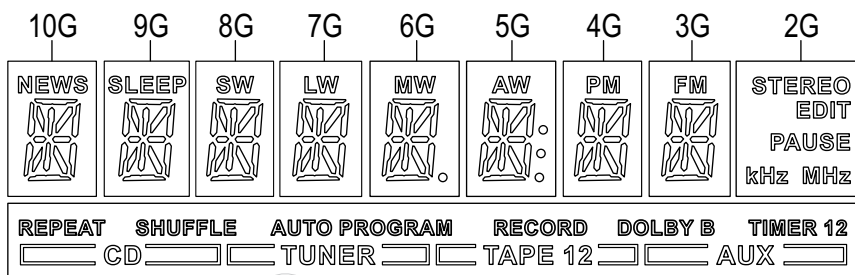
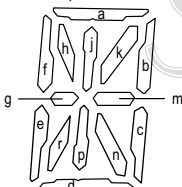


Zestaw audio Philips FW21/20/21/22/37

GRID ASSIGNMENT



(10G ~ 3G)

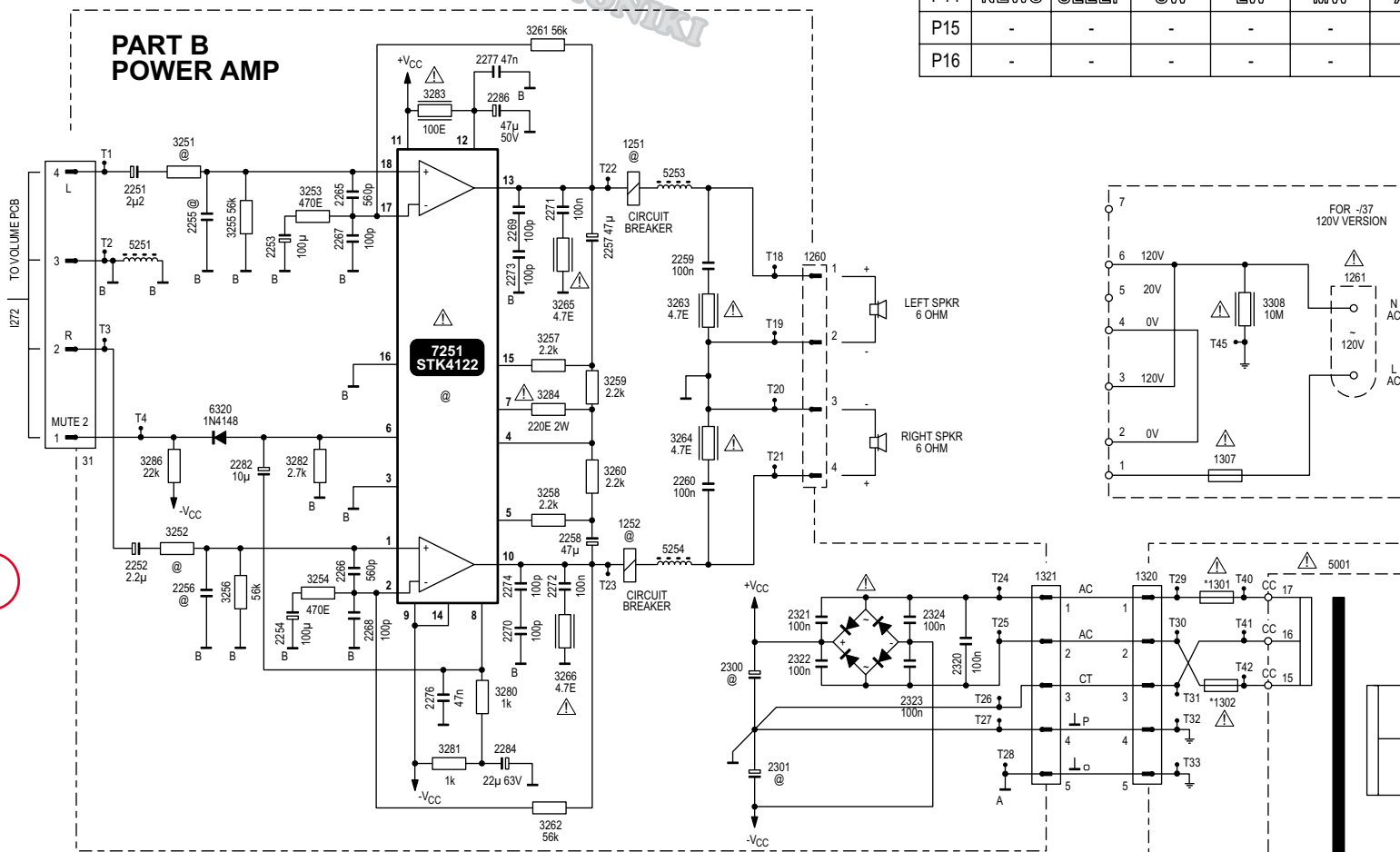


SERWIS ELEKTRONIKI

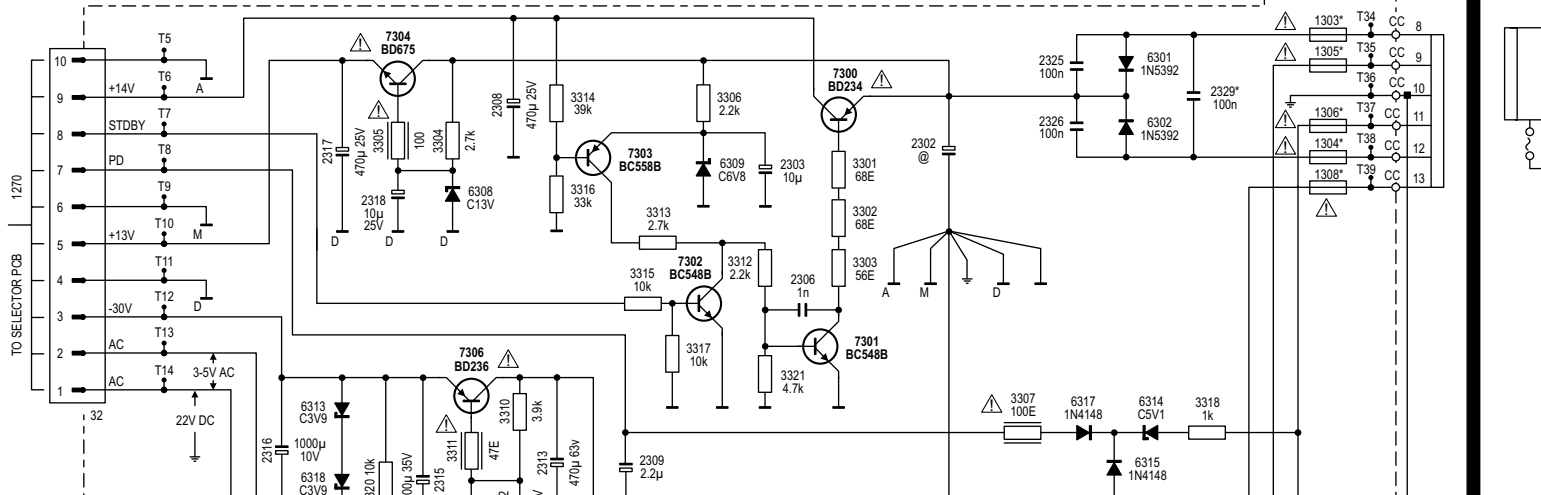
ANODE CONNECTION

	10G	9G	8G	7G	6G	5G
P1	a	a	a	a	a	a
P2	j, p	j, p	j, p	j, p	j, p	j, p
P3	k	k	k	k	k	k
P4	h	h	h	h	h	h
P5	b	b	b	b	b	b
P6	f	f	f	f	f	f
P7	m	m	m	m	m	m
P8	g	g	g	g	g	g
P9	c	c	c	c	c	c
P10	e	e	e	e	e	e
P11	r	r	r	r	r	r
P12	n	n	n	n	n	n
P13	d	d	d	d	d	d
P14	NEWS	SLEEP	SW	LW	MW	AW
P15	-	-	-	-	-	-
