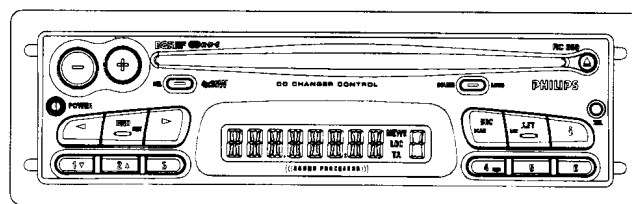


CD car radio 22RC609/00 ../80 22RC619/00 ../80  
22RC629/00 ../80 22RC659/00 ../80

Service  
Service  
**Service**

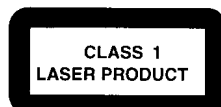


For repair information of the CD-player see Service Manual of the CDM-M2 mechanism

# Service Manual

12 V 

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4822 725 25859

PCS 89 791



**PHILIPS**

- Pause detector

f = 94MHz fm = 1KHz	$\Delta f = 0.6\text{KHz}$	Pin 6 of 7230 < 0.8V
	$\Delta f = 3.5\text{KHz}$	Pin 6 of 7230 > 2.0V

AM part

- Usable sensivity 26dB S/N

Sensitivity at 26dB S/N	207 KHz	m = 30%	1KHz	< 38 $\mu\text{V}$	typ 28
	1053 KHz			< 30 $\mu\text{V}$	typ 22

- Check of search levels

Conditions: start with set in FM DX mode. change to AM = 1053KHz

Search levels	Input	low : 35 $\mu\text{V}$ < X < 140 $\mu\text{V}$ high : 7 $\mu\text{V}$ < X < 28 $\mu\text{V}$
	1053KHz	

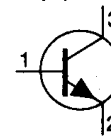
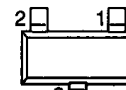
## INTEGRATED CIRCUITS

SAA6579T Radio Data System demodulator

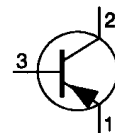
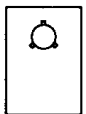
SYMBOL	PIN	DESCRIPTION
QUAL	1	quality indication output
RDDA	2	RDS data output
V <sub>ref</sub>	3	reference voltage output (0.5 V <sub>DDA</sub> )
MPX	4	multiplex input signal
V <sub>DDA</sub>	5	+5V supply voltage for analog part
V <sub>SSA</sub>	6	ground for analog part (0V)
CIN	7	subcarrier input to comparator
SCOUT	8	subcarrier output for reconstruction filter
TCTR	9	test control
TEN	10	test enable
V <sub>SSD</sub>	11	ground for digital part (0V)
V <sub>DDD</sub>	12	+5V supply voltage for digital part
OSCI	13	oscillator input
OSCO	14	oscillator output
T57	15	57kHz clock signal output
RDCL	16	RDS clock output



BC847B

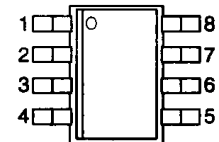


BD438



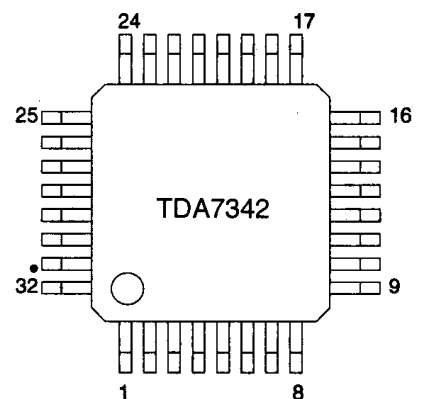
MC4558 Dual op amp

PIN	DESCRIPTION
1	Output 1
2	Inverting input 1
3	Non inverting input 1
4	V <sub>cc</sub> -
5	Non inverting input 2
6	Inverting input 2
7	Output 2
8	V <sub>cc</sub> +



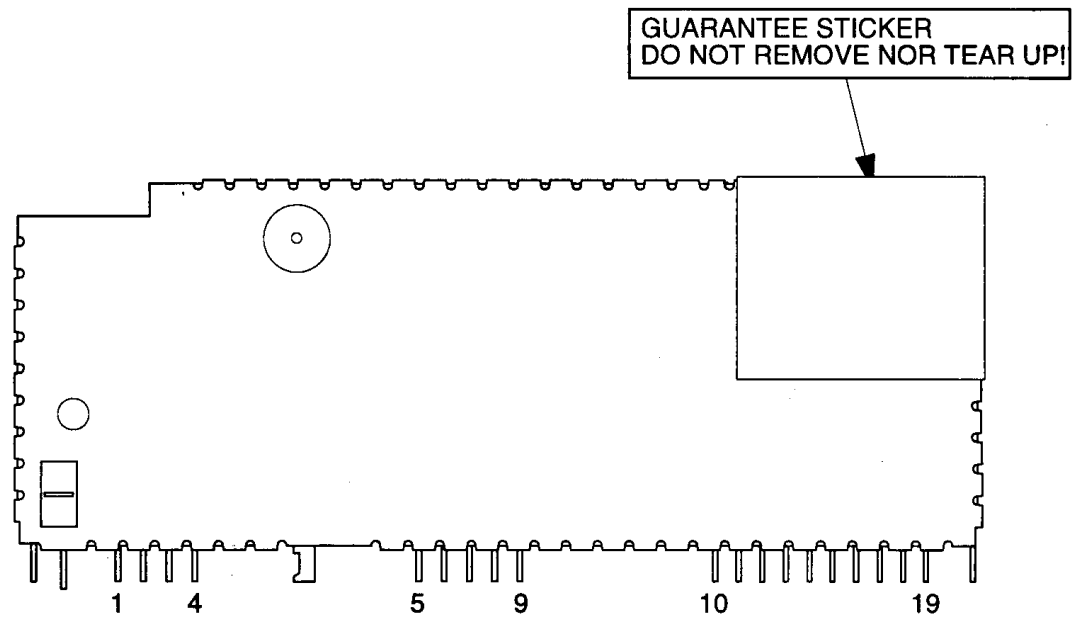
TDA7342 Digitally controlled audio processor

SYMBOL	PIN	DESCRIPTION	SYMBOL	PIN	DESCRIPTION
TR R	1	Treble control capacitor right	BIN L	17	Bass control input left
IN R	2	Input right	BOUT L	18	Bass control output left
OUT R	3	Output right	BIN R	19	Bass control input right
LOUD R	4	Input loudness, right control part	BOUT R	20	Bass control output right
IN R3	5	Input 3 right source (CD)	SM	21	Soft mute control
IN R2	6	Input 2 right source	OUT RR	22	Output rear right
IN R1	7	Input 1 right source	OUT LR	23	Output left right
MONO	8	Input mono source	OUT RF	24	Output right front
LOUD L	9	Input loudness, left control part	OUT LF	25	Output left front
CD GND	10	Ground input CD	DIG GND	26	Bus ground
IN L3	11	Input 3 left source (CD)	SDA		I2C Data
IN L2	12	Input 2 left source	SCL	28	I2C Clock
IN L1	13	Input 1 left source	CREF	29	Supply reference capacitor
CSM	14	Soft mute control capacitor	Vs	30	Supply voltage
IN L	15	Input right	GND	31	Ground
OUT L	16	Output left	TRL	32	Treble control capacitor left



# IC96 MODULE

Not reparable module. Do not open and do not try to repair yourself!



## Connections

2	Ground	10	Multiplex / RDS output signal
5	Inlock detector pin	11	Level
6	Vcc 8.5V	12	I <sup>2</sup> C SDA
7	Ground	13	I <sup>2</sup> C SCL
8	Vcc 5.0V	15	tuner output L
		16	tuner output R
		17	Ground

