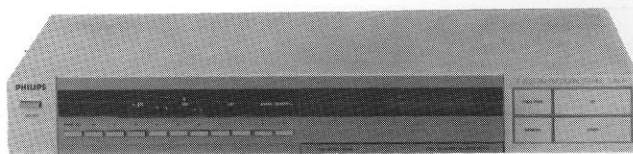


Service
Service
Service



32 161A

Service Manual

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Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

Documentation Technique Service Dokumentation Documentazione di Servizio Huolto-Ohje Manual de Servicio Manual de Servicio

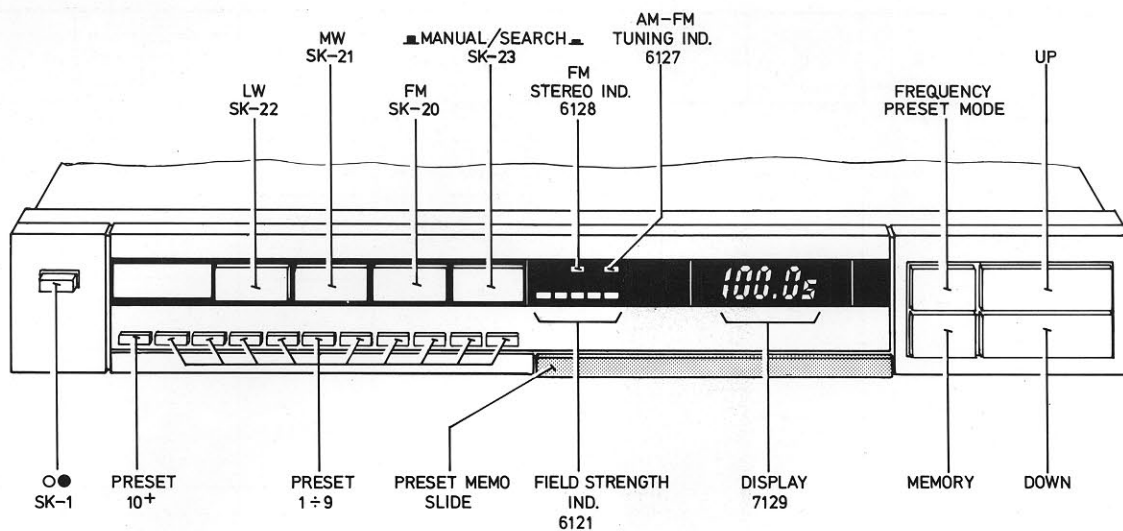


Subject to modification

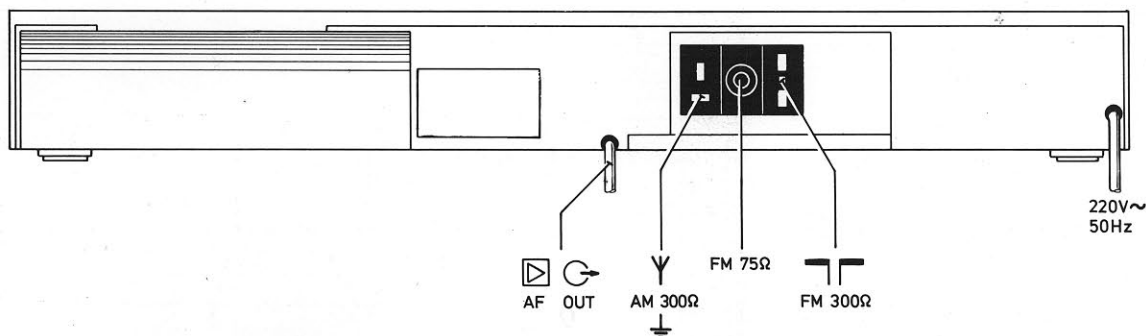
4822 725 15438

Printed in The Netherlands

PHILIPS



32 095B12



32 096B12

TECHNISCHE GEGEVENS

FM gedeelte	Golfbereik	: 87.5-108 MHz
	Gevoeligheid	: Mono 0.85 μ V (26 dB S/R)
	(98 MHz Δ f 75 kHz) bij 75 Ω	: Stereo 20 μ V (46 dB S/R)
	Selectiviteit	: 65 dB voor 300 kHz buitenresonantie
	T.H.D.	: Mono, 0,08% (DIN) : Stereo, 0,13% (DIN)
AM gedeelte	Audio uitgang	: 1000 mV
	Golfbereiken	: 146- 263 kHz LG (2055-1141 m) 513-1611 kHz MG (585- 186 m)
	Gevoeligheid (600 kHz)	: 150 μ V bij 20 dB S/R
Algemeen	Selectiviteit	: 55 dB voor 9 kHz buitenresonantie
	Audio uitgang	: 300 mV bij 30% mod.
	Netspanning	: 110 V-127-220-240 V 50 Hz
	Vermogen	: 8 W
	Afmetingen BxHxD	: 418x51x234 mm

SK			TUNE IN DISPLAY	DETUNE			
----	--	--	-----------------	--------	--	--	--

FM-IF

FM SK-20	98 MHz Δf 250 kHz (sweep range 75-110 MHz)		Display 98.00 MHz 								
					5105						
	98 MHz Δf 75 kHz 10 μ V				5112	5111					
	98 MHz $\Delta f = 75$ kHz 1 kHz mod. 1 mV					5111			0 V \pm 30 mV		0 \pm 30 mV
						5112					
						5105					

FM-RF (oscillator)

FM SK-20	108 MHz 1 kHz mod.		Display 108.00 MHz 		5106		
						max. ~	12 V

FM-RF

FM SK-20	108 MHz 1 kHz mod.		Display 108.00 MHz 		2103 2109		max. ~
	87.56 MHz 1 kHz mod.		Display 87.56 MHz 		5101 5102		

Automatic Gain Control Level

FM SK-20	98 MHz 1 kHz mod. 0,5 mV		Display 98.00 MHz 		3159			5,0 V
	98 MHz 1 kHz mod. 10 mV			No adjust- ment provided			\leq 2,5 V	

Field strength indicator

FM SK-20	98 MHz 1 kHz mod. 0.5 mV		Display 98.00 MHz 		3219		6121 All LED's on
----------	--------------------------------	--	--------------------------	--	------	--	-------------------------

SK...

Stereo decoder

FM SK-20

AM-IF

MW SK-21

AM Oscillator

MW SK-21

SK...			TUNE IN DISPLAY	DETUNE			
-------	--	--	--------------------	--------	--	--	--

Stereo decoder

FM SK-20	No signal				3174		 Frequency counter 76 kHz + 300 Hz
	98 MHz 1 mV 1 kHz mod. R= 90% mod. L= 0 9% pilot		 Display 98.00 MHz		3165	 min. 1 kHz component	
	98 MHz 1 mV 6% pilot				5114 5115	 min. 19 kHz component	

AM-IF

MW SK-21	450 kHz $\Delta f = 9$ kHz (sweep range 0.4-0.5 MHz)		Display 513 kHz	 7 IC7110		 	
				 1 5119 3	5120	 	
				 7 IC7110 1 5119 3			

AM Oscillator

MW SK-21	512 kHz 1 kHz mod		 478 pF//3205	5119	 max. ~ 	
			 478 pF//3205			

121
LED's
on

SK...			TUNE IN DISPLAY	DETUNE			
-------	--	--	--------------------	--------	--	--	--

AM-RF

LW SK-22	155 kHz 1 kHz mod.	◇ B	Display 155 kHz 	◇ 8 max. ~	5117 (LW)	
MW SK-21	567 kHz 1 kHz mod.		Display 567 kHz 		5117 (MW)	
LW SK-22	254 kHz 1 kHz mod.		Display 254 kHz 		2200	
MW SK-21	1503 kHz 1 kHz mod.		Display 1503 kHz 		2198	

Search Stop Level

MW SK-21	567 kHz 1 kHz mod. 800 μ V		Display 567 kHz	3229	6127 Lights up
----------	--------------------------------------	--	--------------------	------	-------------------

- ① De top van de doorlaat curve, door verschuiven van wobbelfrequentie, in het midden van het scherm plaatsen.
- ② Afregelen op maximum hoogte en symmetrie.
- ③a Afregelen op lineariteit en symmetrie van de S-kurve.
- ③b Afregelen op minimale T.H.D. vervorming op distortiemeter.
- ④ Punt 4 van IC7109 aansluiten via 10 k Ω op +15 V. Zonder antennesignaal, V.C.O. afregelen op 76 kHz \pm 300 kHz met 3174.
- ⑤ Onderbreek „loop AM varicap” door brug te openen.
En sluit een rimpel vrije gelijkspanning aan van 7,5 V via 1 k Ω . Sluit tevens een condensator van 478 pF//3205.

- ⑥ — Juiste afstemming bepalen door generator frequentie te variëren (maximaal signaal, minimale vervorming).
— Frequentie aflezen en tuner uitschakelen.
— Schaalafwijking bepalen en aan de hand van tabel bepalen welke diodes verwijderd dienen te worden!
— Tuner wederom aanzetten en controleren opdat f generator = f display.

