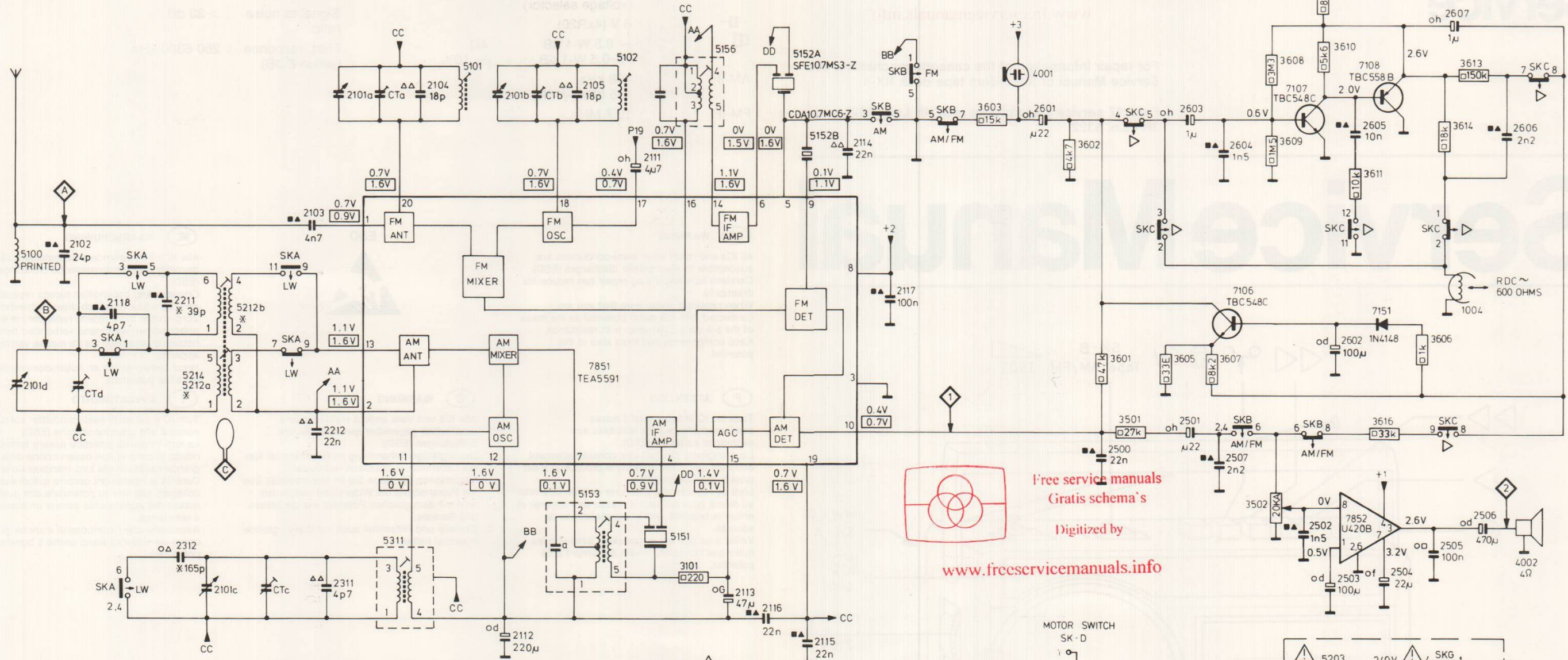
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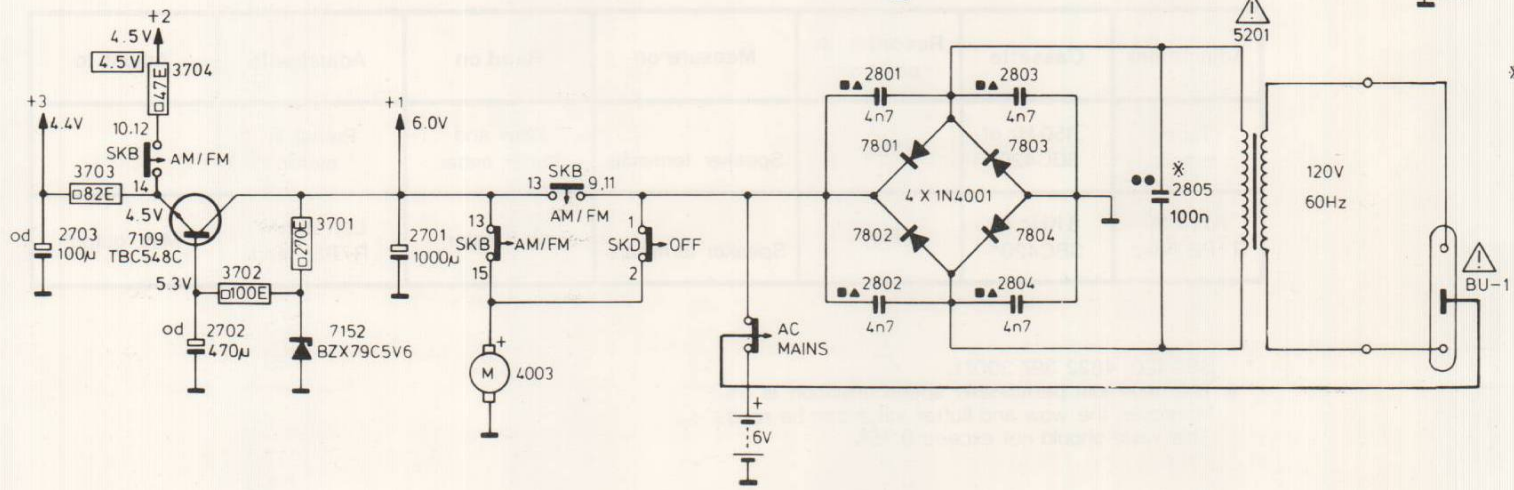