P16	-	-	-	-	-	-

PART B POWER AMP

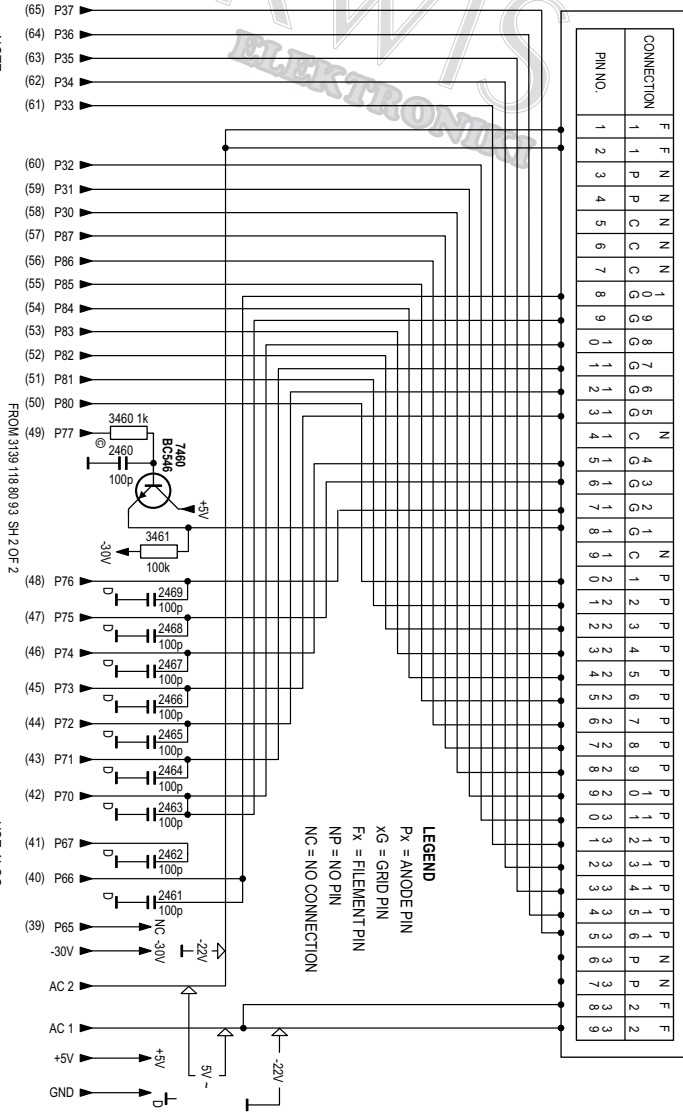


1



5G	4G	3G	2G	1G
a	a	a	KHz	REPEAT
j, p	j, p	j, p	MHz	SHUFFLE
k	k	k	PAUSE	AUTO
h	h	h	EDIT	PROGRAM
b	b	b	STEREO	RECORD
f	f	f	-	DOLBY B
m	m	m	-	TIMER
g	g	g	-	(TIMER) 1
c	c	c	-	(TIMER) 2
e	e	e	-	[AUX]
r	r	r	-	[TAPE]
n	n	n	-	[TAPE] 1
d	d	d	-	[TAPE] 2
AM	PM	FM	-	[TUNER]
•	-	-	-	[CD]
•	-	-	-	-

NOTE:
NUMBER IN (*) ARE PIN NUMBER OF 7400



FROM 3139 118 803 SH 2 OF 2

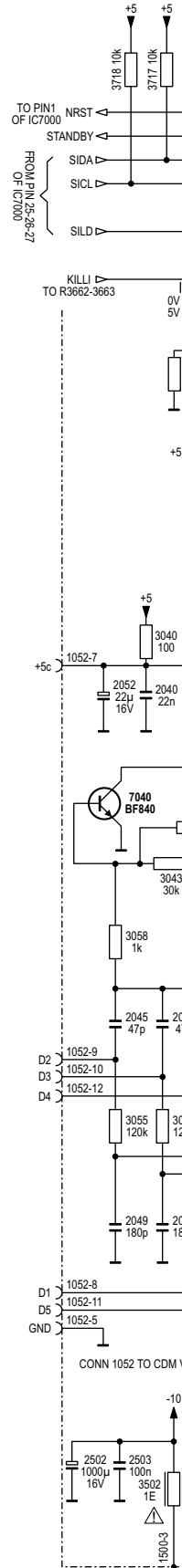
USE ALSO:-
3139 118 803 SH 30-2
3139 118 803 SH 130-3