Gebruikte meetapparaten

- RF generator (THD bij Δf 75 kHz \leq 0,03%)
- Distortion meter
- Oscilloscope
- DC mV meter
- AC mV meter
- Frequency counter

FM-IF offse

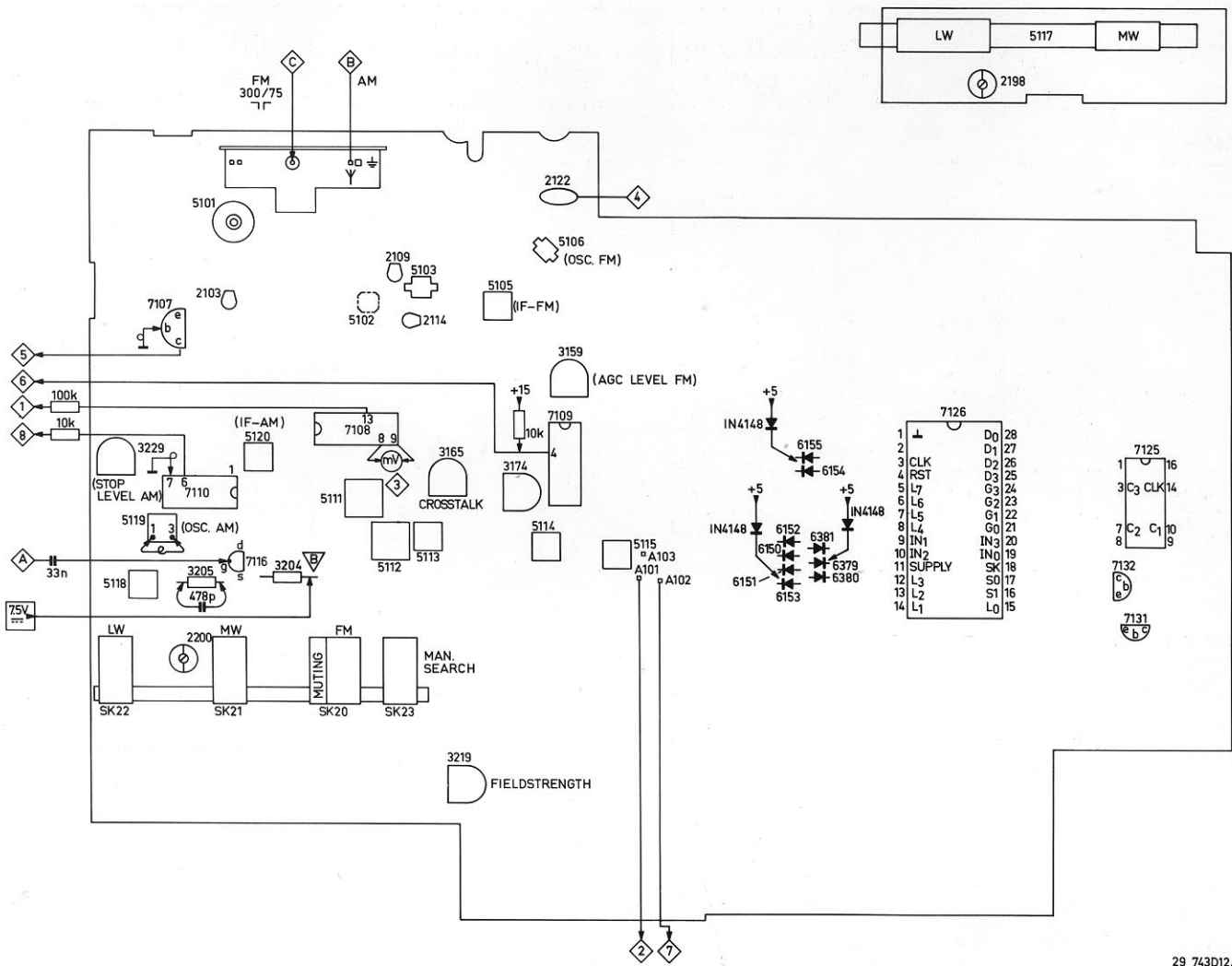
Indien de k
worden ver
te hebben)
worden zo
wordt gere
Alle diodes
apparaat a

SK...
FM SK-20

AM-IF offse

Indien kera
opnieuw de
diodes 615

SK...
MW



AM-I

f gen
1000
999
998
997

SERV
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ALGE
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* „O
* FM
* SE
* Kn

* ∩
* ∩
* Bij
638
Tes

29 743D12/A

FM-IF offset diodes

Indien de keramische resonatoren 5109-5110 (5108) worden vervangen, (deze dienen alle dezelfde kleurcode te hebben) moet opnieuw de FM-IF offset bepaald worden zodat door de μ processor de juiste FM-IF wordt gerekend.

Alle diodes (6150-6152-6153) aanbrengen voordat apparaat aangezet wordt.

SK...			TUNE IN DISPLAY	
FM SK-20	99 MHz 1 kHz-mod. 1 mV		99.00 MHz	

AM-IF offset diodes

Indien keramische resonator 5121 wordt vervangen, zal opnieuw de AM-IF offset bepaald moeten worden.

Diodes 6154 en 6155 aanbrengen.

SK...			TUNE IN DISPLAY	
MW	1000 kHz 1 kHz mod. 50mV		1000 kHz	

Test	Aan te leggen signalen					IC	
	Pin number	20	10	9	19		5
	Pin name	IN ₃	IN ₂	IN ₁	IN ₀	L ₇	L ₆
1		0					
2		0					
3		0			0		
4		0		0			
5		0	0				
6			0				
7							
8							
9							
10							0
11							0
12		0	0	0			

AM-IF offset diodes

f generator	6154	6155	f-IF
1000 kHz	←	←	448 kHz
999 kHz	←		449 kHz
998 kHz		←	450 kHz
997 kHz			451 kHz

← diode mounted

FM-IF offset diodes

f generator	6150	6152	6153	f-IF
99,00 MHz	←	←	←	10,63 MHz
98,98 MHz		←	←	10,65 MHz
98,96 MHz	←		←	10,67 MHz
98,94 MHz			←	10,69 MHz
98,92 MHz	←	←		10,71 MHz
98,90 MHz		←		10,73 MHz
98,88 MHz	←			10,75 MHz
98,86 MHz				10,77 MHz

← diode mounted

SERVICE TEST PROGRAMMA

Om het foutzoeken in het digitale gedeelte van de tuner enigszins te vergemakkelijken kan men gebruik maken van het test programma. Met dit test programma kunnen volgende zaken getest worden.

- * μ processor COP420JQJ
 - o.a. RAM-ROM (intern test programma)
 - I/O ports
 - Reset
- * IC7125 HEF4104BP
- * Transistoren 7131, 7132, 7375
- * Dioden 6379, 6380, 6381

ALGEMEEN

- * „1” is + 5 V behalve voor pin 23 (G2) IC7126 is $\pm 2,5$ V en pinnen 3-7-10-14 van IC7125 zijn ± 11 V
- * „0” is 0 V (\perp)
- * FM SK-20 - ON
- * SEARCH SK23 - OFF
- * Knooppunten:

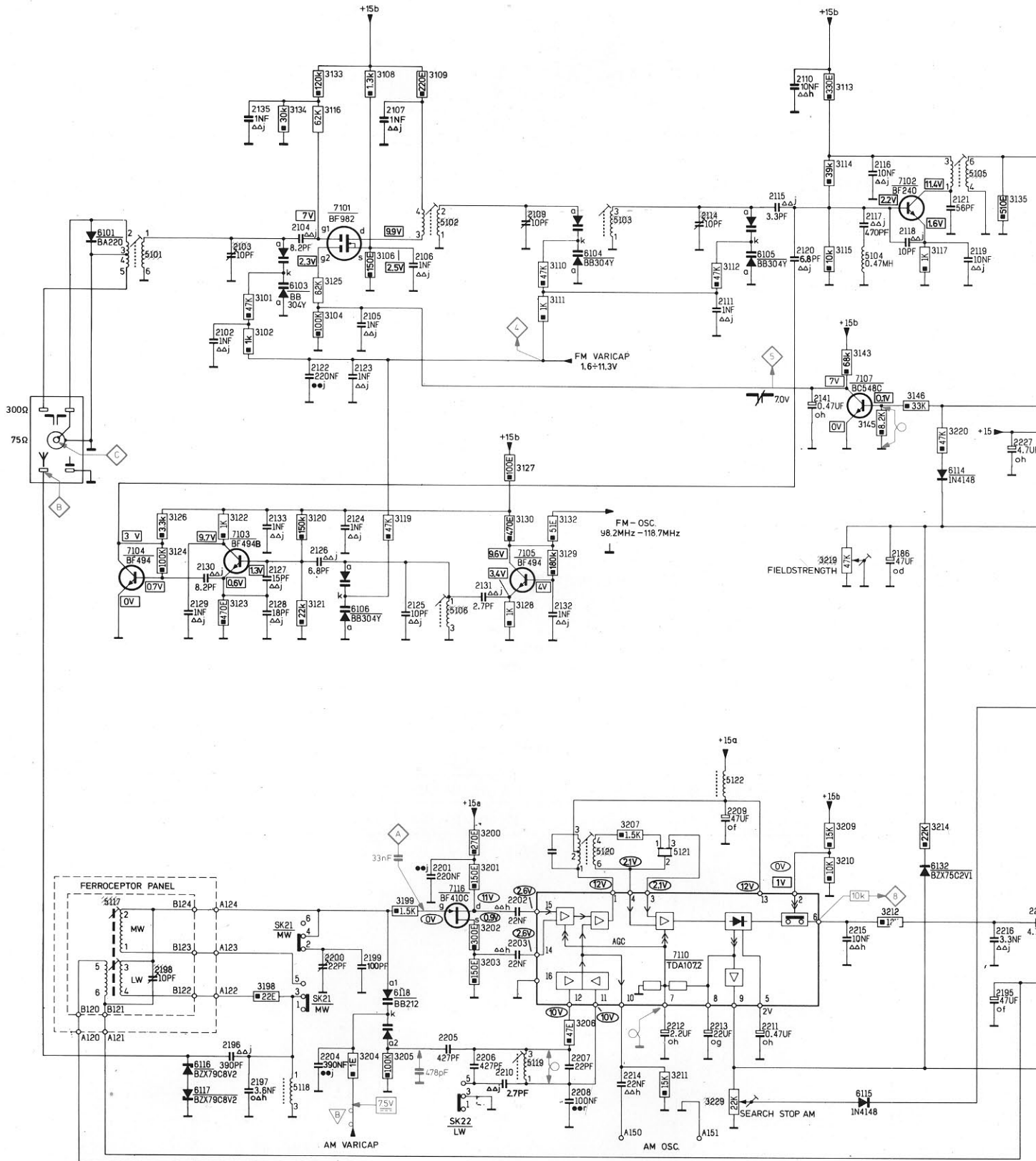
— 6150, 6152, 6153 en 3369.	}	verbinden met +5 V via clamping diode (1N4148).
— 6154, 6155, en 3370		
— 6379, 6380, 6381, 3377 en 2378		
- * \square blok golf 250 kHz
- * $\underline{\underline{\quad}}$ / $\overline{\overline{\quad}}$ pulsen 250 Hz
- * Bij test 6: de clamping diode, aan knooppunt 6379, 6380, 6381, 3377 en 2378, tijdelijk losnemen.
- Test 7: deze diode weer aanbrengen.