MISC	5100 7109 5202	7152 5214 5212a	5212b 4003	5311	5101 7801 7802	7851 7803 5102 5153 7804	5201	5152A 5152B BU1	4001	7106 7107 5203 5202	7108 7151 7852	1004 4002 SKG BU 1
CAP	2703 2102 2702 2101d CTd	2118 2312	2211 2701 2101c CTc 2103 2212	2101a CTa 2104	2801 2112 2802	2105 2803 2111 2804	2805	2113 2116 2115 2114 2117	2601	2500 2603 2604 2501 2507	2502 2503 2605 2504 2602	2607 2505 2606 2506
RES	3703 3704 3702 3701						3101		3603 3602 3601 3501 3605 3607 3502 3608	3609 3610 3612 3610	3612 3611 3616 3613	3614 3613 3606



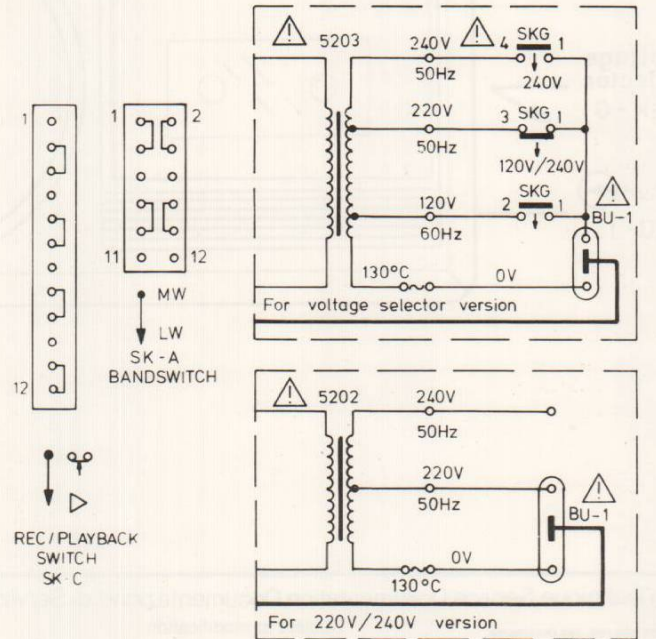
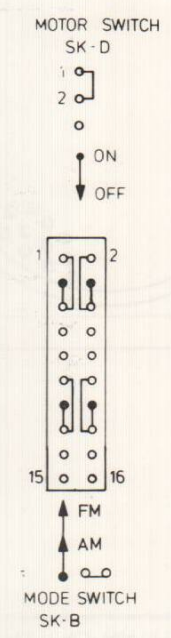
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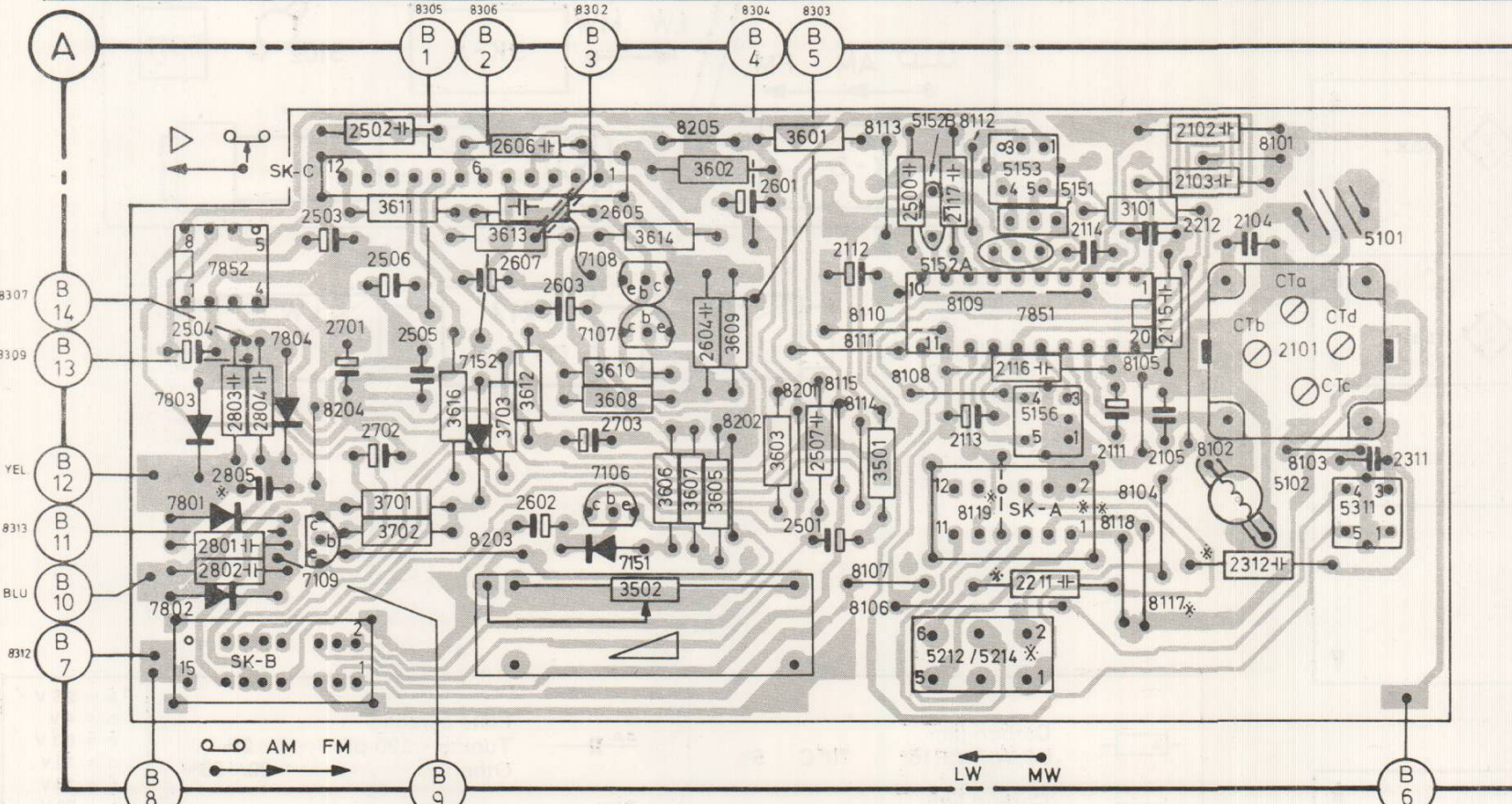
THIS CIRCUIT IS IN TAPE RECORDING