LEGEND
Px = ANODE PIN
XG = GRID PIN
Fx = FILAMENT PIN
NP = NO PIN
NC = NO CONNECTION

FRONT CIRCUIT II

1401

CD CIRCUIT

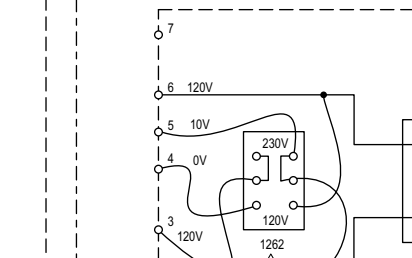
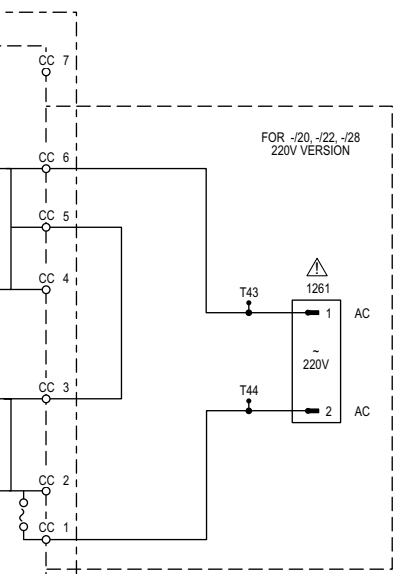
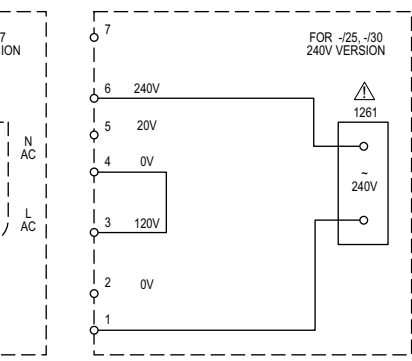


IC 7251 VOLTAGES

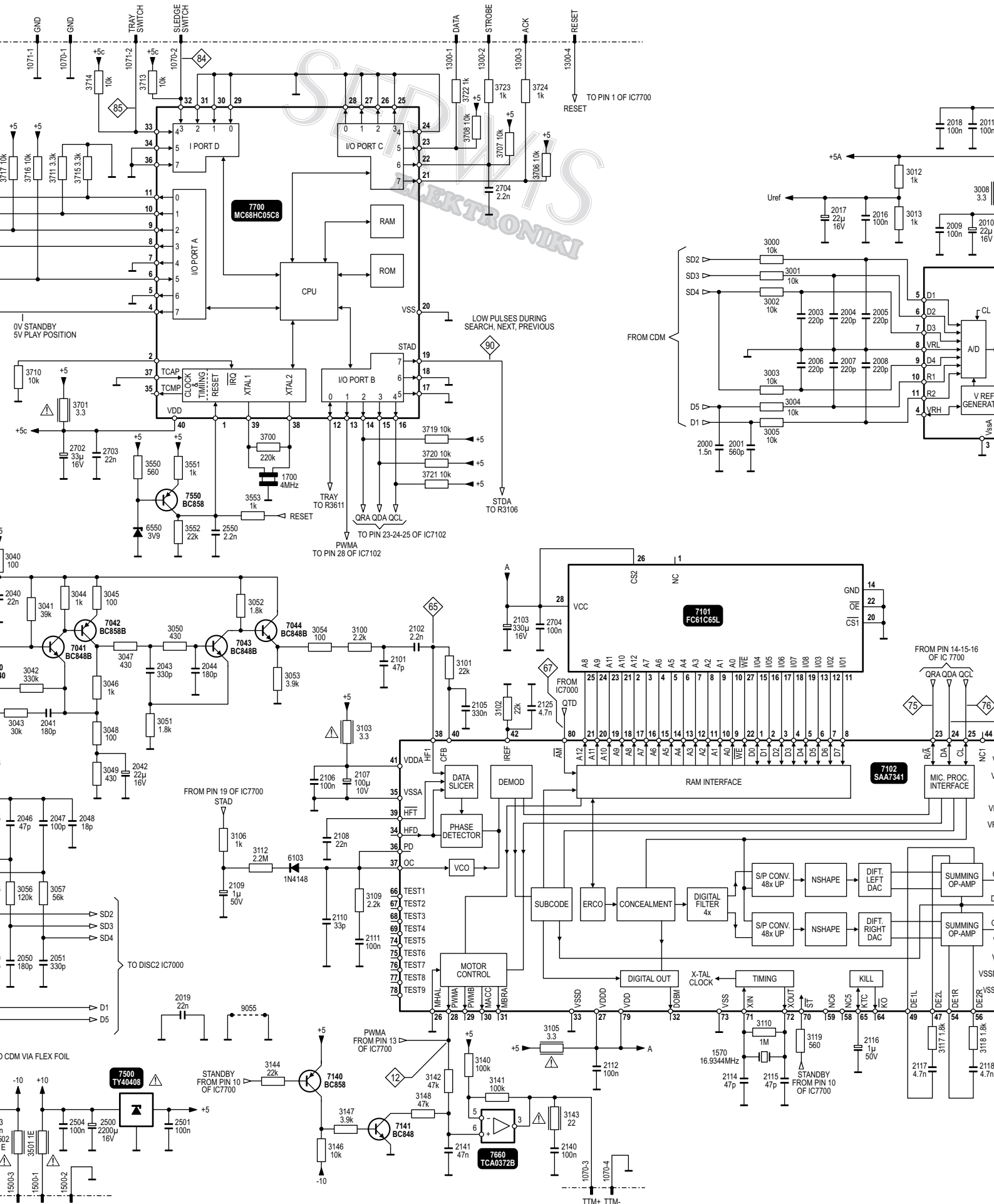
Pin No	FW20	FW30
1	-0.1V	-0.1V
2	-0.1V	-0.1V
3	0V	0V
4	-13.4V	-18.5V
5	-1.2V	-1.0V
6	0V	0V
7	-15.5V	-21.3V
8	-16.0V	-22.0V
9	-16.2V	-22.1V
10	0V	0V
11	16.4V	22.1V
12	15.3V	21.0V
13	0V	0V
14	-16.2V	-22.1V
15	-1.2V	-1.0V
16	0V	0V
17	-0.1V	-0.1V