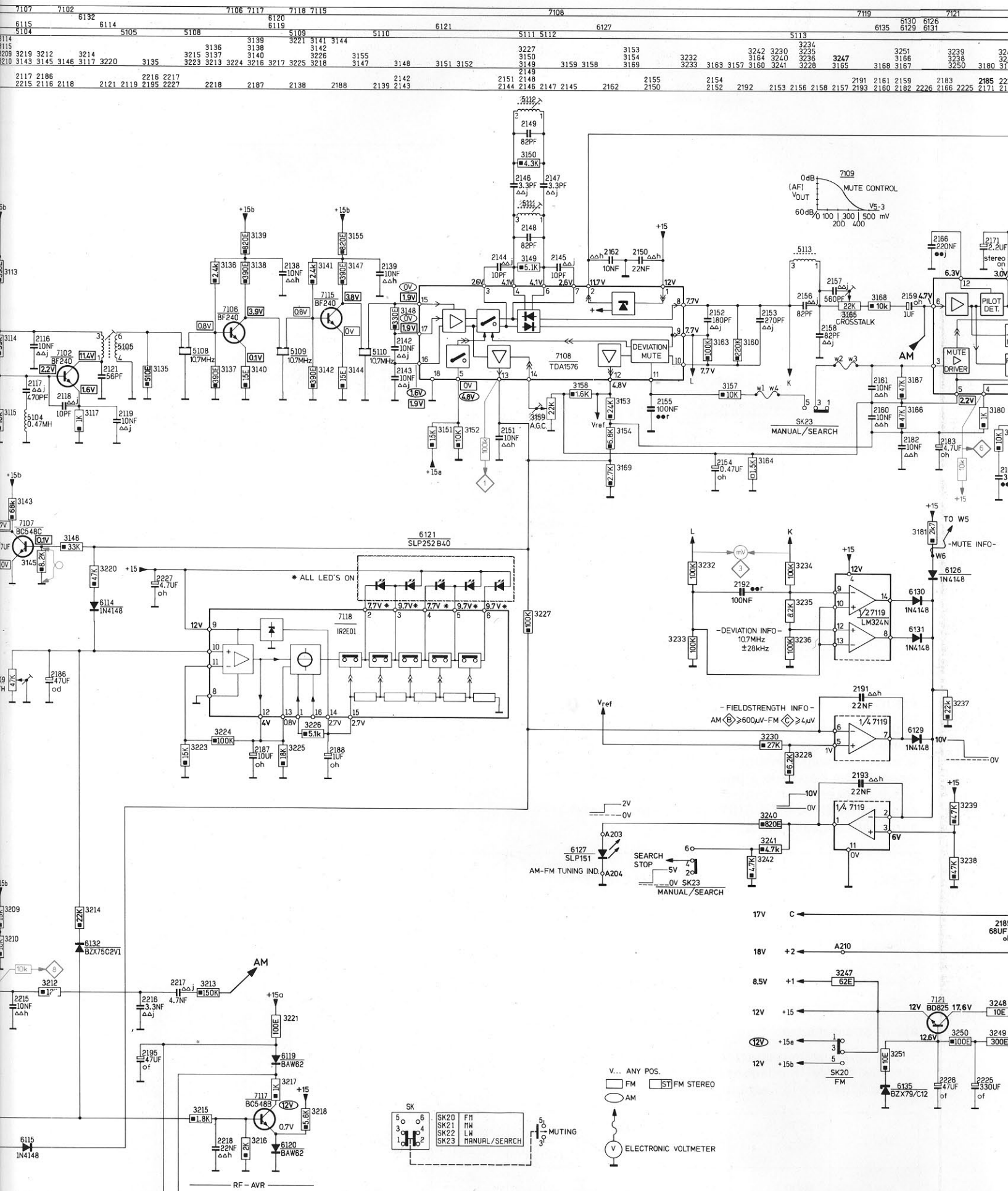
29 743D12/A

Aan te leggen signalen				Te meten signalen																IC7125 HEF4104				Getest deel				
				IC7126				COP420JQJ				IC7126				COP420JQJ				HEF4104								
20	10	9	19	5	6	7	8	4	16	12	13	14	15	25	26	27	28	18	17	24	23	22	21	14	7	10	3	
IN ₃	IN ₂	IN ₁	IN ₀	L ₇	L ₆	L ₅	L ₄	RST	SI	L ₃	L ₂	L ₁	L ₀	D ₃	D ₂	D ₁	D ₀	SK	SO	G ₃	G ₂	G ₁	G ₀	Clk.	C ₂	C ₁	C ₃	
0								0		1	1	1	1	0	0	0	0	\square	0	0	0	0	0	1	1	1	1	
0										1	0	0	0	1	0	0	0	0	0					1	1	0	0	RAM/ROM
0			0							1	0	0	1	1	0	0	1	0	0					1	1	0	1	
0		0								1	0	1	0	1	0	1	0	0	0					1	1	1	0	
0	0									1	1	0	0	1	1	0	0	0	0	0	1	1	1	1	0	0	0	IN ₃₋₀ , L ₃₋₀ , D ₃₋₀ , 7132
0			0							0	1	1	1	0	1	1	1	1	0	1	0	1	1	1	1	1	1	7375,6379,6380,6381
0										0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	1	1	SK
							0											1	$\underline{\underline{\quad}}$	1	1	1	0					SO
							0											1	$\underline{\underline{\quad}}$	1	1	0	1					
							0											1	$\underline{\underline{\quad}}$	1	0	1	1					
							0											1	$\underline{\underline{\quad}}$	0	1	1	1					L ₇₋₄ , G ₃₋₀
0	0	0					0			1	0	1	1	1	0	1	1	0	$\underline{\underline{\quad}}$	1	1	1	0	$\overline{\overline{\quad}}$	1	1	1	7131, 7125

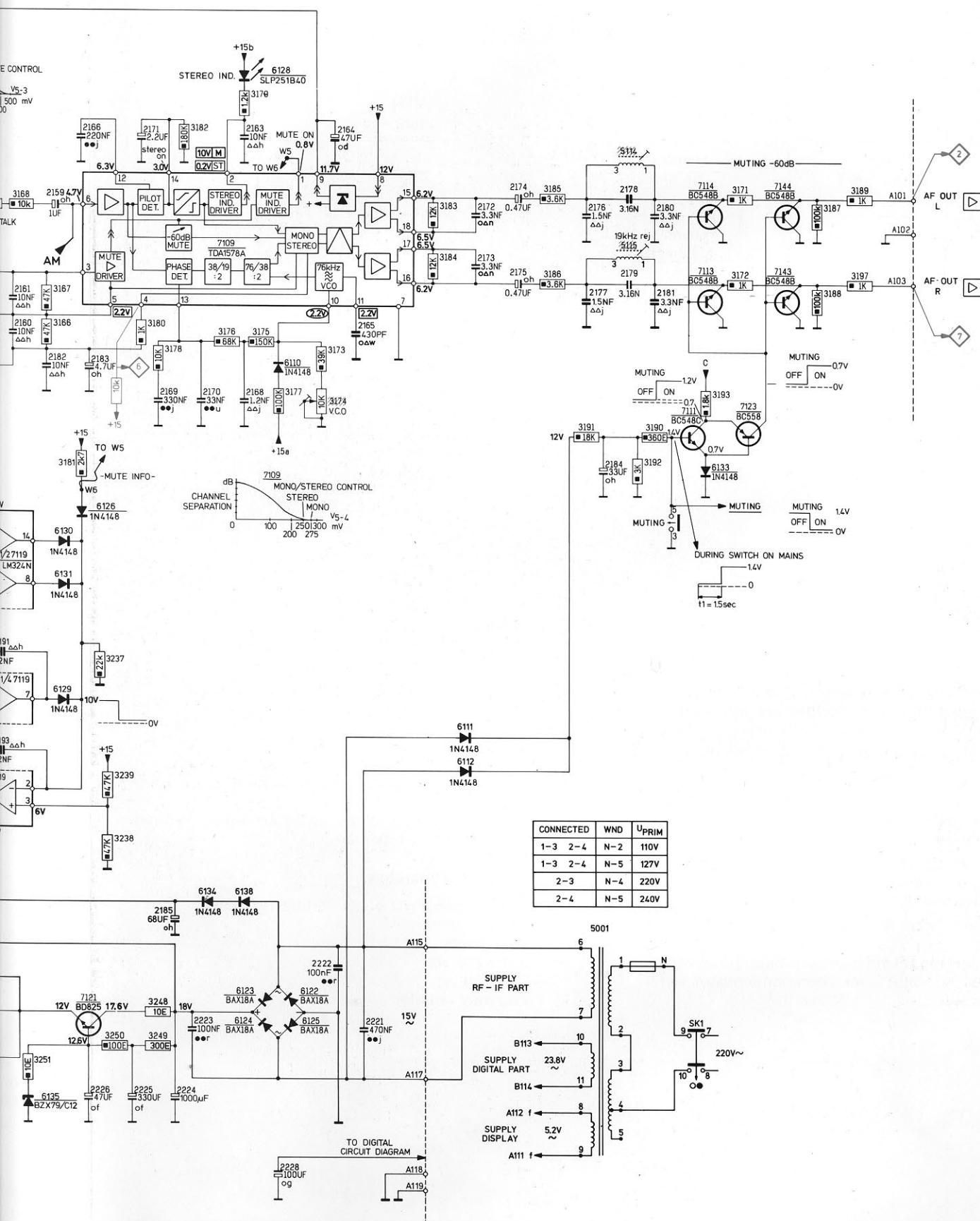
RF-IF CIRCUIT DIAGRAM

7104	6116	7103	7101	7116	7105	7110	7107	7102	
6101	6117	6103	6106	6118	5102 5106	5119	6104	6105	6115
5117 5101		5118	3133	3199	3200 3128	3206	5120 5103	5121	5122
	3126	3122 3102	3134 3120	3116	3108 3119	3201 3130	3110 3132		3112
	3124	3123 3101	3198 3121	3104 3204	3108 3205	3109 3203	3202 3127	3111 3129	3207 3211
		2103	2133	2200		2210	2109		3113
	2129	2196 2135	2127 2122	2204 2123	2105 2125	2205	2202	2207	2110
	2198	2130 2102	2197 2128	2104 2126	2124 2199	2107 2106	2201 2206	2131 2203	2132 2208
									2214
									2212
									2213
									2114 2209
									2211 2115
									2120
									2141
									2117 2186
									2215 2116 2118
									2121 2119
									2195 222
									2216 221
									2217 222
									3114
									3115
									3209 3219 3212
									3210 3143 3145 3146 3117 3220
									3214 3214
									3195