Item No.	D7180	D7182
SK-A	-	Added
2312	-	Added
2211	-	Added
2805	-	Added
5212	-	Added
5214	Added	-





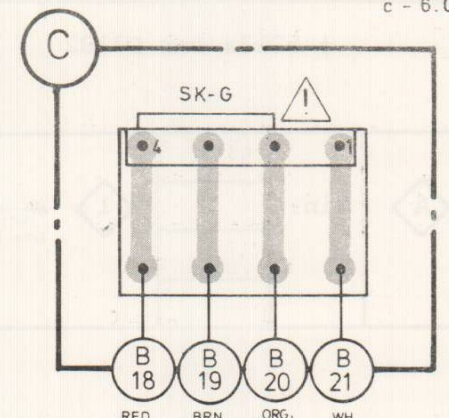
MISC.	7803 7852 7804 8204	7152 7108	8205 8202 8201 8113÷8115 8119 8112 5156 5151 1004 8101÷8105	5101	5202	SKG BU1	5203	BU1
	7801 4002 7109	8203 7107 7151	8106÷8111 5152B5153 7851 8114 4001	5201 5311				
	7802 SKB SKC	SKD 7106	4003 5212 5214 5152ASKA	8118 8117 5102				
CAP.	2504 2803 2804 2503 2506 2505	2606 2603 2703 2603	2601 2112 2500 2117 2113 2211 2114 2115 2102 2104 2101	2311				
	2805 2802 2701 2702	2602 2605 2604	2507 2116	2111 2103 2312 CTa÷CTb				
	2801 2502	2607	2501	2105 2212				
RES.	3611 3616 3613 3612	3610 3602 3601	3501	3101				
	3701 3703	3608 3606 3607 3605 3603						
	3702	3502 3614 3609						



ITEM	D7180	D7182	Conn. pt. AA	Voltage	7851
SK-A	-	ADDED	Brn.	220V	1 - 0.9V 0.7V
2312	-	ADDED	Red	240V	2 - 1.6V 1.1V
2211	-	ADDED			3 - 0V 0V
8118	ADDED	-			4 - 0.9V 0.7V
8119	ADDED	-			5 - 1.6V 0V
8117	-	ADDED			6 - 1.5V 0V
2805	-	ADDED			7 - 0.1V 1.6V
5212	-	ADDED			8 - 4.5V 4.5V
5214	ADDED	-			9 - 1.1V 0.1V