## Quick reference data:

### 1) AM part

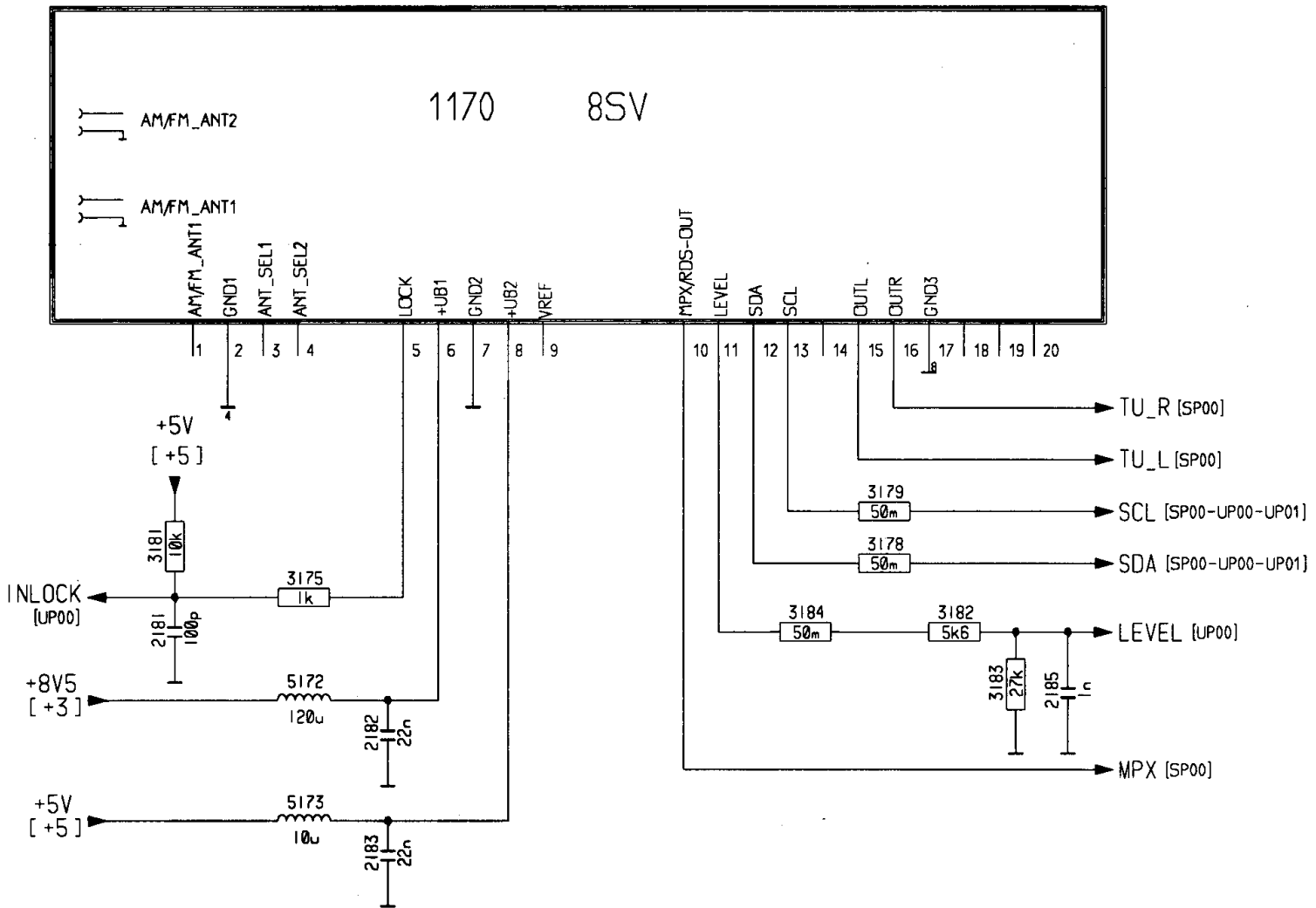
- Longwave/Mediumwave 144-1710 KHz (inclusive USA)
- Shortwave 5850-6250 KHz - 49 meter band
- AM double super concept
- AM IF1 10.7MHz
- AM IF2 450KHz
- First VCO frequency above input signal frequency
- Second X-tal oscillator frequency below IF1
- Usable sensitivity  $\alpha 26$ dB MW = 14 $\mu$ V typ.

### 1) FM part

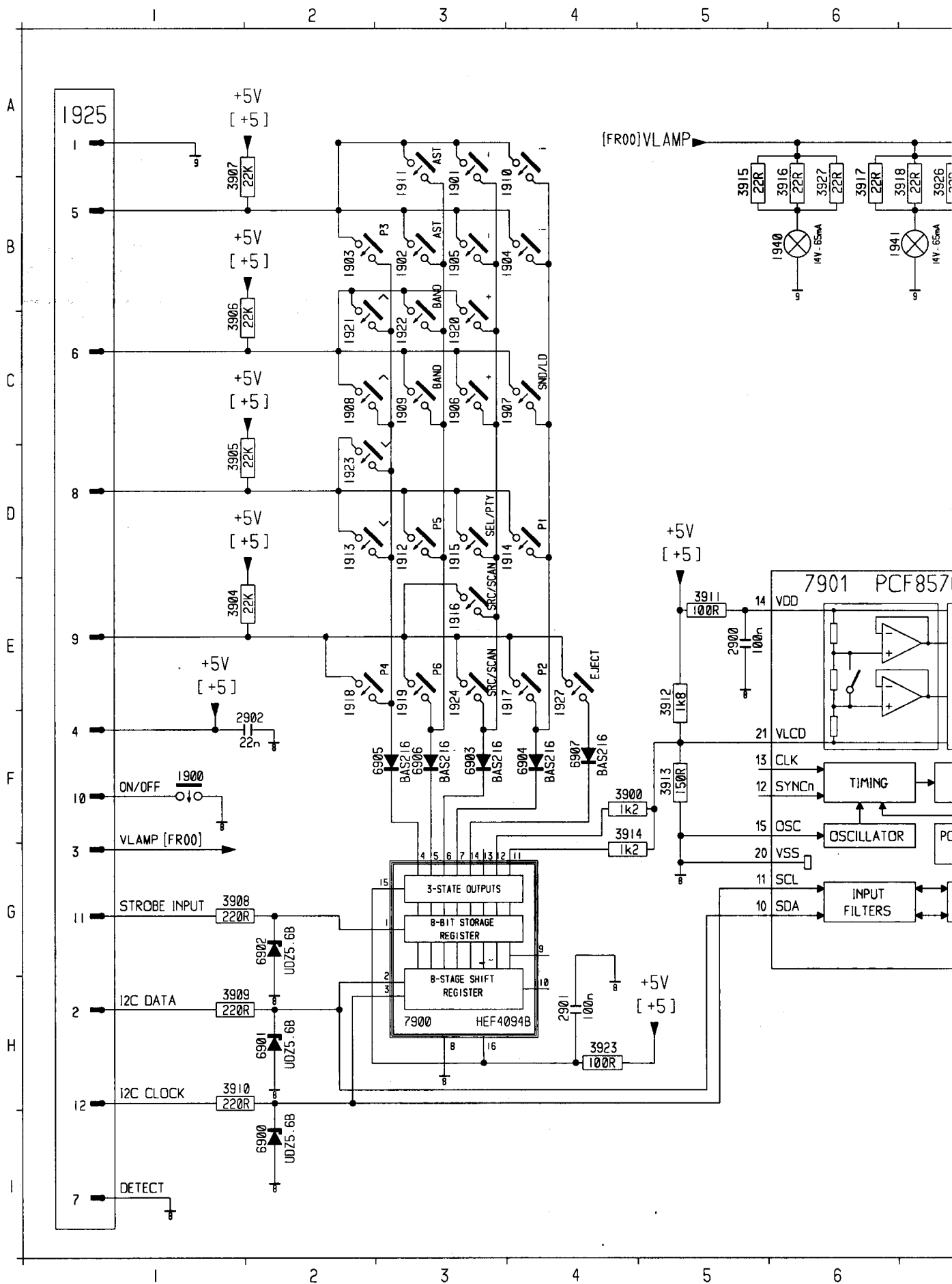
- FM 87.5 - 108MHz
- FM double super concept
- FM IF1 72.2MHz
- FM IF2 10.7MHz
- First VCO frequency above input signal frequency
- Second X-tal oscillator frequency below IF1
- Usable sensitivity  $\alpha 26$ dB = 2.5 $\mu$ V typ.
- THD 1mV  $\delta f = 75$ KHz = 0.5% typ
- Signal to noise ratio = 65dB typ
- Locktime synthesizer < 2mSec