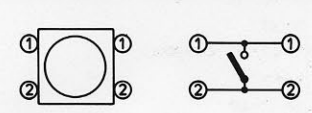
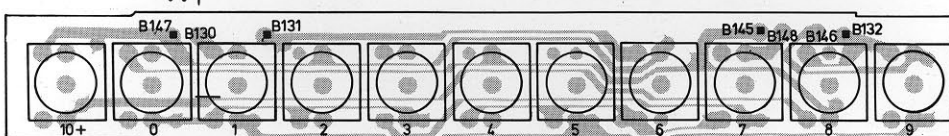
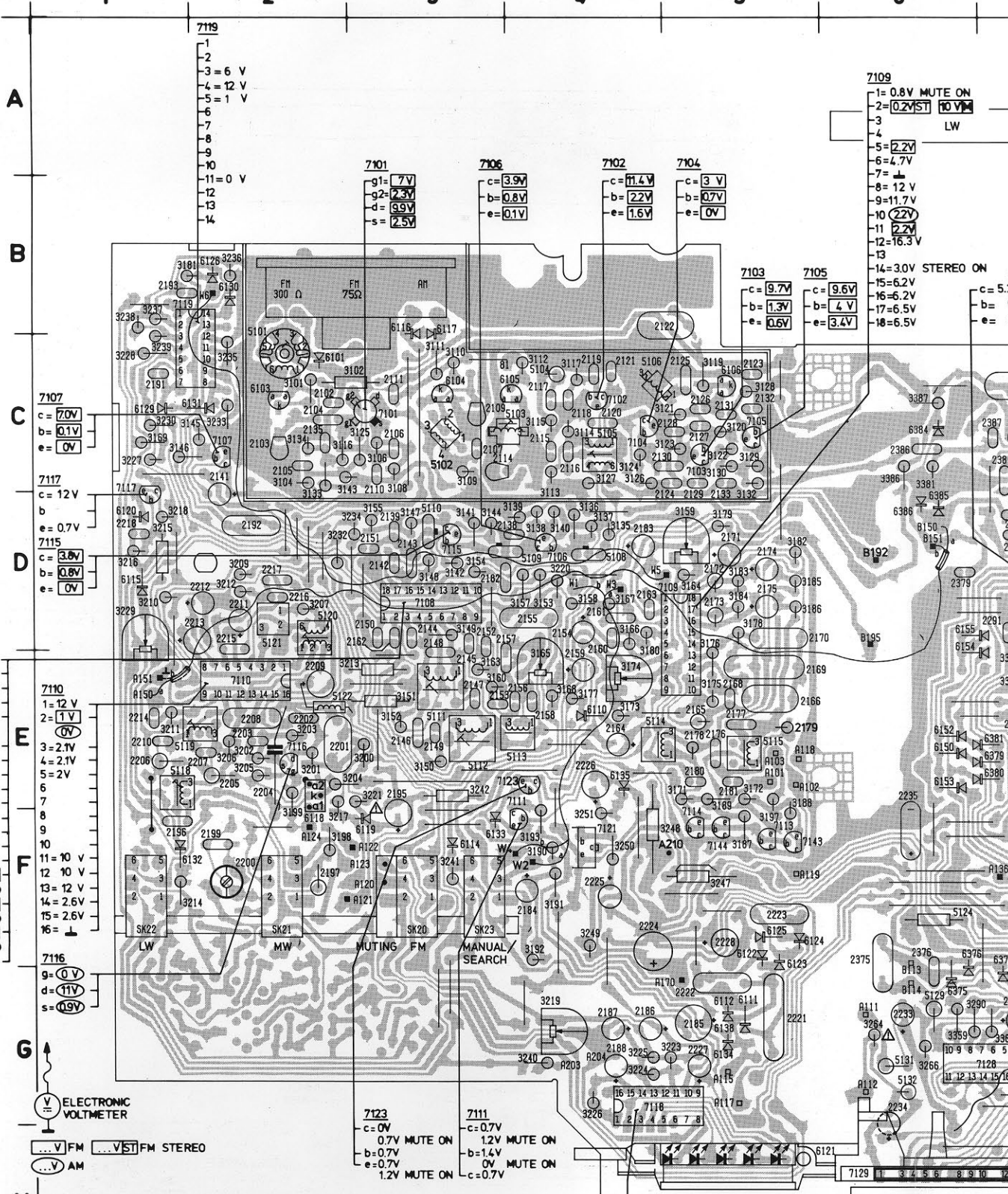


7119	7121	7109	6128	6134	6123	6122	6111	7111	7113	7114	7123	7143	7144			
6135	6130	6126	6134	6138	6128	6110	6124	6125	6160	6111	6112	5001	5115	5114	6133	
3251	3239	3248	3176	3174	3183	3184	3185	3186	3191	3192	3193	3171	3187	3245	3197	
3168	3167	3250	3180	3178	3182	3187	3179	3175	3177	3181	3173	2184	2184	2184	2180	
2181	2159	2183	2185	2224	2223	2170	2168	2163	2222	2221	2165	2172	2175	2176	2178	2180
2182	2226	2166	2225	2171	2169	2223	2170	2168	2222	2221	2165	2172	2174	2177	2179	2181



CONNECTED	WIND	U _{PRIM}
1-3	2-4	N-2 110V
1-3	2-4	N-5 127V
2-3	N-4	220V
2-4	N-5	240V

RF-IF/DIGITAL PANEL 1 2 3 4 5 6



6

7

8

9

10

11

7109

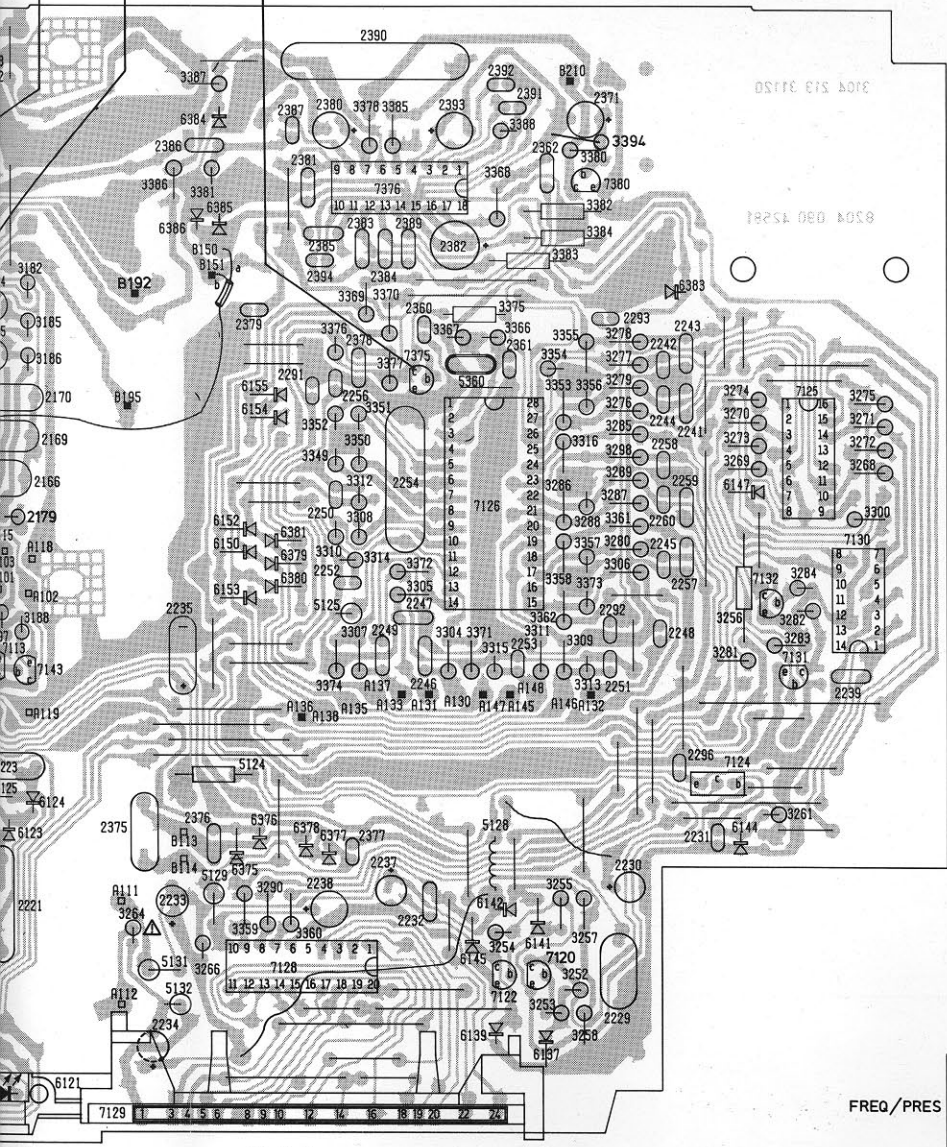
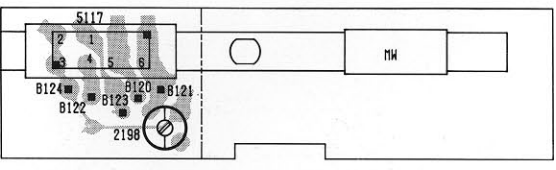
- 1=0.8V MUTE ON
- 2=0.2VST NO VM
- 3
- 4
- 5=2.2V
- 6=4.7V
- 7=
- 8=12V
- 9=11.7V
- 10(2.2V)
- 11(2.2V)
- 12=16.3V
- 13
- 14=3.0V STEREO ON
- 15=6.2V
- 16=6.2V
- 17=6.5V
- 18=6.5V

7105

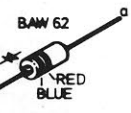
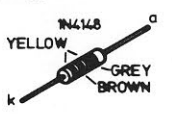
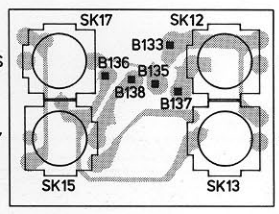
- a=9.6V
- b=4V
- c=3.4V