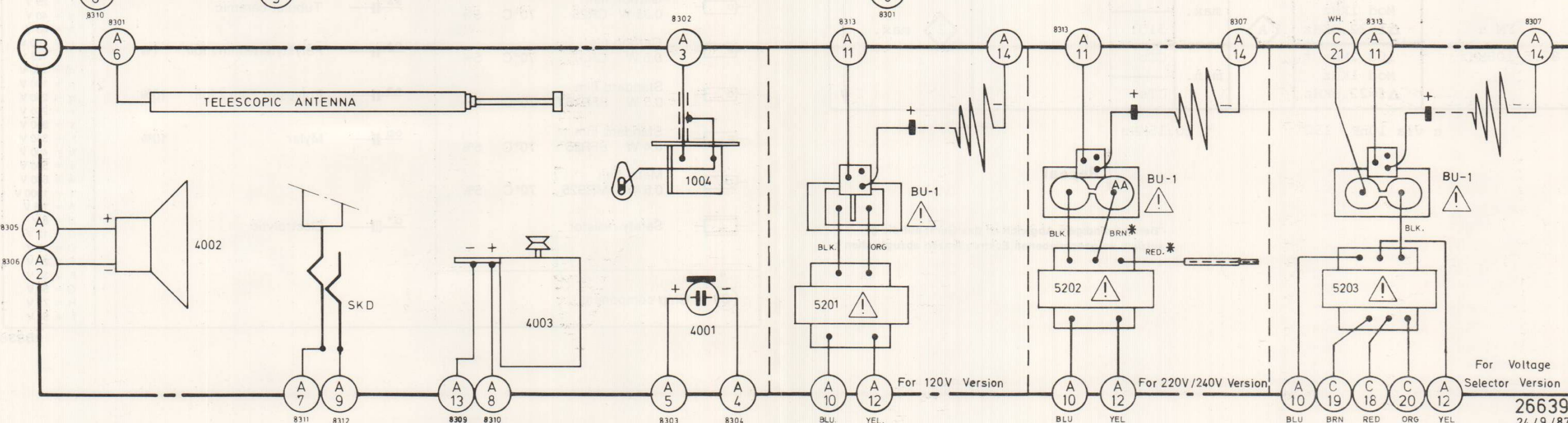
  

Conn. pt. AA	Voltage	7852
Brn.	220V	1 - 0.9V 0.7V
Red	240V	2 - 1.6V 1.1V
		3 - 0V 0V
		4 - 0.9V 0.7V
		5 - 1.6V 0V
		6 - 1.5V 0V
		7 - 0.1V 1.6V
		8 - 4.5V 4.5V
		9 - 1.1V 0.1V
		10 - 0.7V 0.4V
		11 - 0V 1.6V
		12 - 0V 1.6V
		13 - 1.6V 1.1V
		14 - 1.6V 1.1V
		15 - 0.1V 1.4V
		16 - 1.6V 0.7V
		17 - 0.7V 0.4V
		18 - 1.6V 0.7V
		19 - 1.6V 0.7V
		20 - 1.6V 0.7V



ELECTRONIC VOLTMETER  
IMP. ≥ 1MΩ

Measurement done with DC supply







**AM-IF**

MW	≈ 468KHz Δf=10KHz via 33nF	B	min.	5153	2 max.
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**AM-RF**

MW* 526.5-1606.5KHz	512KHz	C	max.	5311	2 max.
	1635KHz		min.	CTc	
	550KHz			5214 <sup>φ</sup>	
	1500KHz			CTd	
LW* 150-255KHz	147KHz	C	max.	5311	2 max.
	200KHz			5212b	

\* Mod 1KHz 30%

φ 5212a for D7182

**FM-IF**

FM	≈ 10.7MHz Δf=300KHz (50Hz) via 10nF	A	min.	5156	1
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Symm + Linear