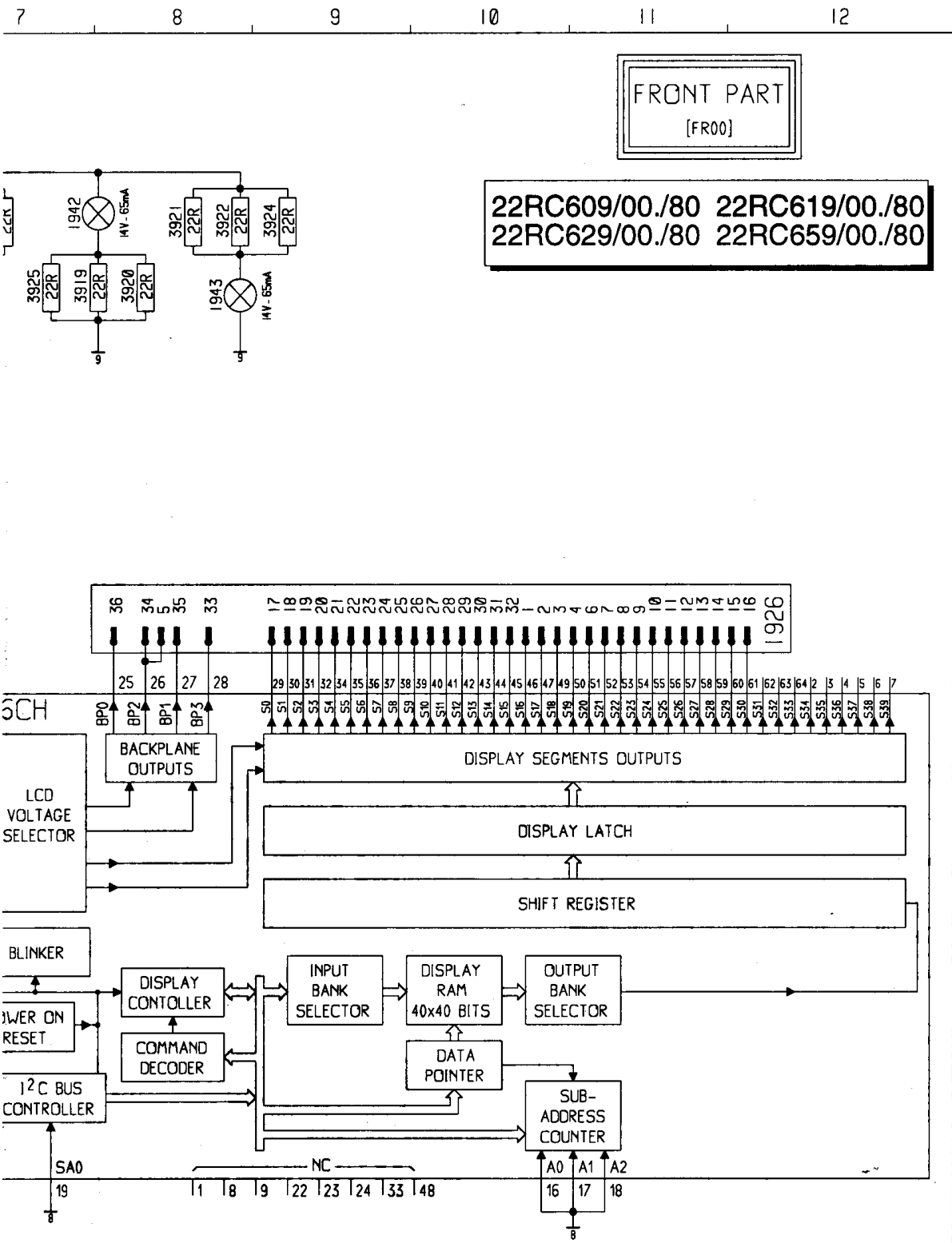
# TUNER PART

[TU00]



22RC609/00./80 22RC619/00./80  
 22RC629/00./80 22RC659/00./80

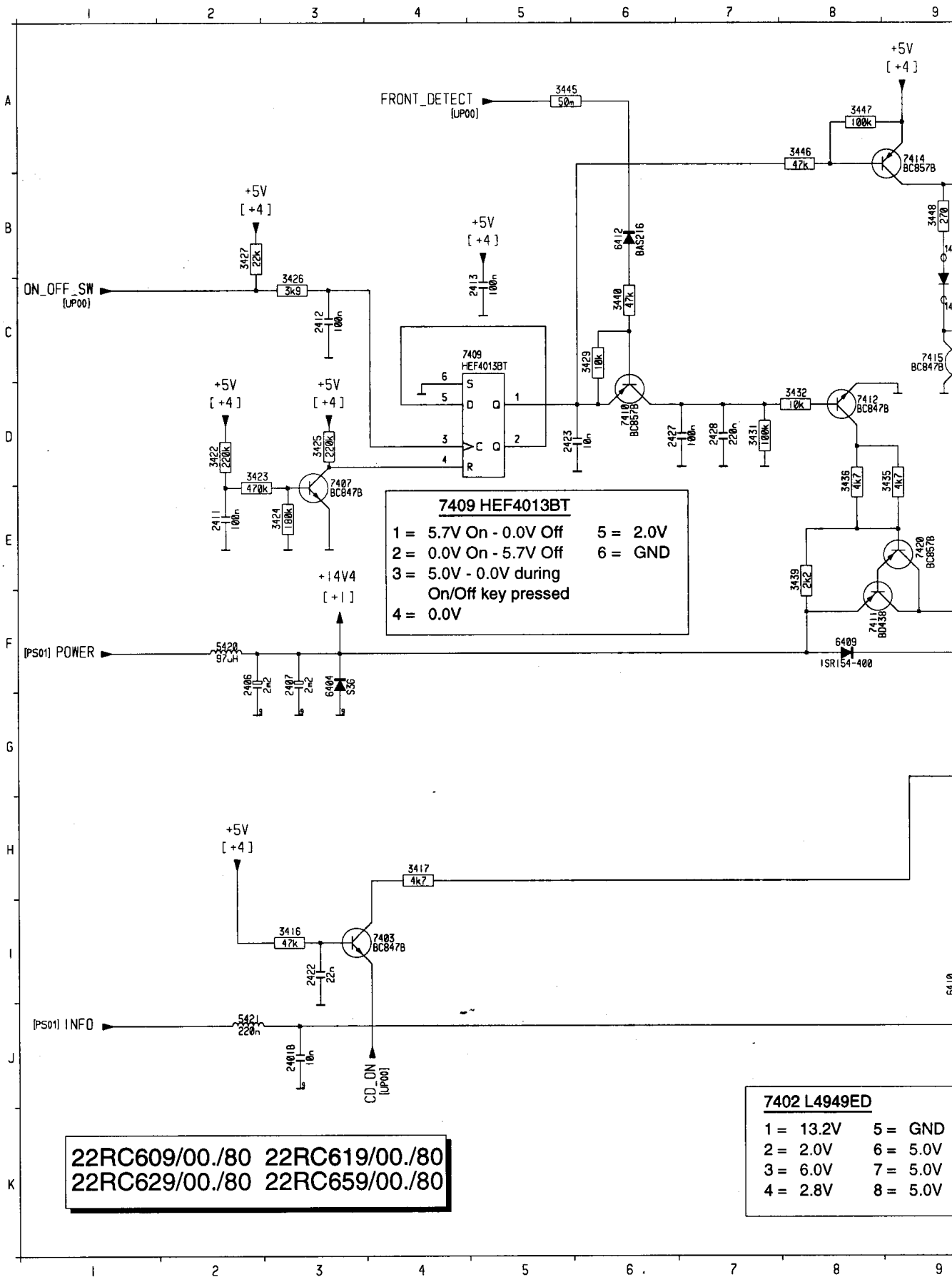




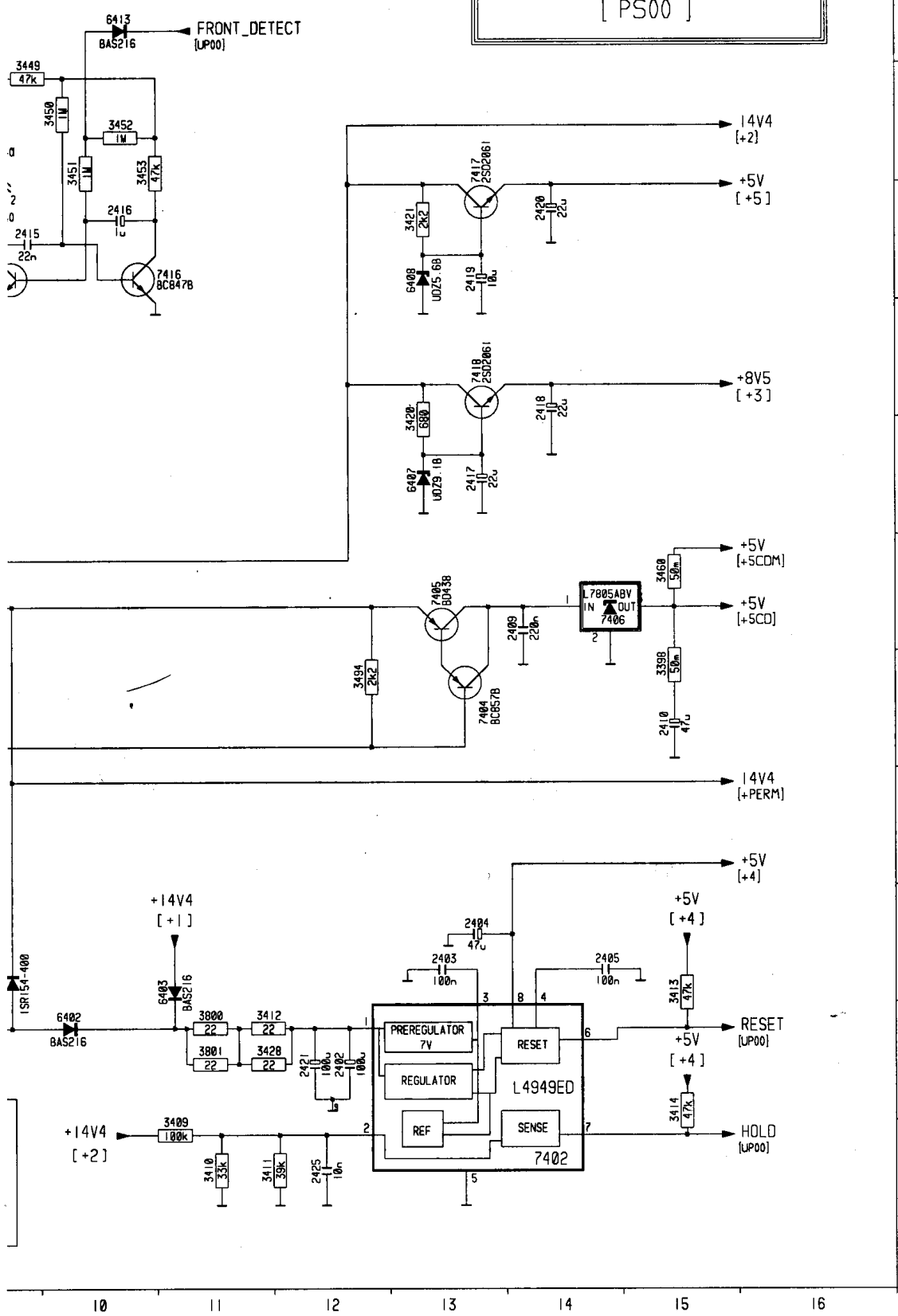
FRONT PART  
[FR00]