7375

- c=5.2V
- b=0V
- e=0V



DISPLAY



6

7

8

9

10

11

RF-IF/DIGITAL PANEL

1 2 3 4 5 6

A

B

C

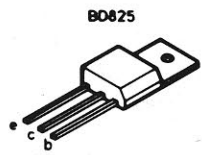
D

E

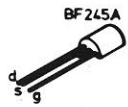
F

G

H



BO825

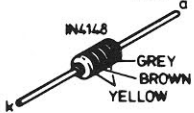


BF245A



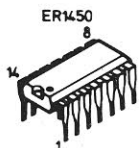
BZX79

C8V2
C5V6
C24
C20
C9V1
C4V7

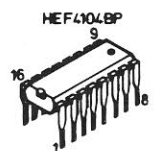


IN4148

GREY
BROWN
YELLOW



ER1450



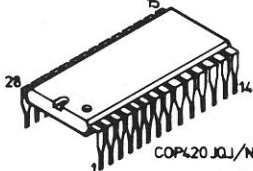
HEF4104BP



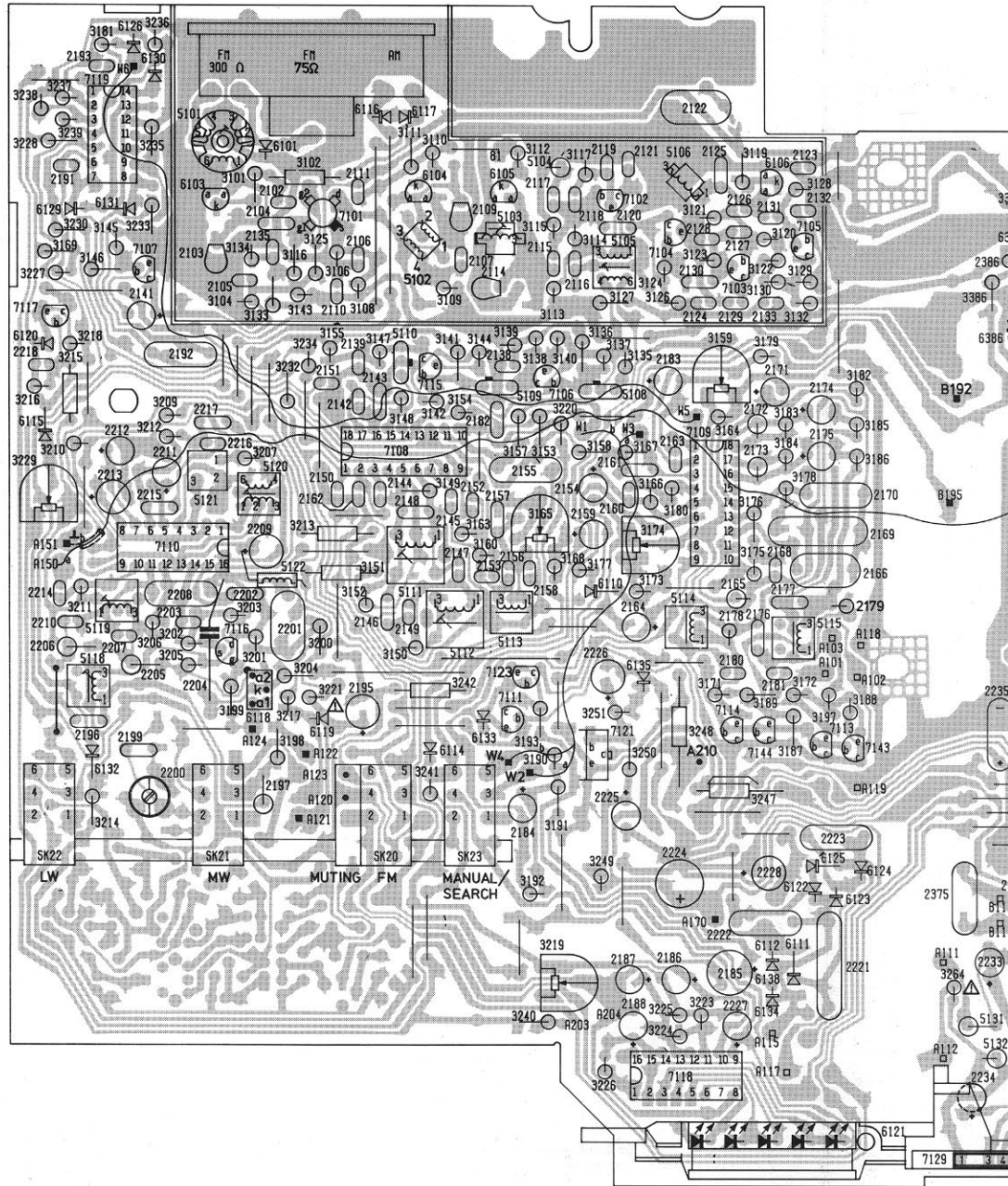
COP470N



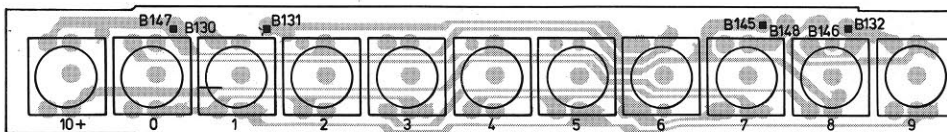
SAA1057



COP420 JQ1/N



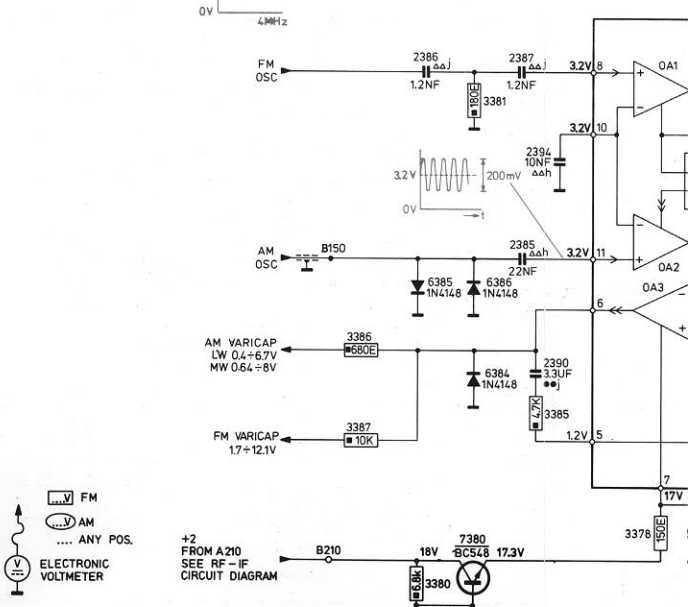
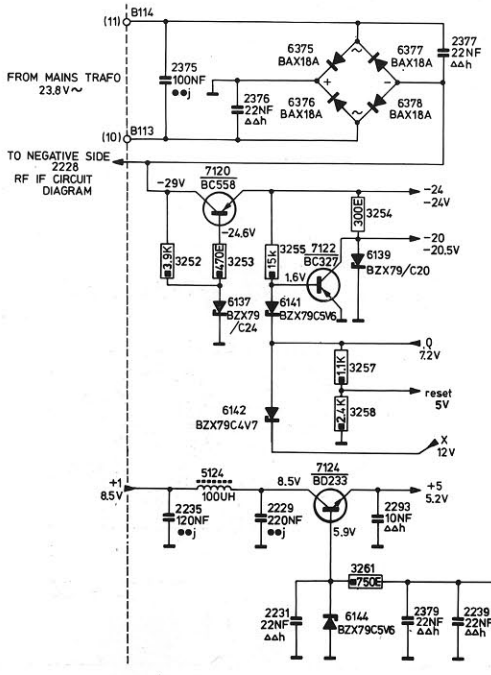
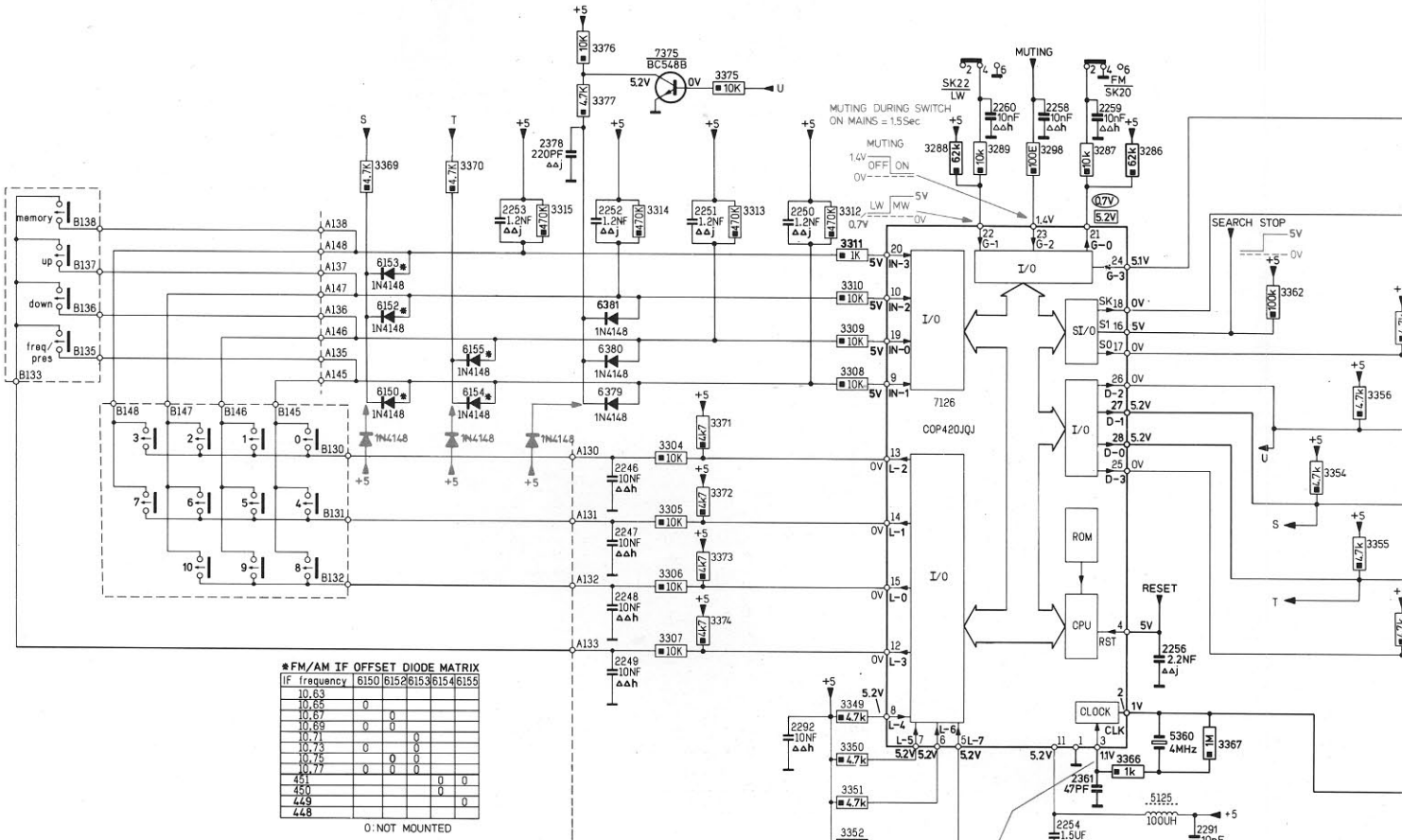
FIELD STRENGTH IND. 1-5