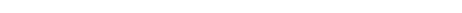
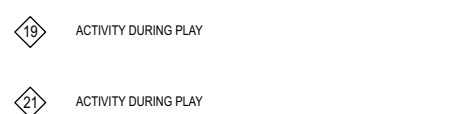
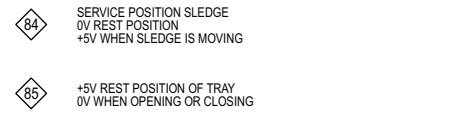
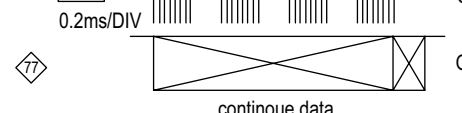
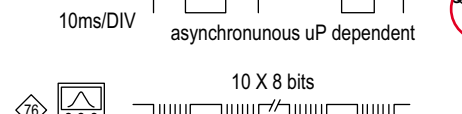
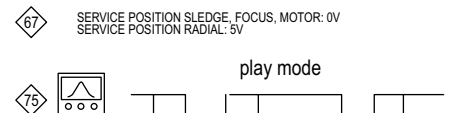
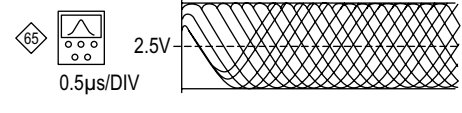
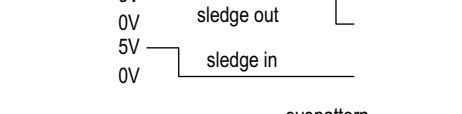
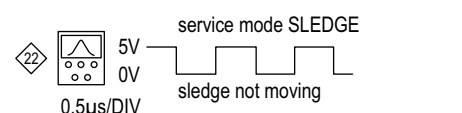
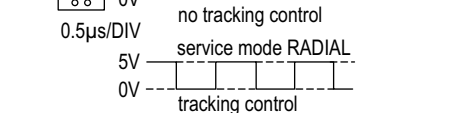
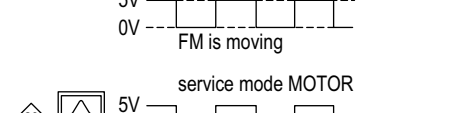
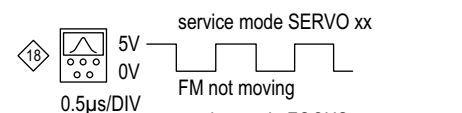
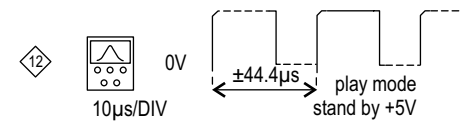
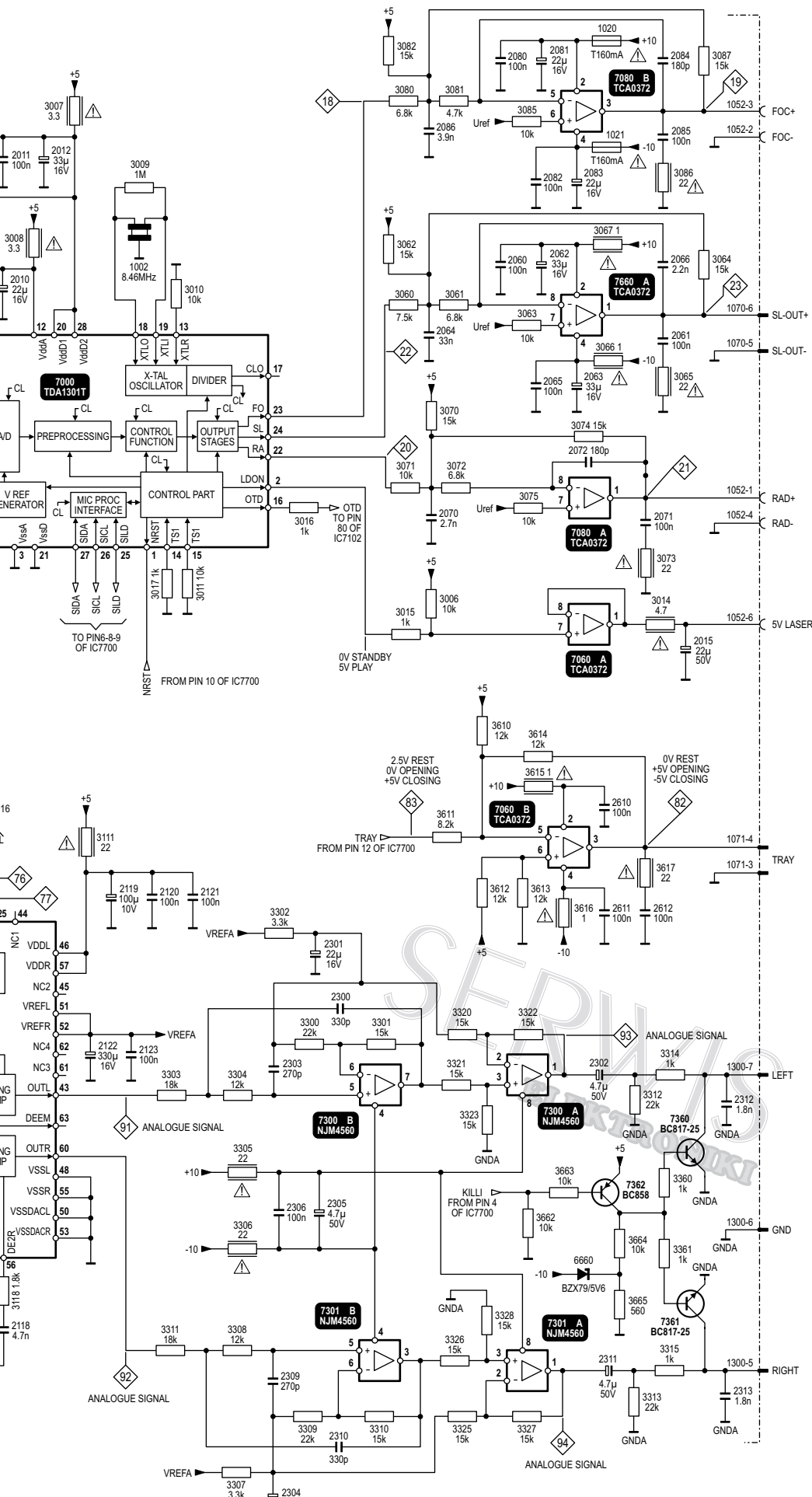
TRANSISTOR VOLTAGE