**FM-RF**

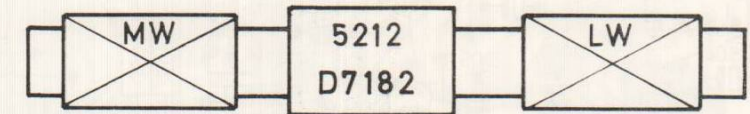
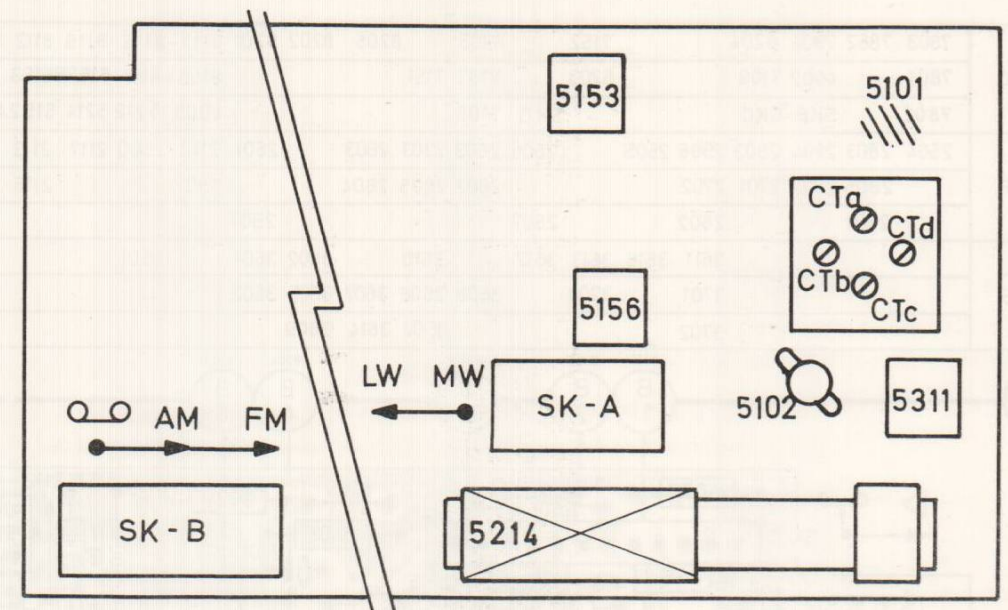
FM α 87.5-108MHz	87.35MHz † Mod 1KHz Δf=22.5KHz	A	max.	5102	2 max.
	108.2MHz † Mod 1KHz Δf=22.5KHz		min.	CTb	
				CTa	