22RC609/00./80 22RC619/00./80  
22RC629/00./80 22RC659/00./80

1900	F 1	3908	G 1	
1901	B 3	3909	H 1	
1902	B 3	3910	H 1	
1903	B 2	3911	E 5	
1904	B 4	3912	E 5	
A	1905	B 3	3913	F 5
	1906	C 3	3914	F 4
	1907	C 4	3915	B 5
	1908	C 2	3916	B 6
	1909	C 3	3917	B 6
	1910	B 4	3918	B 7
	1911	B 3	3919	B 7
	1912	D 3	3920	B 8
B	1913	D 2	3921	B 8
	1914	D 4	3922	B 8
	1915	D 3	3923	H 4
	1916	E 3	3924	B 9
	1917	E 4	3925	B 7
	1918	E 2	3926	B 7
	1919	E 3	3927	B 6
C	1920	C 3	6900	I 2
	1921	C 2	6901	H 2
	1922	C 3	6902	G 2
	1923	D 2	6903	F 3
	1924	E 3	6904	F 4
	1925	A 1	6905	F 3
	1926	D12	6906	F 3
D	1927	E 4	6907	F 4
	1940	B 6	7900	H 3
	1941	B 7	7901	D 6
	1942	A 7		
	1943	B 8		
E	2900	F 5		
	2901	H 4		
	2902	F 2		
	3900	F 4		
	3904	E 1		
	3905	D 1		
	3906	C 1		
	3907	A 1		
F				
G				
H				
I				

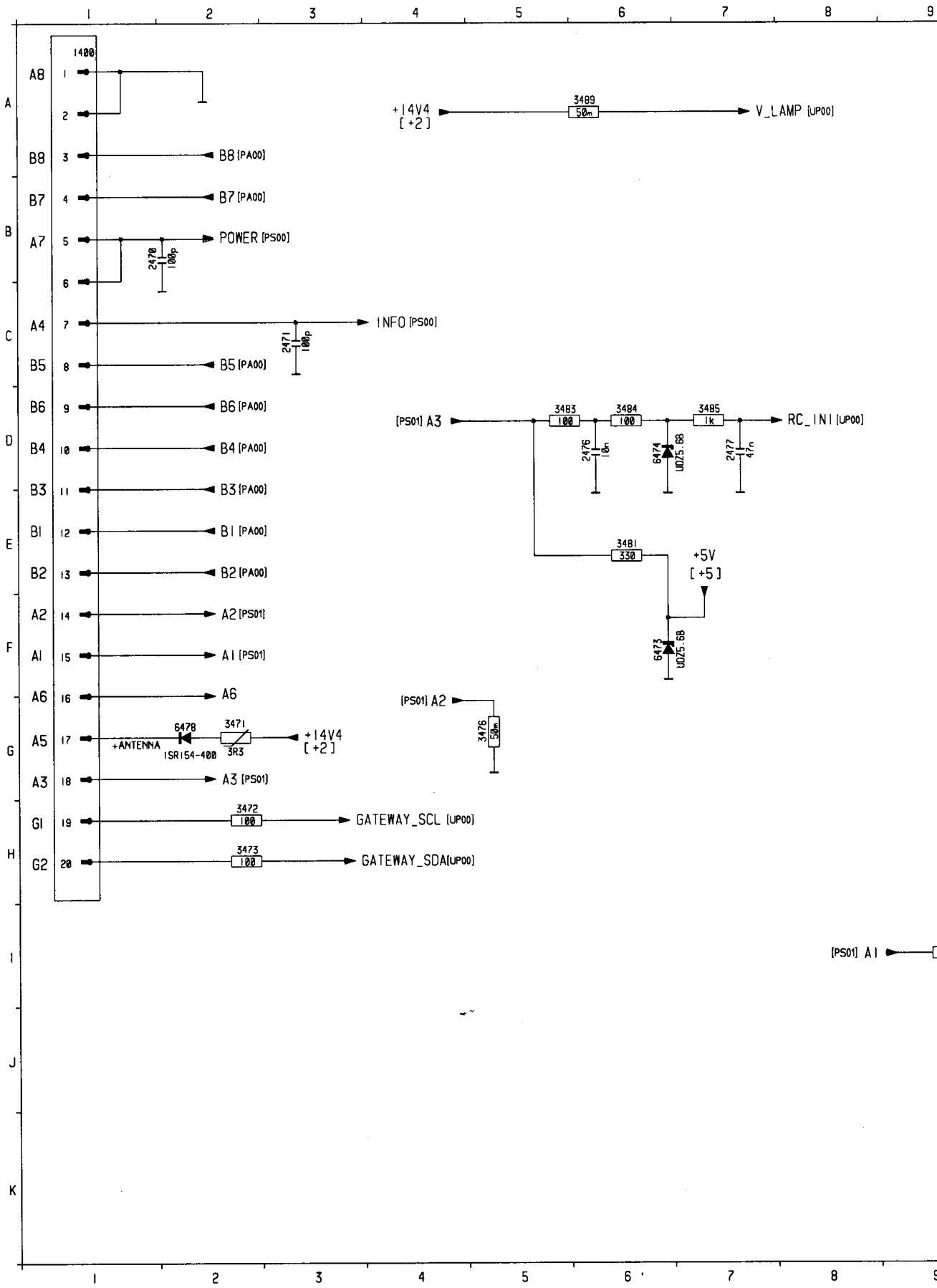


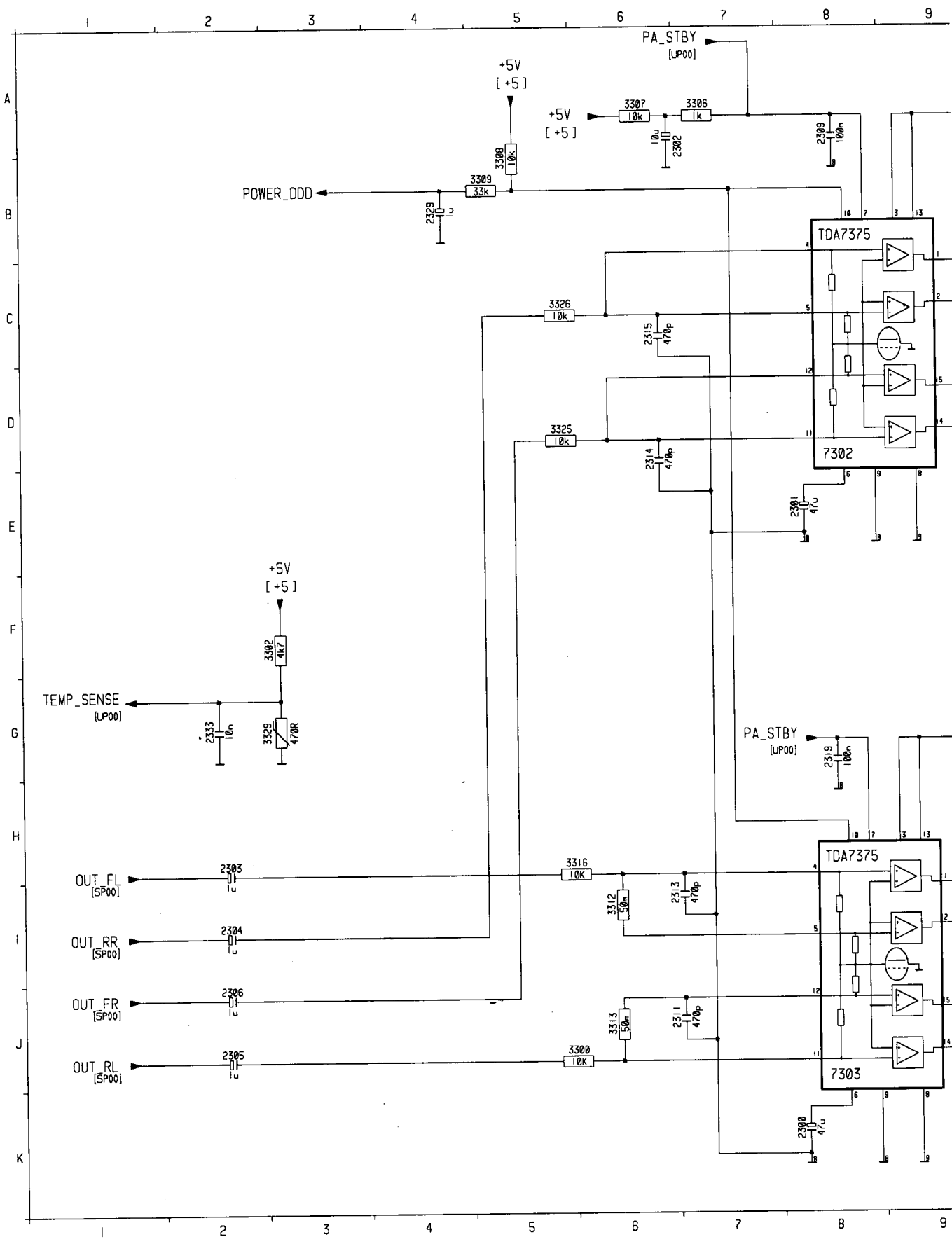
# POWER SUPPLY PART [ PS00 ]