Pin No	ITEM NO					
	7300	7301	7302	7303	7304	7306
e	21.5V	0V	0V	6.7V	13.0V	-30.0V
b	20.8V	0.6V	0V	6.2V	12.3V	-29.2V
	44.0V	20.6V	0.2V	4.2V	24.5V	43.2V



CIRCUIT DIAGRAM

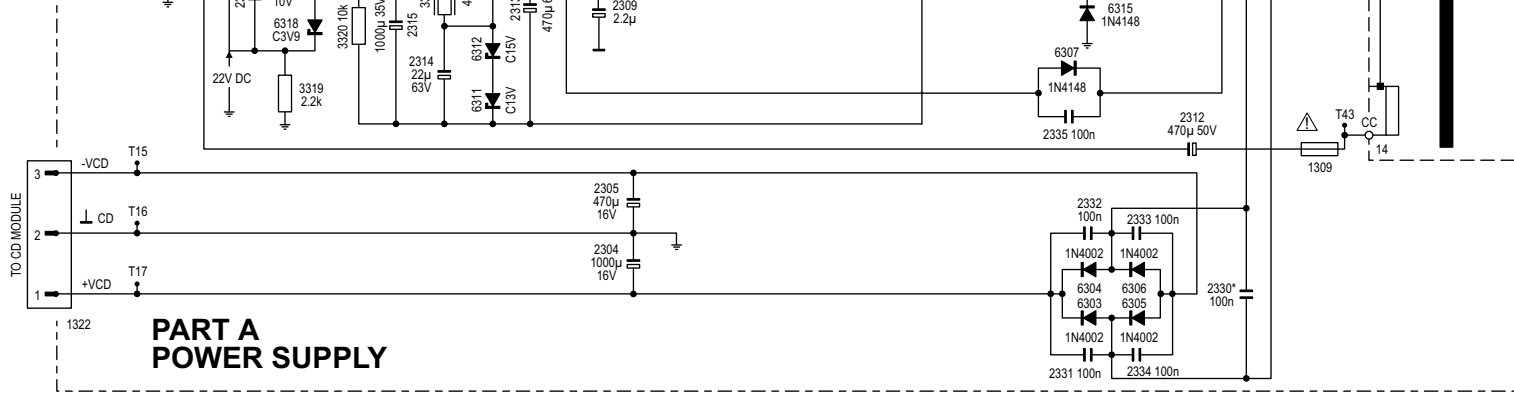




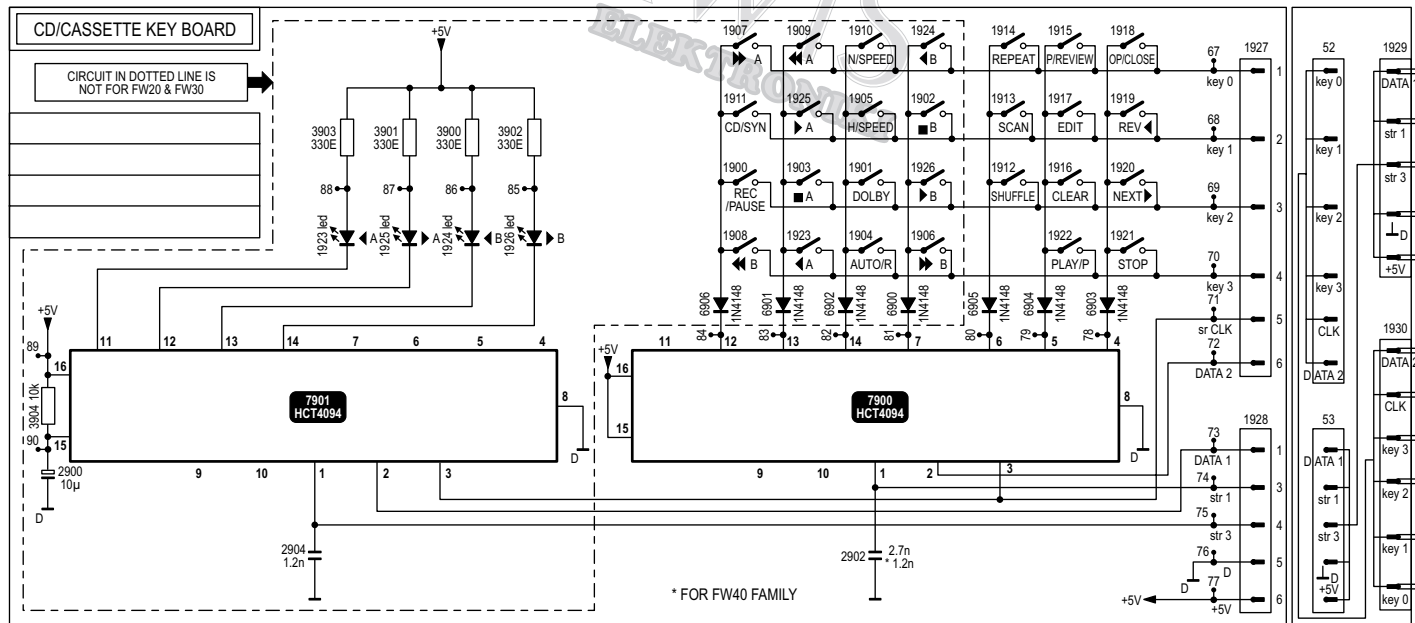
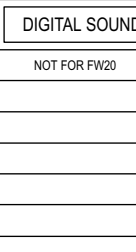