α via 10nF + 15Ω

† ±0.15MHz

Repeat

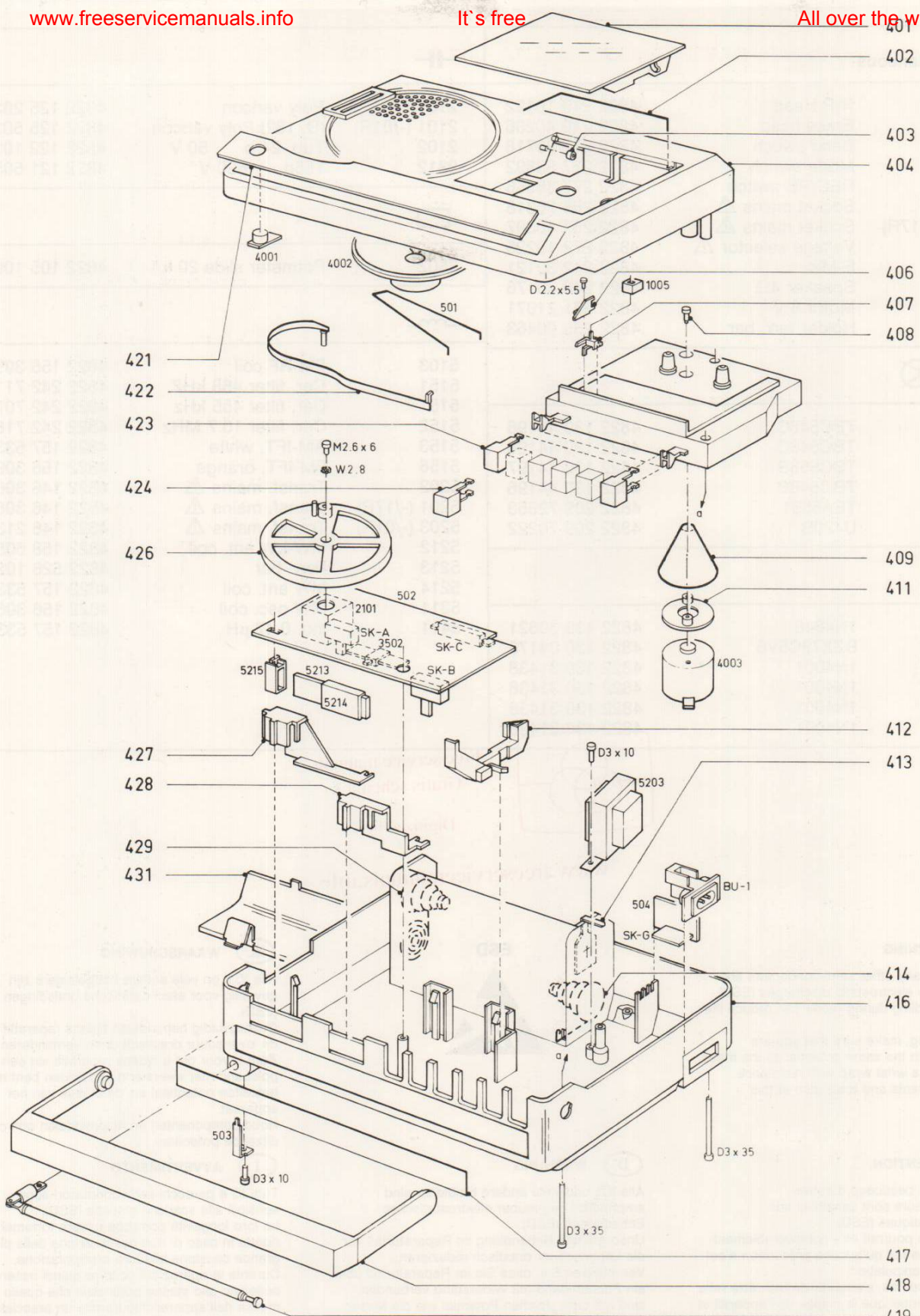
"Bei notwendigem Abgleich ist das Gerät auf die gesetzlich vorgeschriebenen Eckfrequenzen abzugleichen".



26646

	Carbon film 0.2 W CR16 70°C 5%		Plate ceramic Tuning < 120 pF 2% Others -20/+80%	* a = 2.5 V b = 4 V c = 6.3 V d = 10 V e = 16 V f = 25 V g = 40 V h = 63 V i = 100 V l = 125 V m = 150 V n = 160 V q = 200 V r = 250 V s = 300 V t = 350 V u = 400 V v = 500 V w = 630 V x = 1000 V A = 1.6 V B = 6 V C = 12 V D = 15 V E = 20 V F = 35 V G = 50 V H = 75 V I = 80 V
	Carbon film 0.33 W CR25 70°C 5%		Tubular ceramic	
	Carbon film 0.5 W CR37 70°C 5%		Polystyrene film / foil 1%	
	Standard film 0.5 W SFR16T 70°C 5%		Polyester Film / foil 10%	
	Standard film 0.4 W SFR25 70°C 5%		Mylar 10%	
	Metal film 0.6 W MRS25 70°C 5%		Electrolytic	
	Safety resistor			
	Chip component			




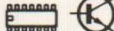



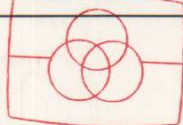


26647

401	4822 443 62334	413	4822 290 80313	423	4822 410 26273
402	4822 492 63903	414	4822 492 51961	424	4822 410 26274
403	4822 325 50167	416	4822 421 60097	426	4822 413 41422
404	4822 423 50889	416	4822 421 60096 (/17R)	427	4822 411 61457
406	4822 403 53334	416	4822 421 60099 (/10R)	428	4822 411 61458
407	4822 403 53335	417	4822 454 12077	429	4822 492 51733
408	4822 502 30441	418	4822 498 10297	431	4822 423 40929
409	4822 358 10111	419	4822 303 30333		
411	4822 529 10193	421	4822 333 40343		
412	4822 403 53336	422	4822 450 81097		