1 2 3 4 5 6

DIGITAL CIRCUIT DIAGRAM

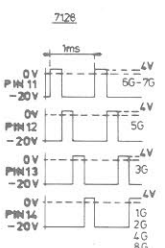
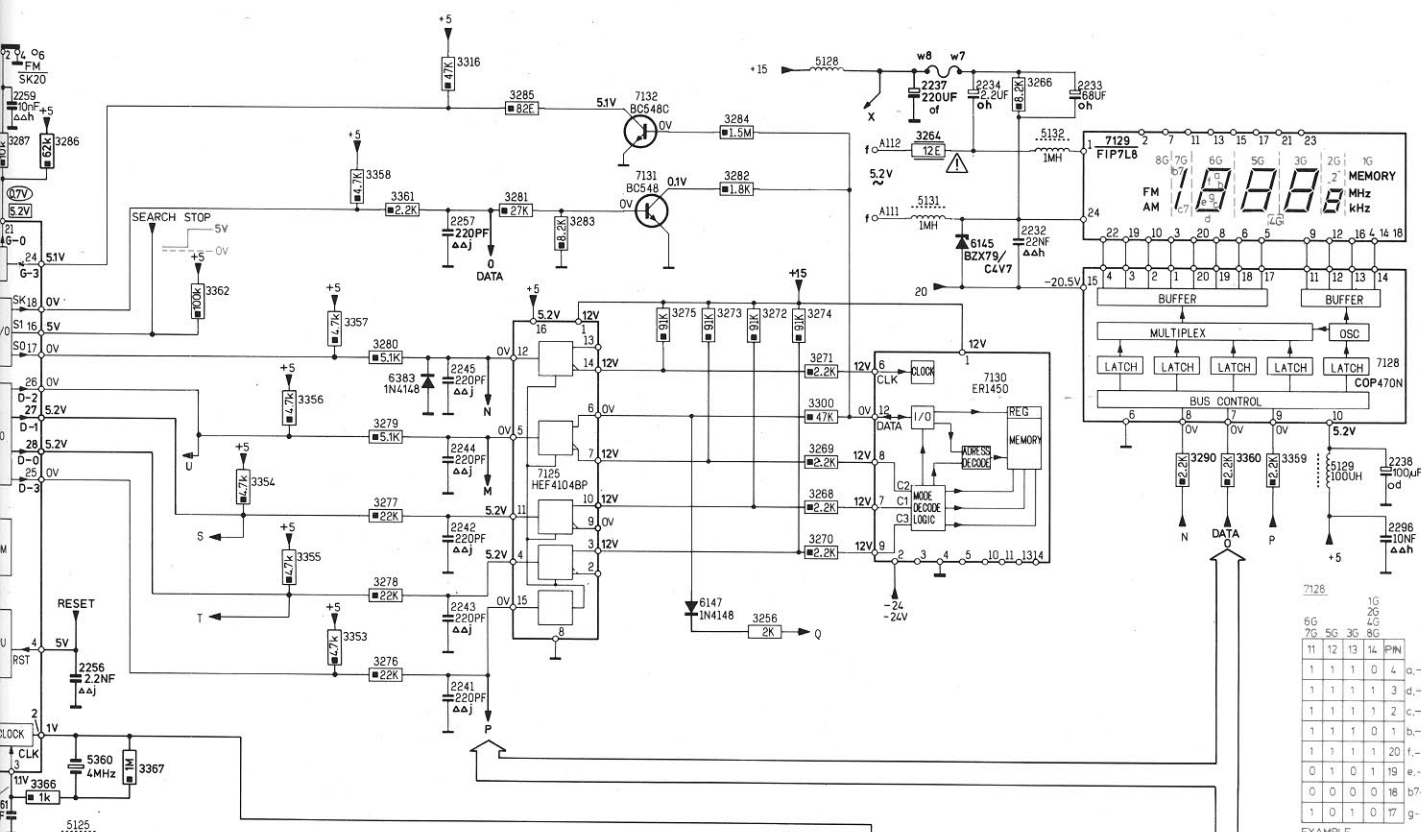
7120	7122	7124		7375		7126	7380
6137 6141	6142	6144 6152	6375 6155 6376	6380	3305 3306 3307	3373 3312 3349 3311	6385 6384
5124	6153 6150	6139 6154	6377 6378	6381 6379	3376 3377	3362 3374 3350 3310 3299	5125 5360
	3369 3257				3376 3377	3375 3376 3377	3289 3386 3387 3286
3252	3253 3255 3261 3258 3254 3370				3314	3304 3313 3372	3287 3286 3380 3381 3367
					2248 2247		3362
					2248 2249		3354 3355 3378
2375 2235	2376 2231 2229	2293	2379 2253	2239 2230 2252 2249	2251	2292 2250	2386 2259 2256 2291 2385 2390



FM
 AM
 ANY POS.
 ELECTRONIC VOLTMETER

+2 FROM A210 SEE RF-IF CIRCUIT DIAGRAM

7380	6386	7376	7125	7132	7131	7130	7129	7128
6385	6384	6383	3278	3361	3285	3284	3300	5128
5125	5360	3276	3280	3316	3282	3282	3269	5131
3386	3266	3356	3353	3316	3388	3275	3271	6145
3287	3286	3354	3355	3378	3357	3358	3277	5132
		2242	2243	2244	2245	3383	3281	3317
		2380	2384	2257	2244	2389	2383	2391
								2392
								2382
								2362
								2237
								2234
								2232
								2233
								2258
								2298



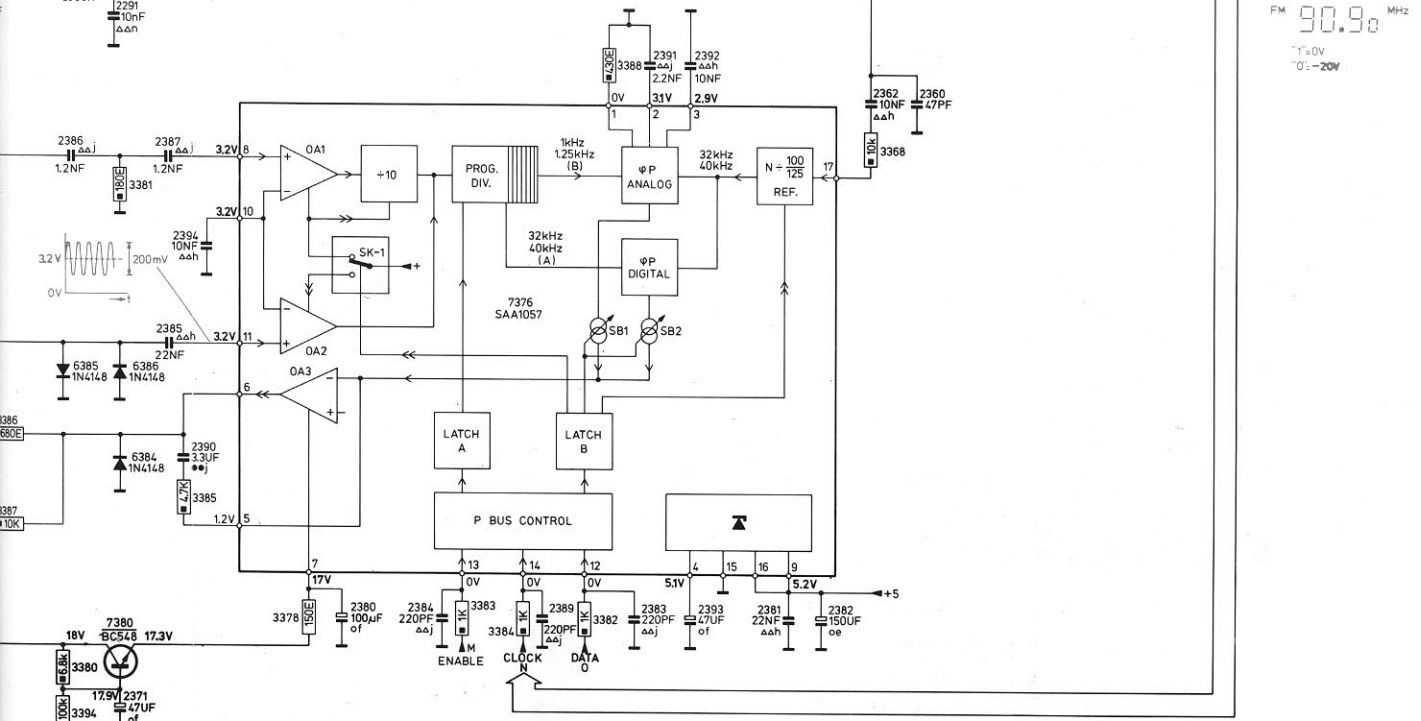
7128

6G	7G	5G	3G	8G	PIN
1	1	1	0	4	d.-MEMORY
1	1	1	1	3	d.-b2.-e2
1	1	1	1	2	e.-c2.-12
1	1	1	0	1	b.-g2
1	1	1	1	20	f.-g2.-g2.-Dp.-MHz
0	1	0	1	19	e.-FM
0	0	0	0	18	b7.-c7.-AM
1	0	1	0	17	g.-kHz.