1440	B 9	6408	C13
1440	C 9	6409	F 8
2401	J 3	6410	I 9
2402	J12	6412	B 6
2403	I13	6413	A10
A			
2404	I13	7402	K14
2405	I14	7403	I 4
2406	F 2	7404	G13
2407	F 3	7405	F13
2409	F14	7406	F15
B			
2410	G15	7407	E 3
2411	E 2	7409	C 4
2412	C 3	7410	D 6
2413	C 5	7411	F 8
2415	C 9	7412	D 8
C			
2416	C10	7414	A 9
2417	E13	7415	C 9
2418	D14	7416	C11
2419	C13	7417	C13
2420	C14	7418	D13
D			
2421	J12	7420	E 9
2422	I 3		
2423	D 5		
2425	K12		
2427	D 6		
E			
2428	D 7		
3398	G15		
3409	K11		
3410	K11		
3411	K11		
F			
3412	J11		
3413	I15		
3414	J15		
3416	I 3		
3417	H 4		
3420	E13		
3421	C13		
3422	D 2		
3423	D 2		
3424	E 3		
G			
3425	D 3		
3426	C 3		
3427	B 2		
3428	J11		
3429	C 6		
H			
3431	D 7		
3432	D 8		
3435	D 9		
3436	D 8		
3439	E 8		
I			
3440	C 6		
3445	A 5		
3446	A 8		
3447	A 8		
3448	B 9		
J			
3449	B 9		
3450	B10		
3451	B10		
3452	B10		
3453	B10		
K			
3460	F15		
3494	G12		
3800	J11		
3801	J11		
5420	F 2		
5421	J 2		
6402	J10		
6403	I11		
6404	F 3		
6407	E13		







10 11 12 13 14 15 16

+14V4  
[ + ]

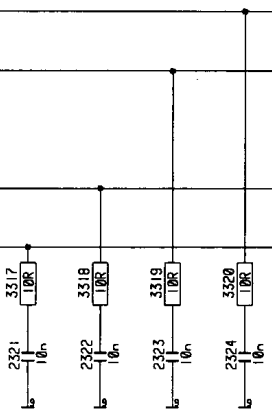


POWER AMPLIFIER PART  
[PA00]

22RC609/00./80 22RC619/00./80  
22RC629/00./80 22RC659/00./80

- 2300 K 8
- 2301 E 8
- 2302 A 6
- A 2303 H 2
- 2304 I 2
- 2305 J 2
- 2306 J 2
- 2309 A 8
- 2311 J 6
- 2313 I 6
- B 2314 D 6
- 2315 C 6
- 2317 G10
- 2319 G 8
- 2320 A10
- C 2321 E 9
- 2322 E10
- 2323 E10
- 2324 E11
- 2325 K16
- D 2326 K15
- 2327 K15
- 2328 K14
- 2329 B 4
- 2333 G 2
- 3300 J 6
- 3302 F 3
- E 3306 A 7
- 3307 A 6
- 3308 B 5
- 3309 B 5
- 3312 I 6
- 3313 J 6
- F 3316 H 6
- 3317 D 9
- 3318 D10
- 3319 D10
- 3320 D11
- 3321 J16
- G 3322 J15
- 3323 J15
- 3324 J14
- 3325 D 5
- 3326 C 5
- 3329 G 3
- H 7302 D 8
- 7303 J 8

- B1 [PS01] RR
- B2 [PS01]
- B3 [PS01] FR
- B4 [PS01]



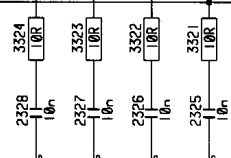
7302/7303 TDA7375

- |           |            |
|-----------|------------|
| 1 = 7.2V  | 9 = GND    |
| 2 = 7.20V | 10 = 0.0V  |
| 3 = 14.4V | 11 = 0.8V  |
| 4 = 0.8V  | 12 = 0/8V  |
| 5 = 0.8V  | 13 = 14.4V |
| 6 = 0.8V  | 14 = 7.2V  |
| 7 = 5.4V  | 15 = 7.2V  |
| 8 = GND   |            |

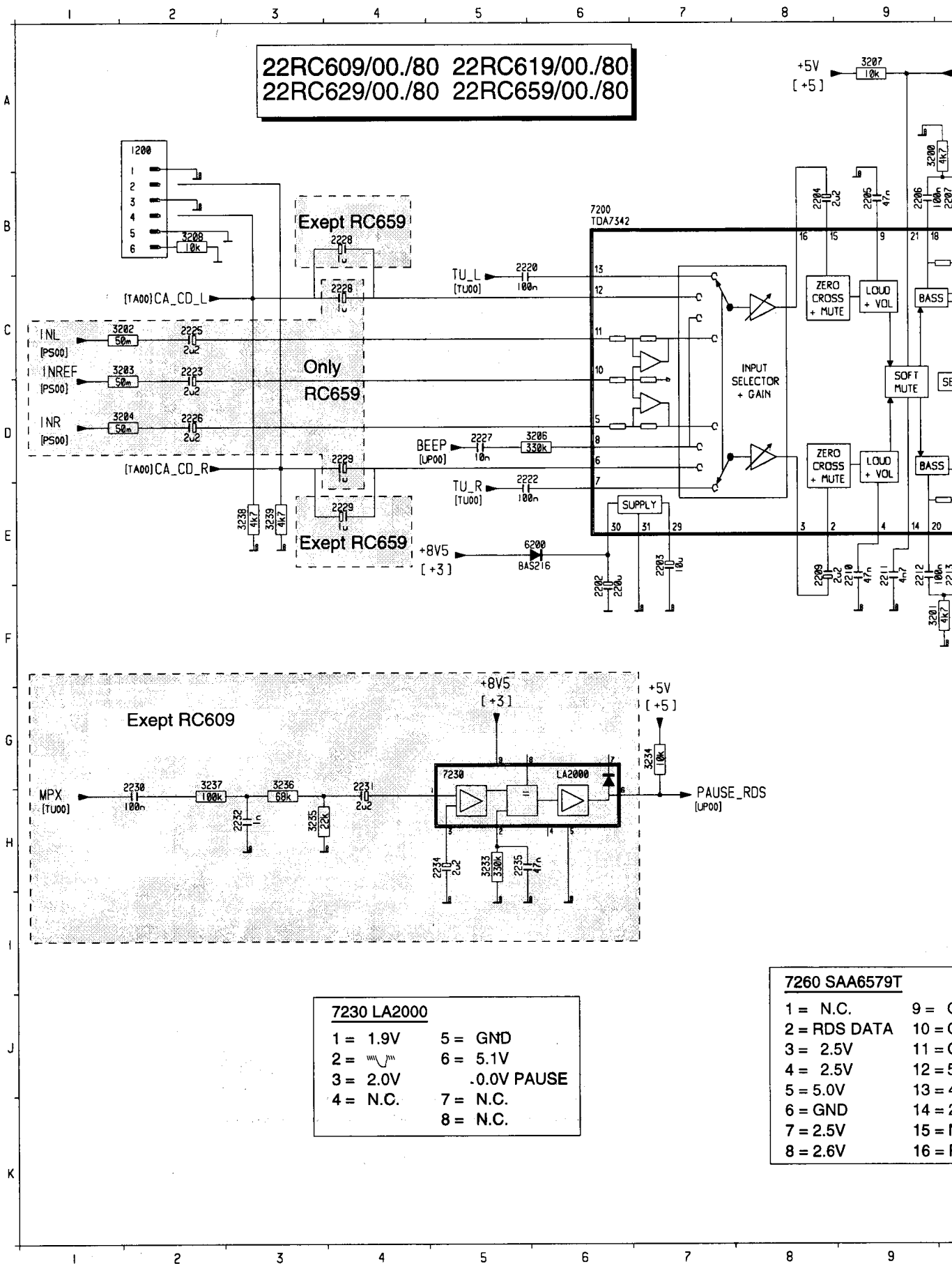
+14V4  
[ + ]



- B5 [PS01] FL
- B6 [PS01]
- B7 [PS04] RL
- B8 [PS01]