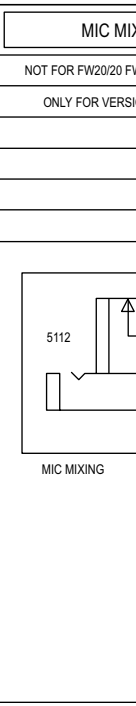
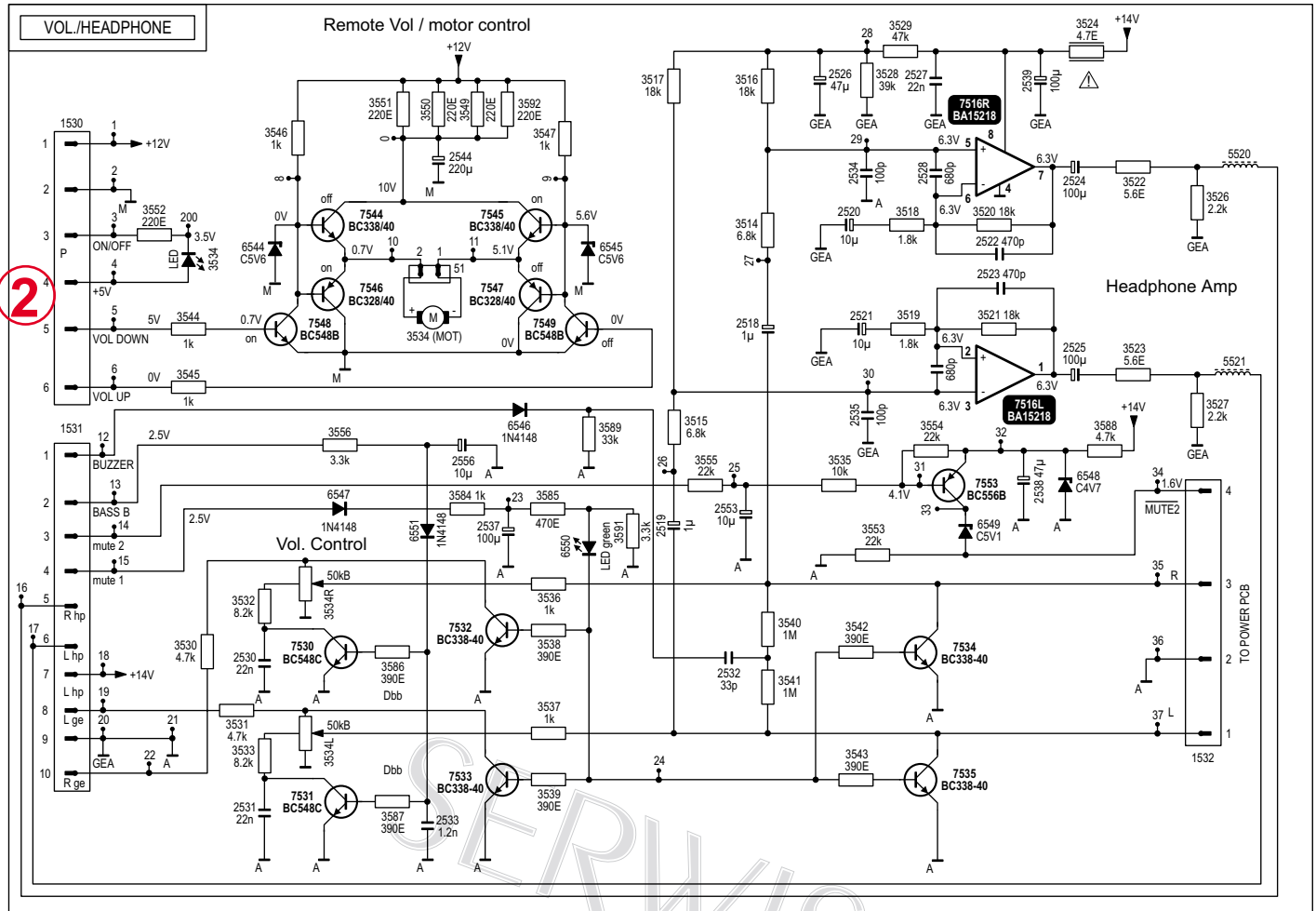
QR 1

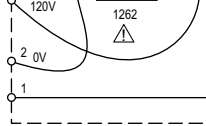
QCL

QDA



COMBI CIRCUIT DIAGRAM





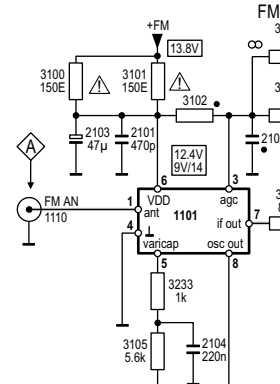
e	21.5V	0V	0V	0.7V	13.0V	-30.0V
b	20.8V	0.6V	0V	6.2V	12.3V	-29.2V
c	14.0V	20.6V	0.9V	1.3V	21.5V	-47.2V
					17	-0.1V
						-0.1V