EXAMPLE

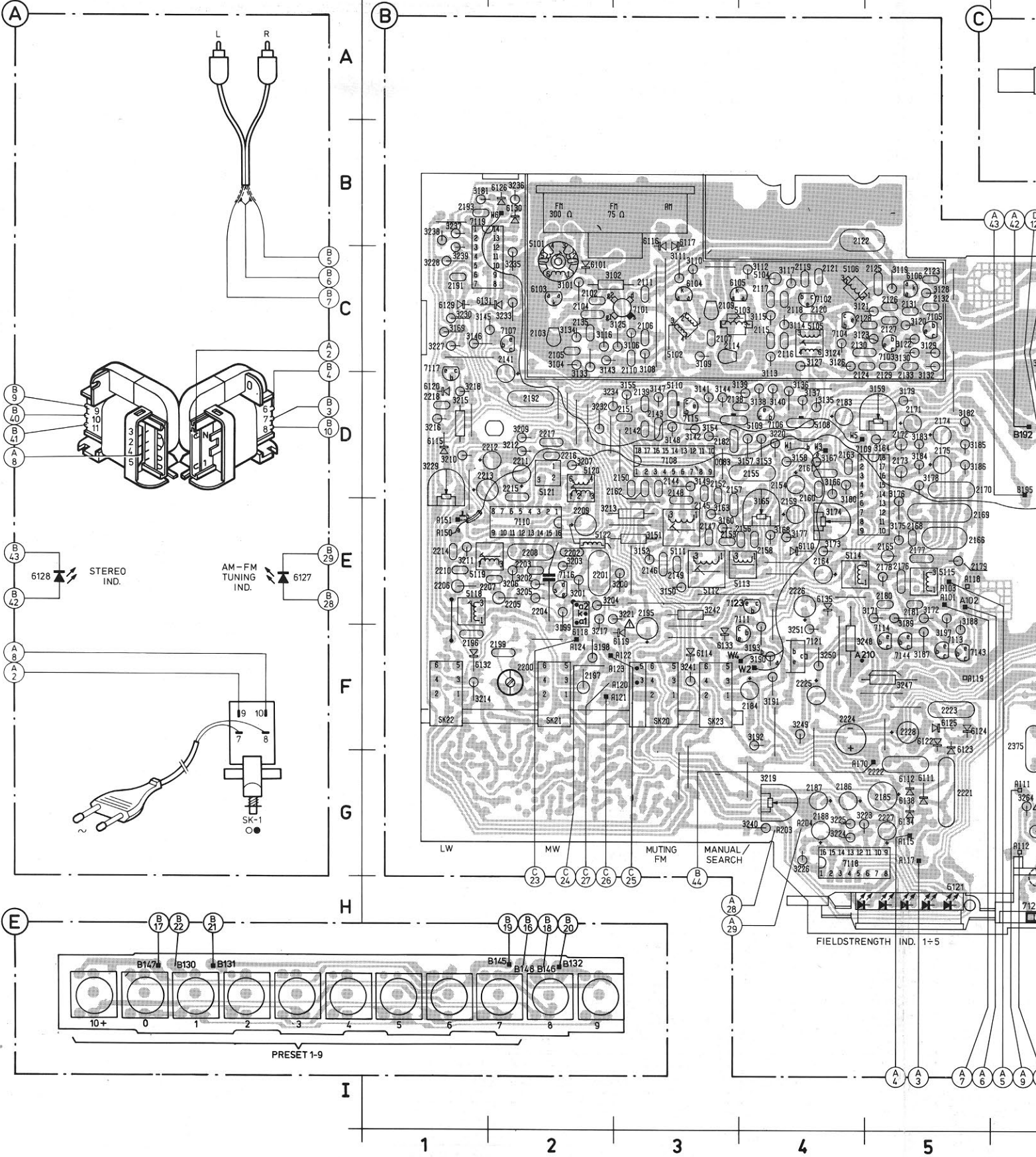
FM 00.00 MHz

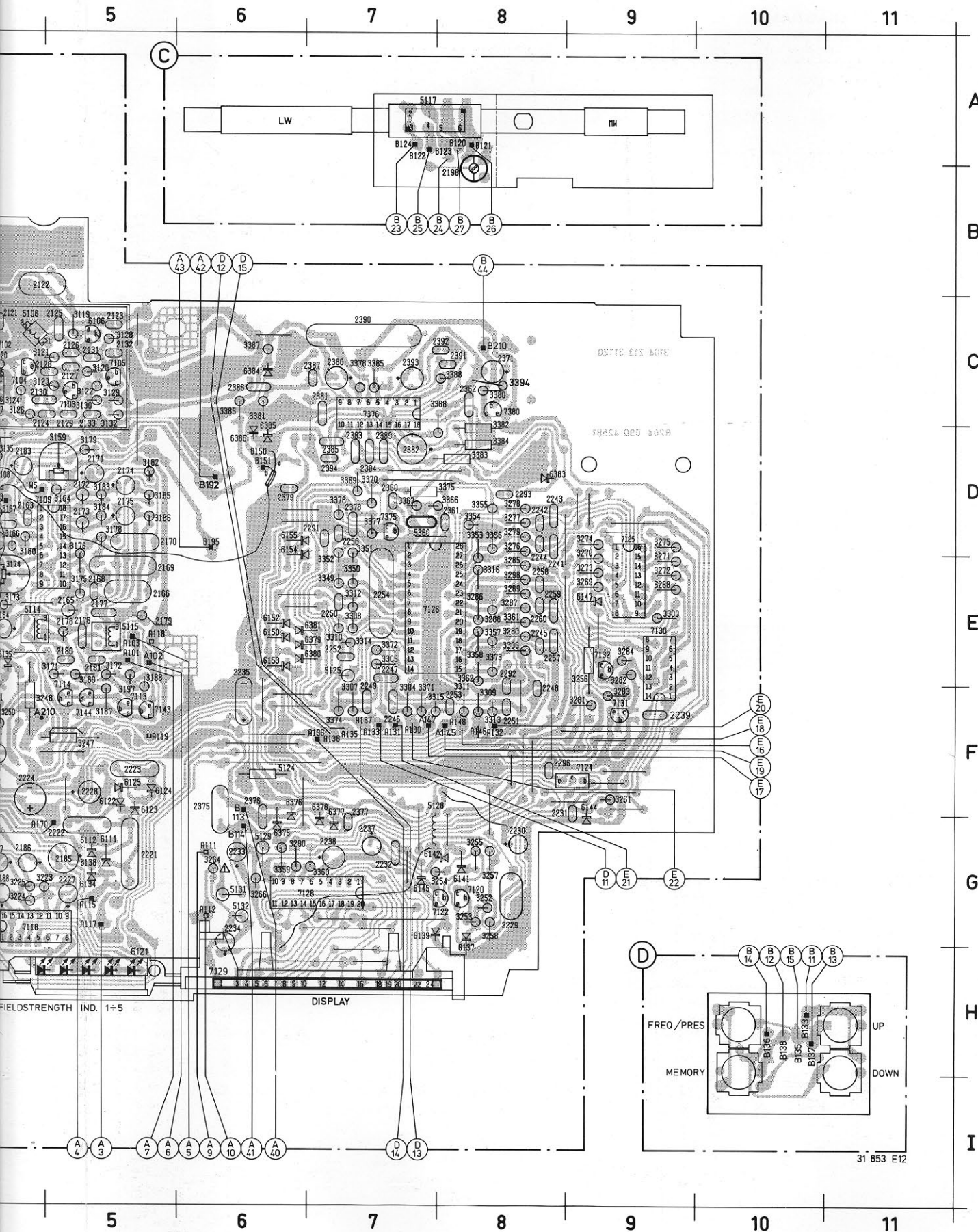
↑ = 0V
○ = -20V



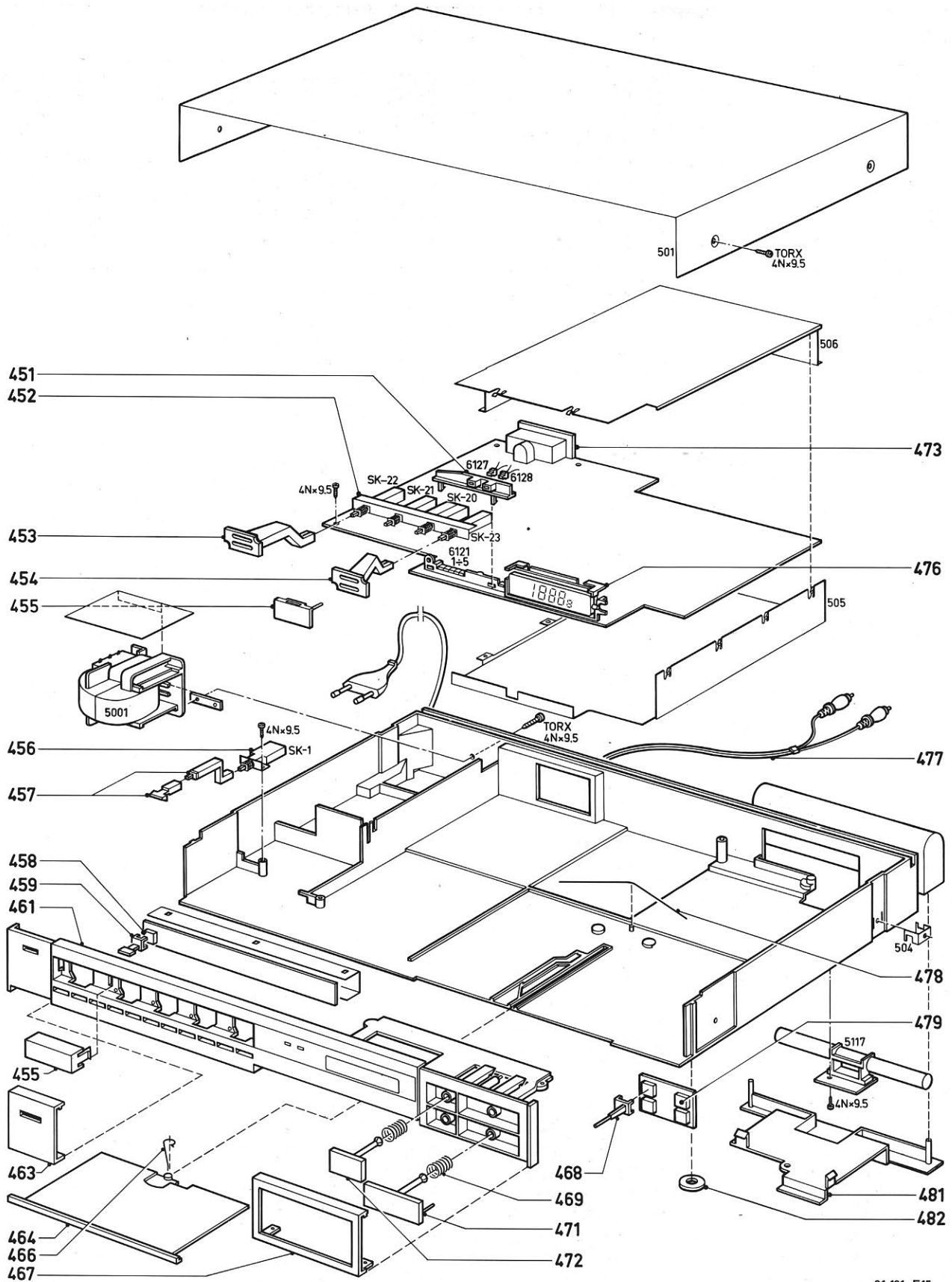
31 736 F7

WIRING DIAGRAM





31 853 E12



31 191 E15

451	4822 404 20469
452	4822 276 40307
453	4822 410 30294
454	4822 410 30295
455	4822 413 70172
456	4822 276 10807
457	4822 410 30273
458	4822 276 10933
459	4822 410 23026
461	4822 426 50589

463	4822 426 60242
464	4822 426 60243
466	4822 492 62641
467	4822 459 40507
468	4822 410 23023
469	4822 492 51538
471	4822 410 23024
472	4822 410 23025
473	4822 265 40145
476	4822 404 20471

477	4822 321 20482
478	4822 492 62642
479	4822 276 10933
481	4822 426 60222
482	4822 466 91385

SERVICE WENK 1


Indien EAROM IC7130 (ER1450) wordt vervangen, dienen alle presets voor FM en MW ingelezen te worden met resp. 87,55 MHz en 513 kHz.