10 11 12 13 14 15 16

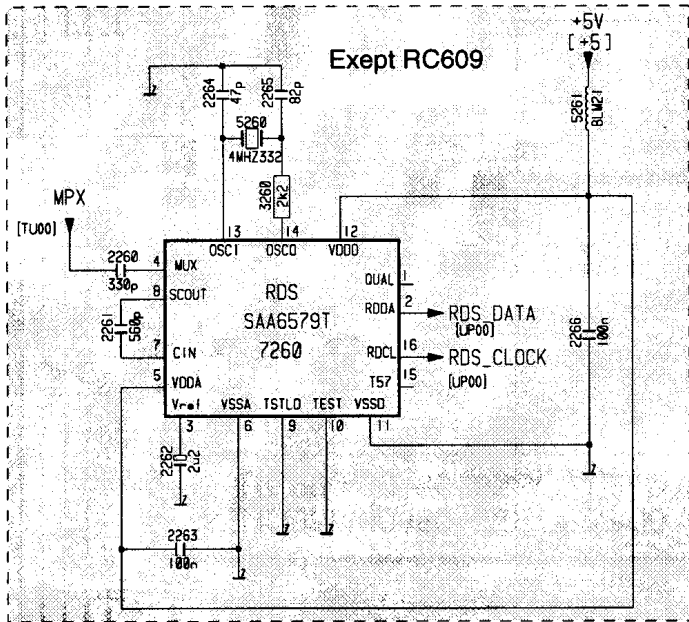
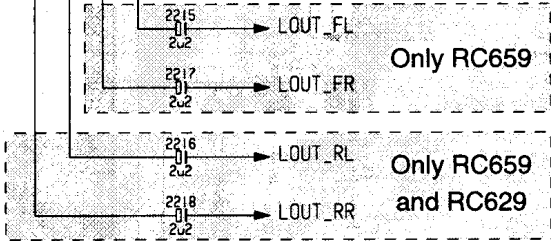
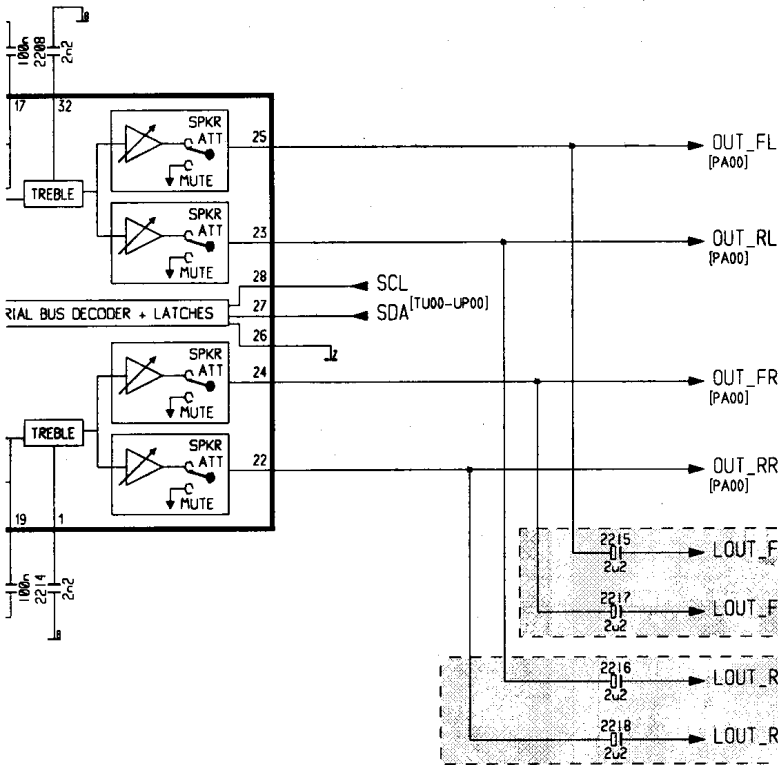


**SOUND PROCESS PART  
[SP00]**

**7200 TDA7342**

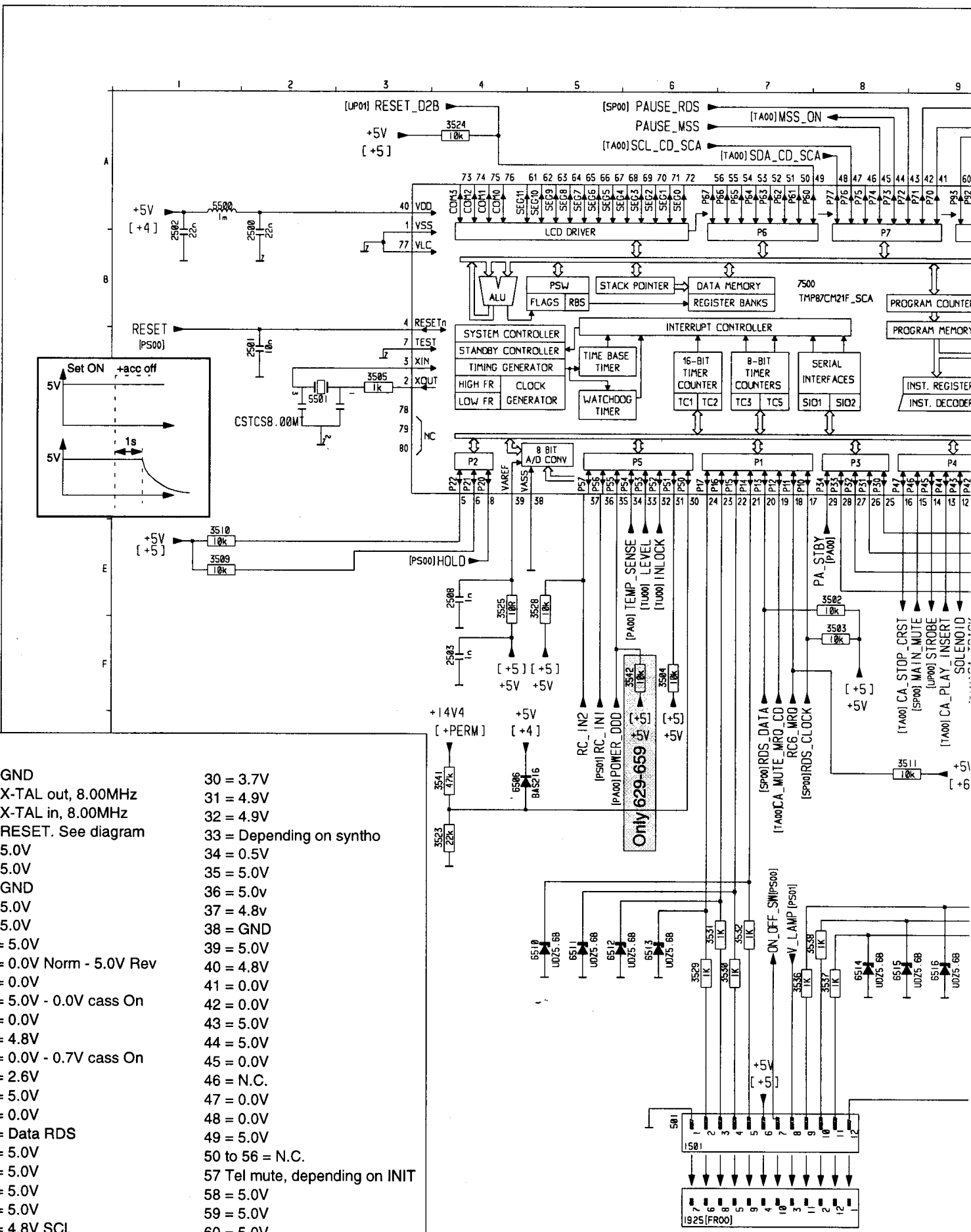
1 = 4.0V	17 = 4.0V
2 = 4.0V	18 = 4.0V
3 = 4.0V	19 = 4.0V
4 = 4.0V	20 = 4.0V
5 = 4.0V	21 = 5.0V
6 = 4.0V	22 = 3.3V
7 = 4.0V	23 = 3.3V
8 = 4.0V	24 = 3.3V
9 = 4.0V	25 = 3.3V
10 = 4.0V	26 = GND
11 = 4.0V	27 = 5.0V
12 = 4.0V	28 = 5.0V
13 = 4.0V	29 = 4.0V
14 = 7.2V	30 = 7.9V
15 = 4.0V	31 = GND
16 = 4.0V	32 = 4.0V

MAIN\_MUTE  
[UP00]