NOTE FOR ITEMS MARKED @

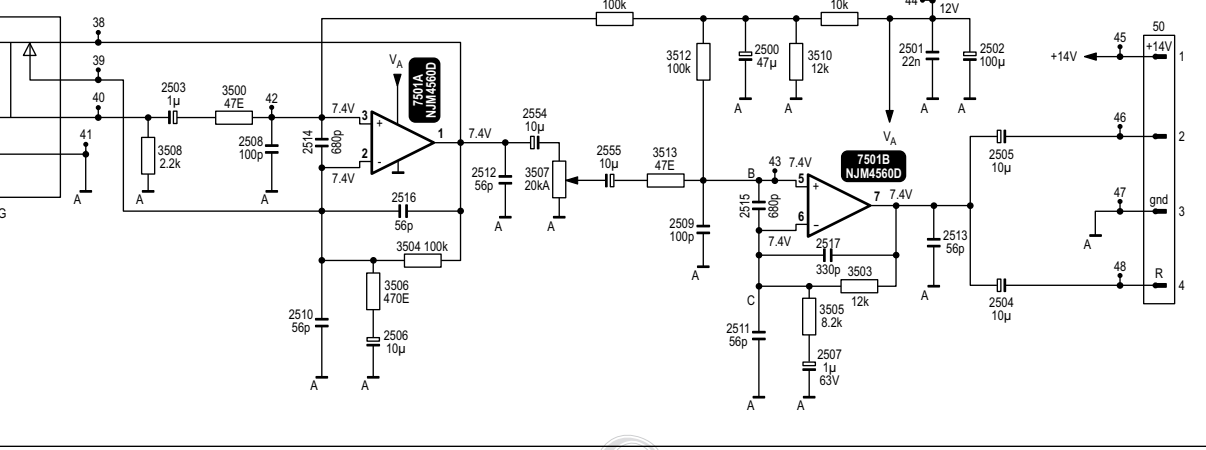
ITEMS	FW20		FW30		FW40	
	STK4112	-	STK4132			
6300	D3SB	D5SB	D5SB			
2300	3300μ		3300μ/35V			
2301	/25V					
1251	1.75A	2.0A	2.5A			
1252						
3251	22k	10k	3.3k			
3252						
2255	100pF	270pF	680pF			
2256						
2302		2200μF	3300μF			

Item marked *	FW40		FW30		FW40	
	All versions except /37	/37	All versions except /37	/37	Other version	/33 /37
1301	2A	3.15A	3.15A	5A	4A	4A 5A
1302						
1303						
1304	1A	1.25A	1A	1.25A		1A 1.25A
1305						
1306	0.63A	1.25A	0.63A	1.25A	0.63A	0.63A 1.25A
1307	-	2A	-	2A	-	1.6A 2A
1308						
1309	0.63A	1.25A	0.63A	1.25A	0.63A	0.63A 1.25A

TUNER UNIT



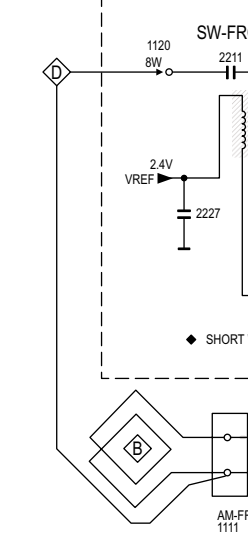
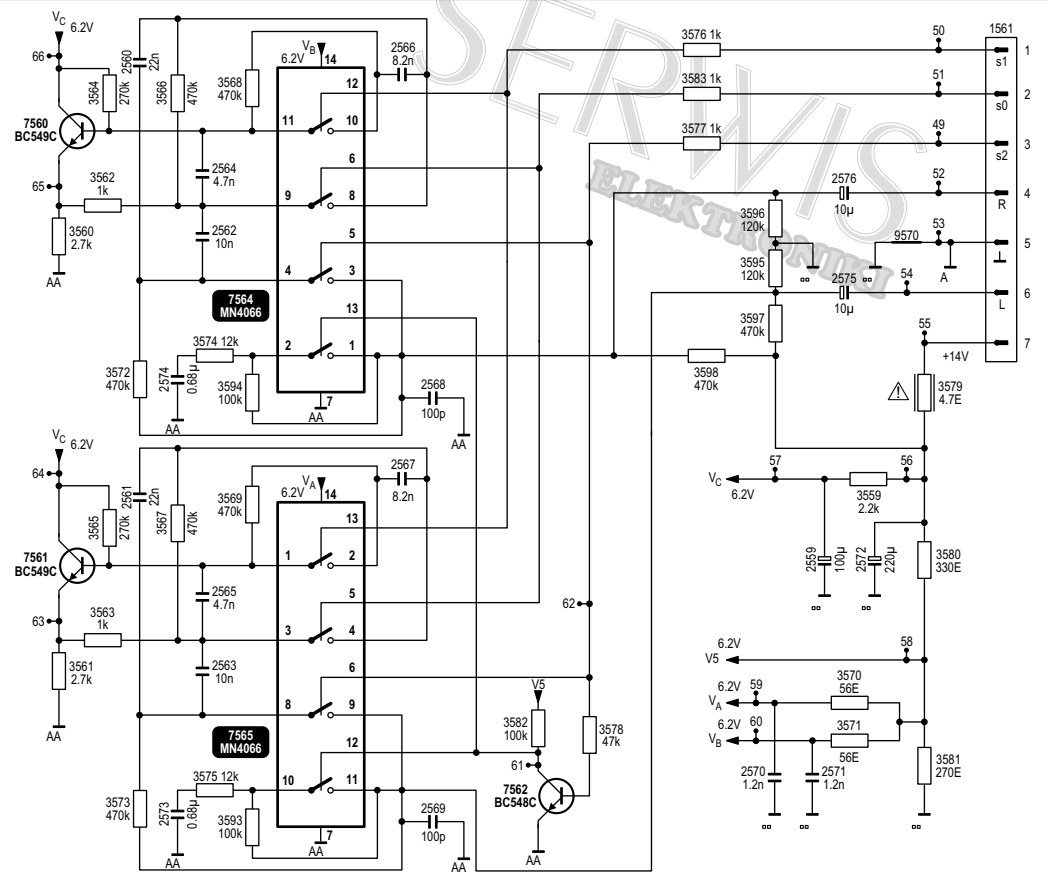
C MIXER
20/20 FW30/20 FW40/20
VERSION 21 ONLY