-Miscellaneous-			-II-																																												
1004	R/P Head	4822 249 10122	2101	Poly varicon	4822 125 20283																																										
1005	Erase head	4822 249 40236	2101 (-/01R)	(D7182) Poly varicon	4822 125 50368																																										
SK-A	Band switch	4822 277 30718	2102	Tub. 24 p 50 V	4822 122 10391																																										
SK-B	Mode switch	4822 277 30892	2312	165p 630 V	4822 121 50541																																										
SK-C	REC/PB switch	4822 277 30856																																													
BU-1	Socket mains $\Delta$	4822 265 20318																																													
BU-1 (-/17R)	Socket mains $\Delta$	4822 267 40397																																													
SK-G	Voltage selector $\Delta$	4822 272 10225																																													
4001	E-Mic	4822 242 30121	3502	Potmeter slide 20 kA	4822 105 10966																																										
4002	Speaker 4 $\Omega$	4822 240 40176																																													
4003	Motor 6 V	4822 361 21071																																													
5215	Holder ferr. bar	4822 256 90463	<table border="0"> <tr> <td>5103</td> <td>FM-RF coil</td> <td>4822 156 30947</td> </tr> <tr> <td>5151</td> <td>Cer. filter 468 kHz</td> <td>4822 242 71139</td> </tr> <tr> <td>5151</td> <td>Cer. filter 455 kHz</td> <td>4822 242 70754</td> </tr> <tr> <td>5152</td> <td>Cer. filter 10.7 MHz</td> <td>4822 242 71869</td> </tr> <tr> <td>5153</td> <td>AM-IFT, white</td> <td>4822 157 53322</td> </tr> <tr> <td>5156</td> <td>FM-IFT, orange</td> <td>4822 156 30958</td> </tr> <tr> <td>5202</td> <td>Transf. mains <math>\Delta</math></td> <td>4822 146 30666</td> </tr> <tr> <td>5201 (-/17R)</td> <td>Transf. mains <math>\Delta</math></td> <td>4822 146 30665</td> </tr> <tr> <td>5203 (-/01R)</td> <td>Transf. mains <math>\Delta</math></td> <td>4822 146 21313</td> </tr> <tr> <td>5212</td> <td>MW-LW ant. coil</td> <td>4822 158 60582</td> </tr> <tr> <td>5213</td> <td>Ferr. bar</td> <td>4822 526 10263</td> </tr> <tr> <td>5214</td> <td>MW ant. coil</td> <td>4822 157 53323</td> </tr> <tr> <td>5311</td> <td>MW osc. coil</td> <td>4822 156 30671</td> </tr> <tr> <td>5411</td> <td>Ind. 0.47 <math>\mu</math>H</td> <td>4822 157 53377</td> </tr> </table>			5103	FM-RF coil	4822 156 30947	5151	Cer. filter 468 kHz	4822 242 71139	5151	Cer. filter 455 kHz	4822 242 70754	5152	Cer. filter 10.7 MHz	4822 242 71869	5153	AM-IFT, white	4822 157 53322	5156	FM-IFT, orange	4822 156 30958	5202	Transf. mains $\Delta$	4822 146 30666	5201 (-/17R)	Transf. mains $\Delta$	4822 146 30665	5203 (-/01R)	Transf. mains $\Delta$	4822 146 21313	5212	MW-LW ant. coil	4822 158 60582	5213	Ferr. bar	4822 526 10263	5214	MW ant. coil	4822 157 53323	5311	MW osc. coil	4822 156 30671	5411	Ind. 0.47 $\mu$ H	4822 157 53377
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