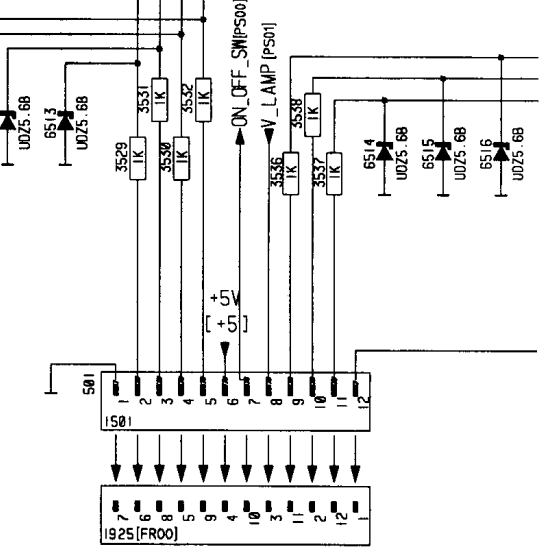


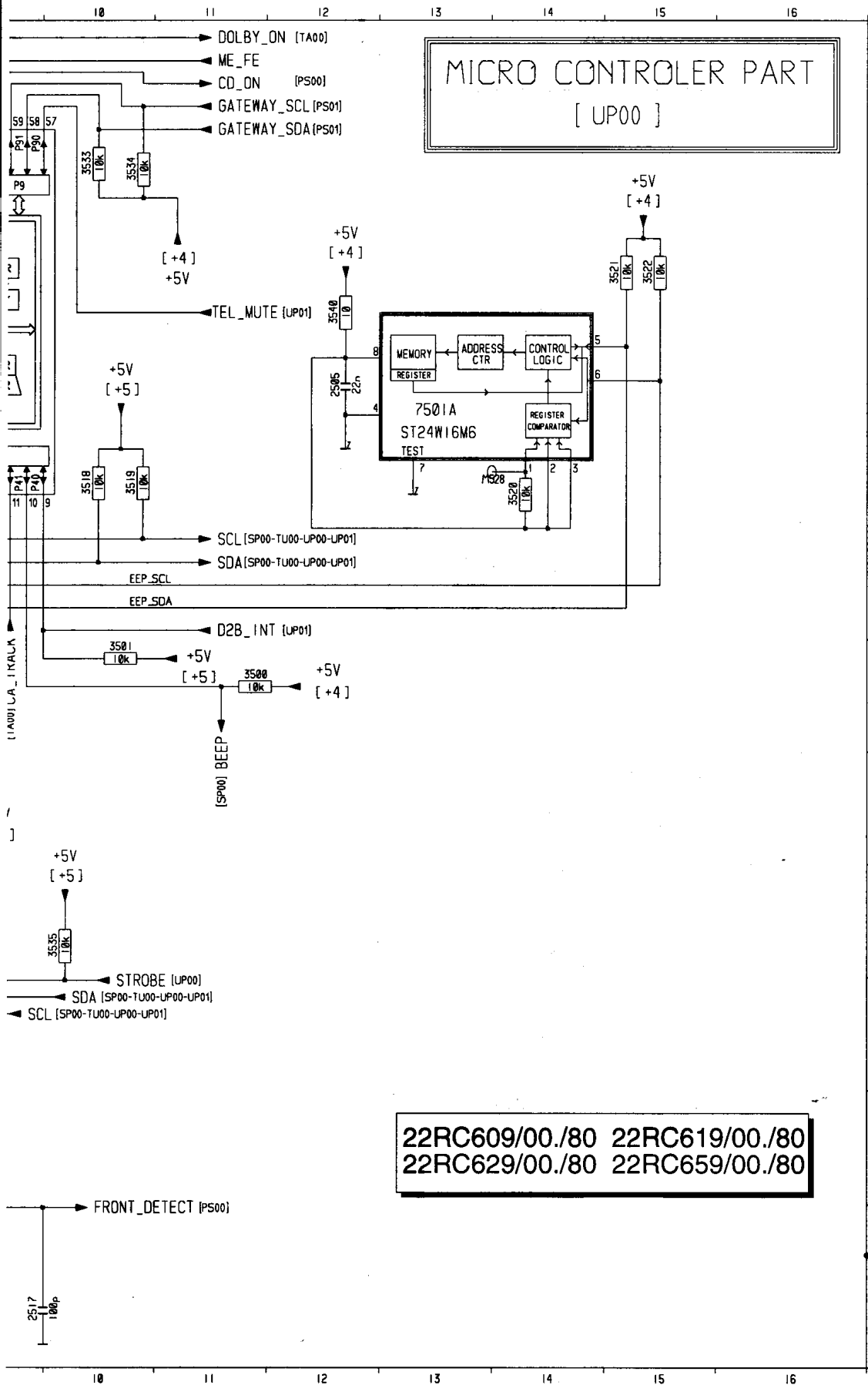
IND  
IND  
IND  
.0V  
.332MHz  
.5V  
I.C.  
RDS CLOCK

- 1200 A 2
- 2202 F 6
- 2203 E 7
- 2204 B 8
- 2205 B 9
- 2206 B 9
- 2207 B10
- 2208 B10
- 2209 E 8
- 2210 E 9
- 2211 E 9
- 2212 E 9
- 2213 E10
- 2214 E10
- 2215 E14
- 2216 F14
- 2217 F14
- 2218 F14
- 2220 B 5
- 2222 E 5
- 2223 C 2
- 2225 C 2
- 2226 D 2
- 2227 D 5
- 2228 C 4
- 2229 D 4
- 2230 H 2
- 2231 H 4
- 2232 H 3
- 2234 H 5
- 2235 H 5
- 2260 I13
- 2261 I13
- 2262 J13
- 2263 K13
- 2264 H13
- 2265 H14
- 2266 I16
- 3200 A 9
- 3201 F 9
- 3202 C 1
- 3203 D 1
- 3204 D 1
- 3206 D 5
- 3207 A 9
- 3208 B 3
- 3233 H 5
- 3234 G 7
- 3235 H 3
- 3236 G 3
- 3237 G 2
- 3238 E 3
- 3239 E 3
- 3260 H14
- 5260 H14
- 5261 H16
- 6200 E 6
- 7200 B 6
- 7230 G 5
- 7260 I14



- |                           |                                |
|---------------------------|--------------------------------|
| 1 = GND                   | 30 = 3.7V                      |
| 2 = X-TAL out, 8.00MHz    | 31 = 4.9V                      |
| 3 = X-TAL in, 8.00MHz     | 32 = 4.9V                      |
| 4 = RESET. See diagram    | 33 = Depending on syntho       |
| 5 = 5.0V                  | 34 = 0.5V                      |
| 6 = 5.0V                  | 35 = 5.0V                      |
| 7 = GND                   | 36 = 5.0v                      |
| 8 = 5.0V                  | 37 = 4.8v                      |
| 9 = 5.0V                  | 38 = GND                       |
| 10 = 5.0V                 | 39 = 5.0V                      |
| 11 = 0.0V Norm - 5.0V Rev | 40 = 4.8V                      |
| 12 = 0.0V                 | 41 = 0.0V                      |
| 13 = 5.0V - 0.0V cass On  | 42 = 0.0V                      |
| 14 = 0.0V                 | 43 = 5.0V                      |
| 15 = 4.8V                 | 44 = 5.0V                      |
| 16 = 0.0V - 0.7V cass On  | 45 = 0.0V                      |
| 17 = 2.6V                 | 46 = N.C.                      |
| 18 = 5.0V                 | 47 = 0.0V                      |
| 19 = 0.0V                 | 48 = 0.0V                      |
| 20 = Data RDS             | 49 = 5.0V                      |
| 21 = 5.0V                 | 50 to 56 = N.C.                |
| 22 = 5.0V                 | 57 Tel mute, depending on INIT |
| 23 = 5.0V                 | 58 = 5.0V                      |
| 24 = 5.0V                 | 59 = 5.0V                      |
| 25 = 4.8V SCL             | 60 = 5.0V                      |
| 26 = 4.9V SDA             | 61 to 76 = N.C.                |
| 27 = 5.0V                 | 77 = GND                       |
| 28 = 5.0V                 | 78 to 80 = N.C.                |
| 29 = 4.7V                 |                                |

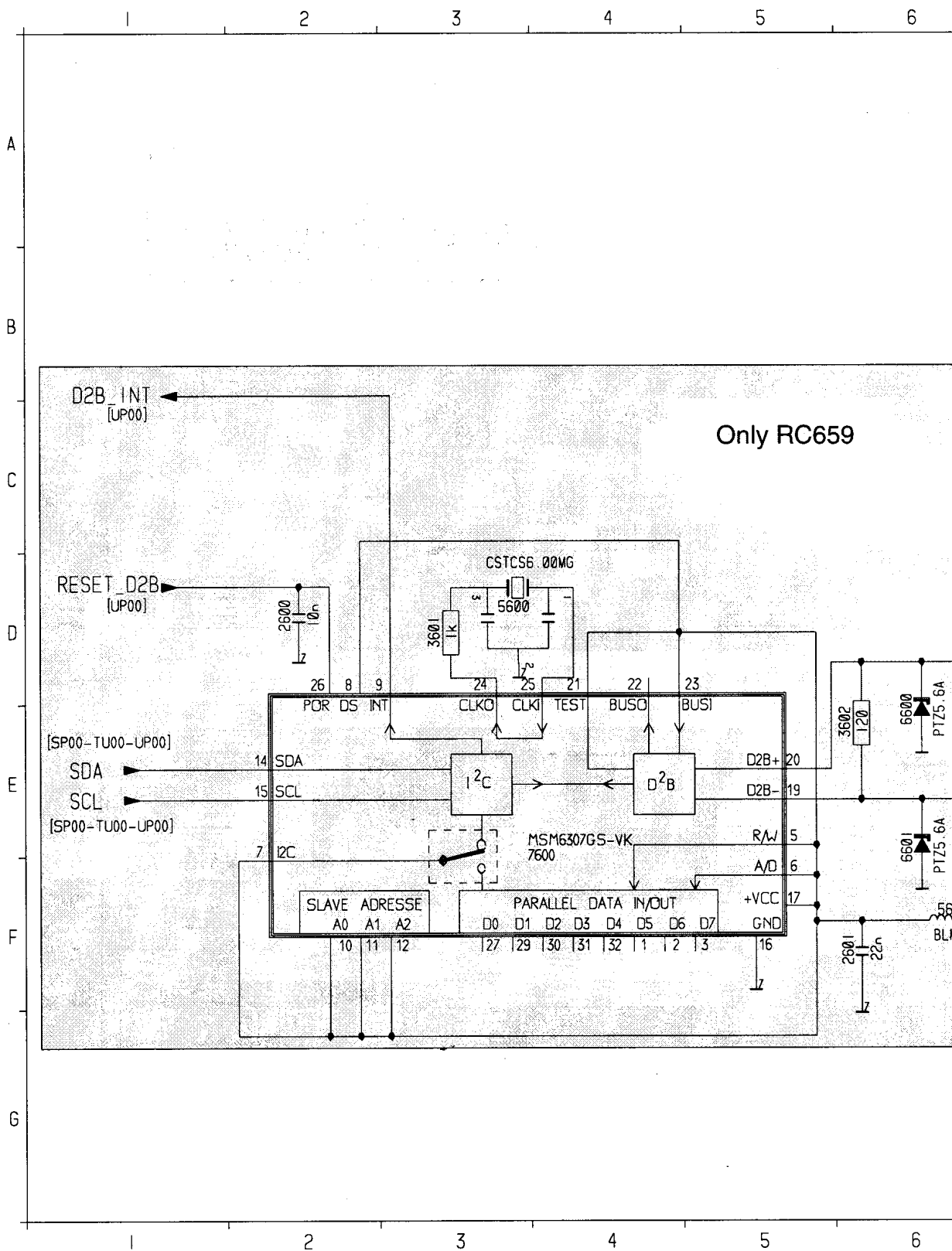




1501	K 6
2500	B 2
2501	C 2
2502	B 1
2503	F 4
A 2505	C12
2508	E 4
2517	K 9
3500	F11
3501	F10
3502	E 8
3503	F 8
3504	F 6
3505	C 3
3509	E 1
B 3510	E 1
3511	G 9
3518	D10
3519	D10
3520	D14
3521	B15
3522	B15
3523	H 4
C 3524	A 4
3525	E 4
3528	E 5
3529	I 6
3530	I 7
3531	I 6
3532	I 7
D 3533	A10
3534	A10
3535	H10
3536	I 7
3537	I 8
3538	I 8
3540	C12
3541	G 4
E 3542	F 6
5500	A 1
5501	C 2
6506	G 4
6510	I 5
6511	I 5
6512	I 5
6513	I 6
F 6514	I 8
6515	I 8
6516	I 9
7500	B 7
7501	D13