Dit is noodzakelijk i.v.m.:

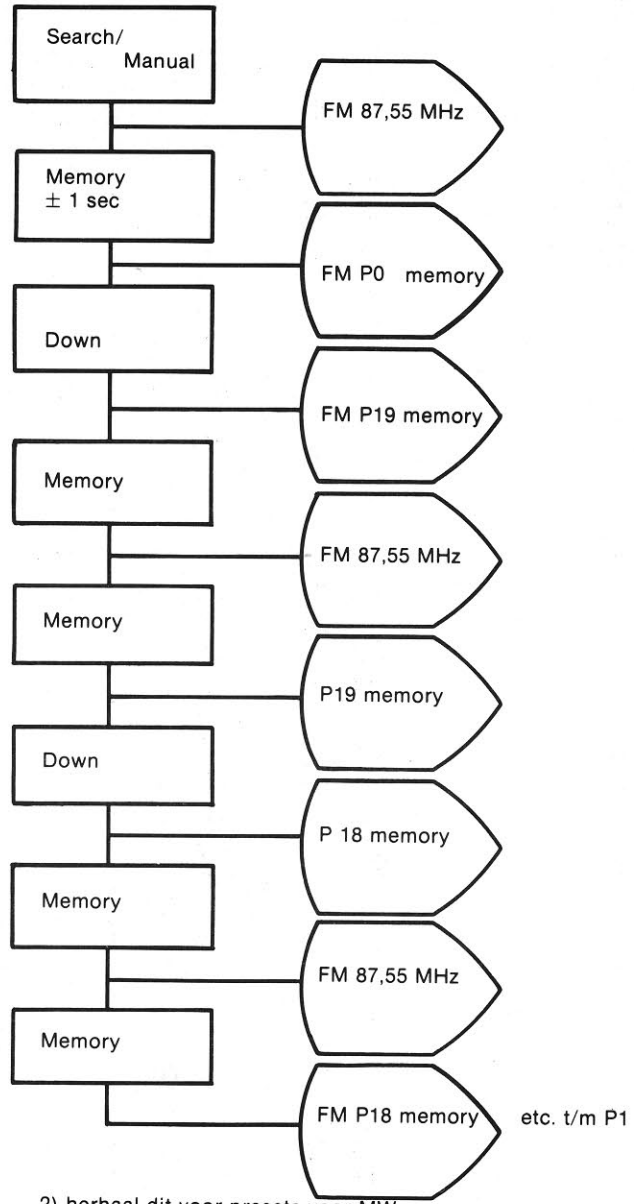
1. de voorgeschiedenis van de EAROM n.l. de testfrequenties.
2. verschil in stappen van display (50 kHz bij FM, 9 kHz bij MW, t.o.v. de stappen (C.L.K.) voor de EAROM (10 kHz).

Wordt dit niet gedaan, dan zullen problemen ontstaan bij het terugroepen van opgeslagen zenders ! Een snelle methode om de presets in te lezen wordt hieronder gegeven.

Waarbij  toets indrukken welke vermeld staat in blok

 resultaat op display















1) voor FM:



2) herhaal dit voor presets voor MW

SERVICE WENK 2

Omdat MOS IC's in het algemeen zeer gevoelig zijn voor overbelasting en te hoge spanning dient bij het meten de grootst mogelijke zorgvuldigheid in acht genomen te worden. Zie voor verdere instructies de bijsluiters in de verpakking van de IC's.

	Carbon film 0.2 W 70°C 5%		Ceramic plate Tuning ≤ 120 pF NP.0 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 j = 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 70°C 5%		Polyester flat foil 10%	
	Metal film 0.33 W 70°C 5%		Metalized polyester flat film 10%	
	Carbon film 0.5 W 70°C 5%		Polyester flat foil small size (Mylar) 10%	
	Carbon film 0.67 W 70°C 5%		Polysterene film/foil 1%	
	Carbon film 1.15 W 70°C 5%		Tubular ceramic	
			Miniature single	
			Subminiature tantalum ± 20%	
© Chip component				



- BAW62
- BAX18A
- BA220
- BB212
- BB304Y
- 1N4148
- BZX75-C2V1
- BZX79-B24
- BZX79-B4V7
- BZX79-B5V6
- BZX79/C20
- BZX79/C8V2
- BZX79/C12
- SLP151B red
- SLP251 B50A
- SLP252B-40










- BC327
- BC494B
- BC548
- BC548B
- BC548C
- BC558
- BD237 (BD23)
- BD825
- BF240
- BF494
- BF982
- BF410C



- COP420-JQJ
- ER1450
- HEF4104BD
- IR-2E01
- MLM324P
- TDA1072
- TDA1576
- TDA1578
- SAA1057
- COP470/N
- FIP7L8



- 2103 Trim
- 2109 Trim
- 2114 Trim
- 2121 56 p
- 2125 10 p
- 2148 82 p
- 2149 82 p
- 2171 2.2 μ
- 2178 3160
- 2179 3160

			
BAW62	4822 130 30613	2198	Trimmer 10 pF 4822 125 50062
BAX18A	4822 130 31025	2199	100 pF 2% 100 V 4822 122 31081
BA220	4822 130 34221	2200	Trimmer 20 pF 4822 125 50045
BB212	4822 130 31129	2205	427 pF 500 V 4822 121 50792
BB304Y	4822 130 31705	2206	427 pF 500 V 4822 121 50792
1N4148	4822 130 30621	2207	22 pF N750 2% 5322 122 34196
BZX75-C2V1	4822 130 34049	2224	Elco 1000 μF 25 V 4822 124 40214
BZX79-B24	4822 130 34398	2360	47 pF 2% 4822 122 31292
BZX79-B4V7	4822 130 34174	2361	47 pF 2% 4822 122 31292
BZX79-B5V6	4822 130 34173		
BZX79/C20	4822 130 31245	3116	Resistor, M film 62k 4822 110 70155
BZX79/C8V2	4822 130 34382	3125	Resistor, M film 62k 4822 110 70155
BZX79/C12	4822 130 34197	3159	Potm. 22k 0.1 W 4822 100 10051
SLP151B red	4822 130 31476	3165	Potm. 22k 0.1 W 4822 100 10051
SLP251 B50A	4822 130 32057	3174	Potm. 10k 0.1 W 4822 100 10035
SLP252B-40	4822 130 31704	3219	Potm. 47k 0.1 W 4822 100 10079
		3221	Resistor, M film 100E SFR30 5322 116 51723
BC327	4822 130 40854	3229	Potm. 22k 0.1 W 4822 100 10051
BC494B	4822 130 41376	3232	Resistor, M film 100k 0.4 W 4822 116 51268
BC548	4822 130 40938	3233	Resistor, M film 100k 0.4 W 4822 116 51268
BC548B	4822 130 40937	3234	Resistor, M film 100k 0.4 W 4822 116 51268
BC548C	4822 130 44196	3235	Resistor, M film 8.2k 0.4 W 4822 116 51296
BC558	4822 130 40941	3236	Resistor, M film 100k 0.4 W 4822 116 51268
BD237 (BD233)	4822 130 44235	3247	Resistor, M film 62E 1.6 W 5322 116 54969
BD825	4822 130 41746	3248	Resistor M fim 10E 2.5 W 5322 116 54348
BF240	4822 130 40902	3249	Resistor, M film 300E 1.6 W 5322 116 55322
BF494	4822 130 44195	3254	Resistor, M film 300E 1.6 W 5322 116 55322
BF982	4822 130 41817	3264	Resistor, safety 12E 0.33 W 4822 111 30511
BF410C	4822 130 41482	3284	Resistor, HT 1.5 M VR25 4822 110 72192
		3378	Resistor 150E SPR30 4822 111 30797
COP420-JJQ	4822 209 10319		
ER1450	4822 209 10321	5001	Trafo fuse 4822 252 20007
HEF4104BD	4822 209 10273	5101	Transf., mains 4822 146 30443
IR-2E01	4822 209 80878	5102	4822 157 51465
MLM324P	4822 209 80587	5103	4822 157 51065
TDA1072	4822 209 80754	5104	0.47 μH 4822 157 50967
TDA1576	4822 209 80872	5105	4822 156 30692
TDA1578	4822 209 80873	5106	4822 157 51171
SAA1057	4822 209 81002	5108	Ceram filter 10.7 MHz 4822 242 70457
COP470/N	4822 130 90078	5109	Ceram filter 10.7 MHz 4822 242 70457
FIP7L8	4822 130 90103	5110	Ceram filter 10.7 MHz 4822 242 70457
		5111	4822 157 51707
2103	Trimmer 10 pF 4822 125 50186	5112	4822 156 30859
2109	Trimmer 10 pF 4822 125 50186	5113	Coil 114 kHz 4822 156 20743
2114	Trimmer 10 pF 4822 125 50186	5114	Coil 114 kHz 4822 156 20743
2121	56 pF 2% 5322 122 34206	5115	Coil 114 kHz 4822 156 20743
2125	10 pF 2% 5322 122 34143	5117	Ferroceptor 4822 158 60489
2148	82 pF 2% 4822 122 31963	5118	Coil 114 kHz 4822 156 20743
2149	82 pF N150 4822	5119	Coil osc. 4822 156 10459
2171	2.2 μF 20% 50 V 4822 121 50807	5120	4822 156 30767
2178	3160 pF 2% 160 V 4822 121 50843	5121	Ceram filter 450 kHz 4822 242 70487
2179	3160 pF 2% 160 V 4822 121 50843	5122	Coil, choke 100 μH 4822 157 50964
		5124	Coil, choke 100 μH 4822 157 50964
		5125	Coil, choke 100 μH 4822 157 50964
		5128	Coil, choke 100 μH 4822 157 50975
		5129	Coil, choke 100 μH 4822 157 50964
		5131	Coil, choke 1 MH 4822 157 50975
		5132	Coil, choke 1 MH 4822 157 50975
		5360	Crystal 4 MHz 4822 242 70345

t/m P1

- 2,5 V
- 4 V
- 6,3 V
- 10 V
- 16 V
- 25 V
- 40 V
- 63 V
- 100 V
- 125 V
- 150 V
- 160 V
- 200 V
- 250 V
- 300 V
- 350 V
- 400 V
- 500 V
- 630 V
- 1000 V
- 1,6 V
- 6 V
- 12 V
- 15 V
- 20 V
- 35 V
- 50 V
- 75 V
- 80 V