**22RC609/00./80 22RC619/00./80**  
**22RC629/00./80 22RC659/00./80**

G  
H  
I  
J  
K



Only RC659



7

8

9

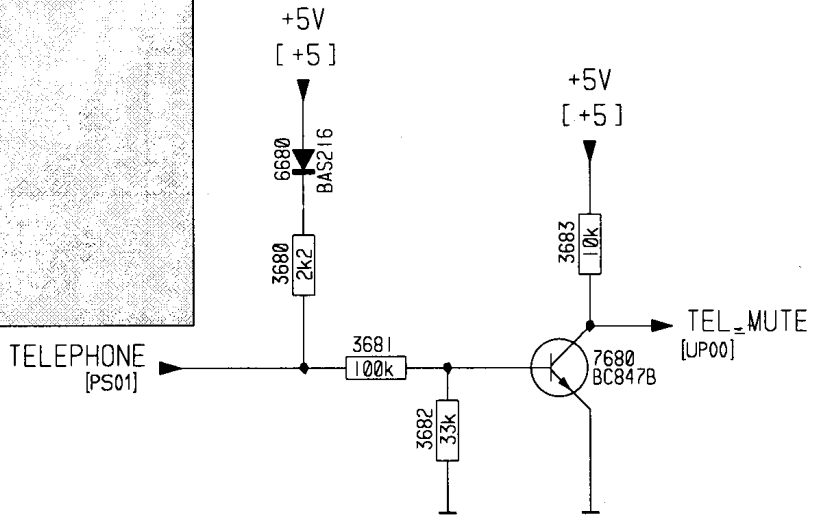
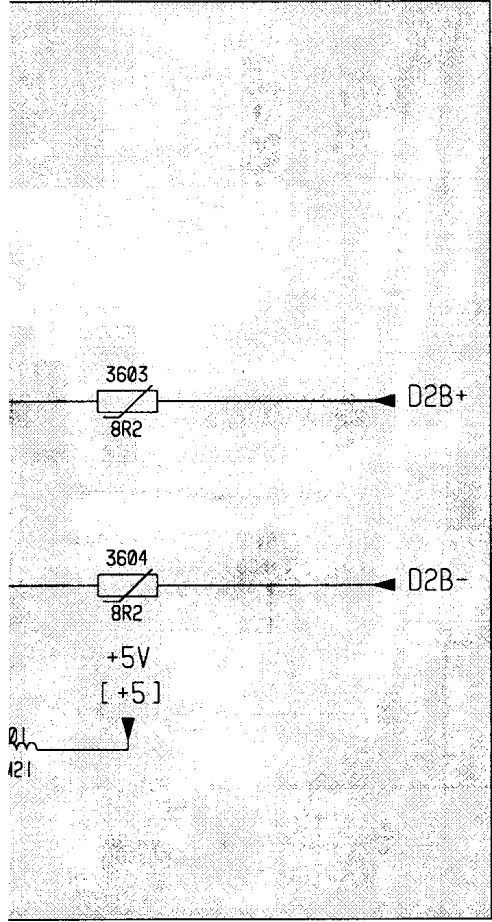
10

11

UP CONTROLLER PART 01  
[UP01]

22RC609/00./80 22RC619/00./80  
22RC629/00./80 22RC659/00./80

- 2600 D 2
- 2601 F 6
- 3601 D 3
- 3602 E 6
- A 3603 D 7
- 3604 E 7
- 3680 F 9
- 3681 G10
- 3682 G10
- 3683 F10
- 5600 D 3
- 5601 F 6
- B 6600 E 6
- 6601 E 6
- 6680 F 9
- 7600 F 3
- 7680 G11



C  
D  
E  
F  
G

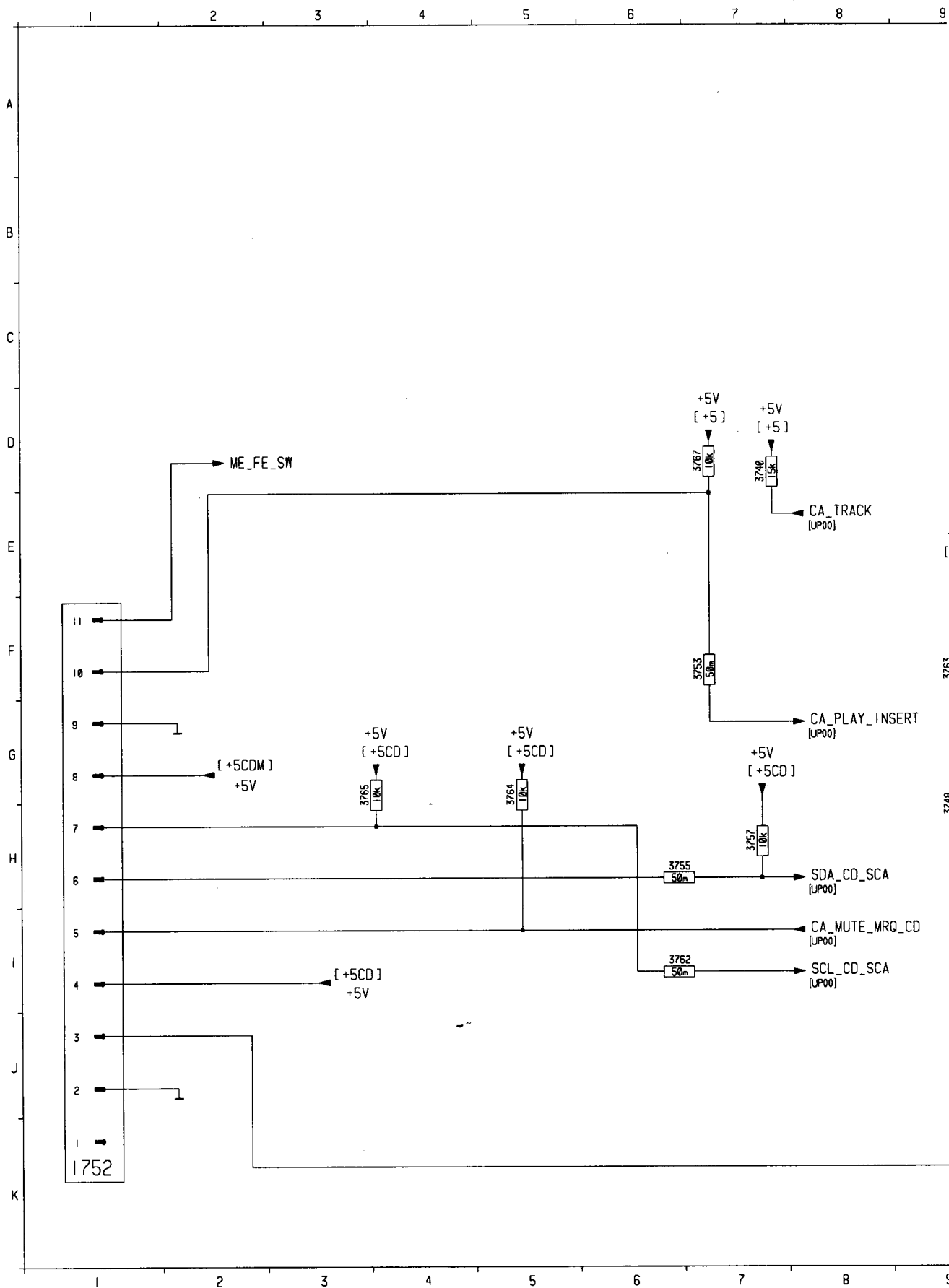
7

8

9

10

11



10 11 12 13 14 15 16

TAPE PART  
[ TA00 ]

22RC609/00./80 22RC619/00./80  
22RC629/00./80 22RC659/00./80

- 1752 K 1
- 3729 E12
- 3737 G12
- 3740 D 7
- A 3748 H 9
- 3753 F 7
- 3755 H 6
- 3757 H 7
- 3762 I 6
- 3763 F 9
- B 3764 G 5
- 3765 G 3
- 3767 D 7

C

D

E

F

G

H

I

J

K