GROUND CONTROL
V20

LOGIC TABLE

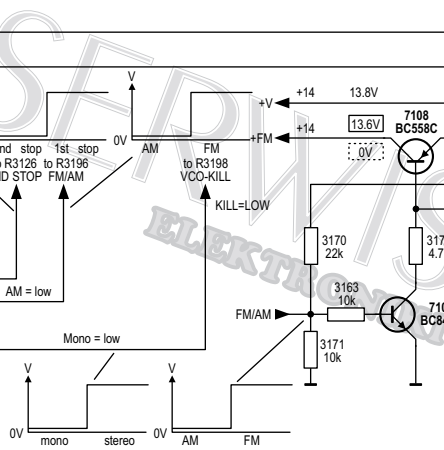
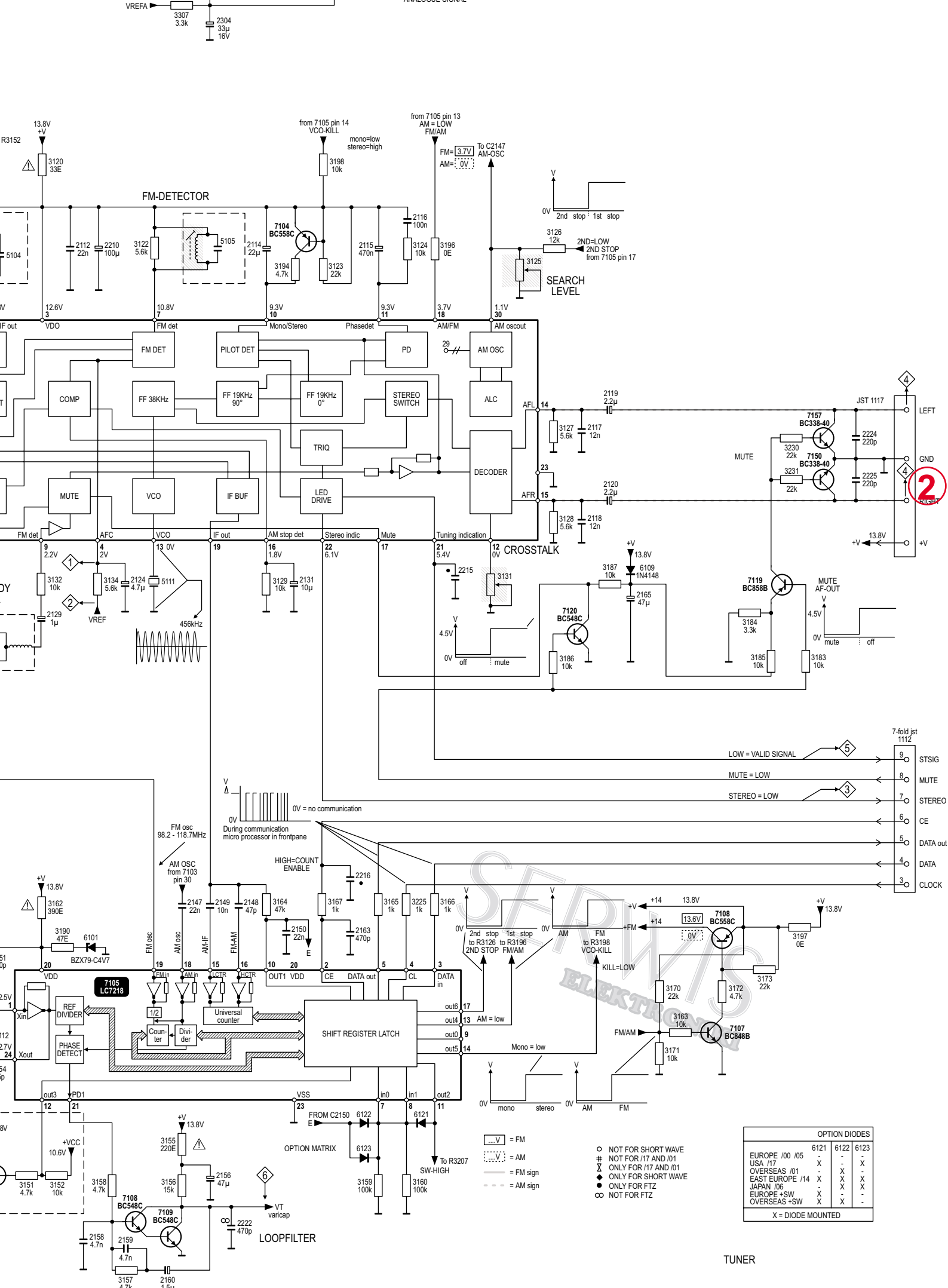
S0	S1	S2
0	1	1
1	0	1
0	0	1
0	1	0



Varicap voltage

FM :	108MHz	7.9V	/00
FM :	87.5MHz	1.3-2V	/00
FM :	65MHz	1.3-3V	/14
FM :	108MHz	7-10.5V	/14
FM :	78MHz	1.3-2V	/08
FM :	90MHz	7-9V	/08
LW :	279kHz	8.5V	/00
LW :	153kHz	1V	± 0.3V
MW :	1.611kHz	8.5V	± 0.1V
MW :	1.710kHz	8.5V	± 0.1V
MW :	522kHz	1.1V	± 0.3V
MW :	530kHz	1V	± 0.3V
SW :	12.1MHz	8.5V	± 0.1V
SW :	3.9MHz	1V	± 0.3V
SW :	18.1MHz	8.5V	± 0.1V
SW :	5.9MHz	1V	± 0.3V





- = FM
- = AM
- = FM sign
- = AM sign
- NOT FOR SHORT WAVE
- # NOT FOR /17 AND /01
- X ONLY FOR /17 AND /01
- ONLY FOR SHORT WAVE
- ONLY FOR FTZ
- ∞ NOT FOR FTZ

		OPTION DIODES	
		6121	6123
EUROPE /00 /05		-	-
USA /17		X	X
OVERSEAS /01		X	X
EAST EUROPE /14		X	X
JAPAN /06		X	X
EUROPE +SW		X	-
OVERSEAS +SW		X	-

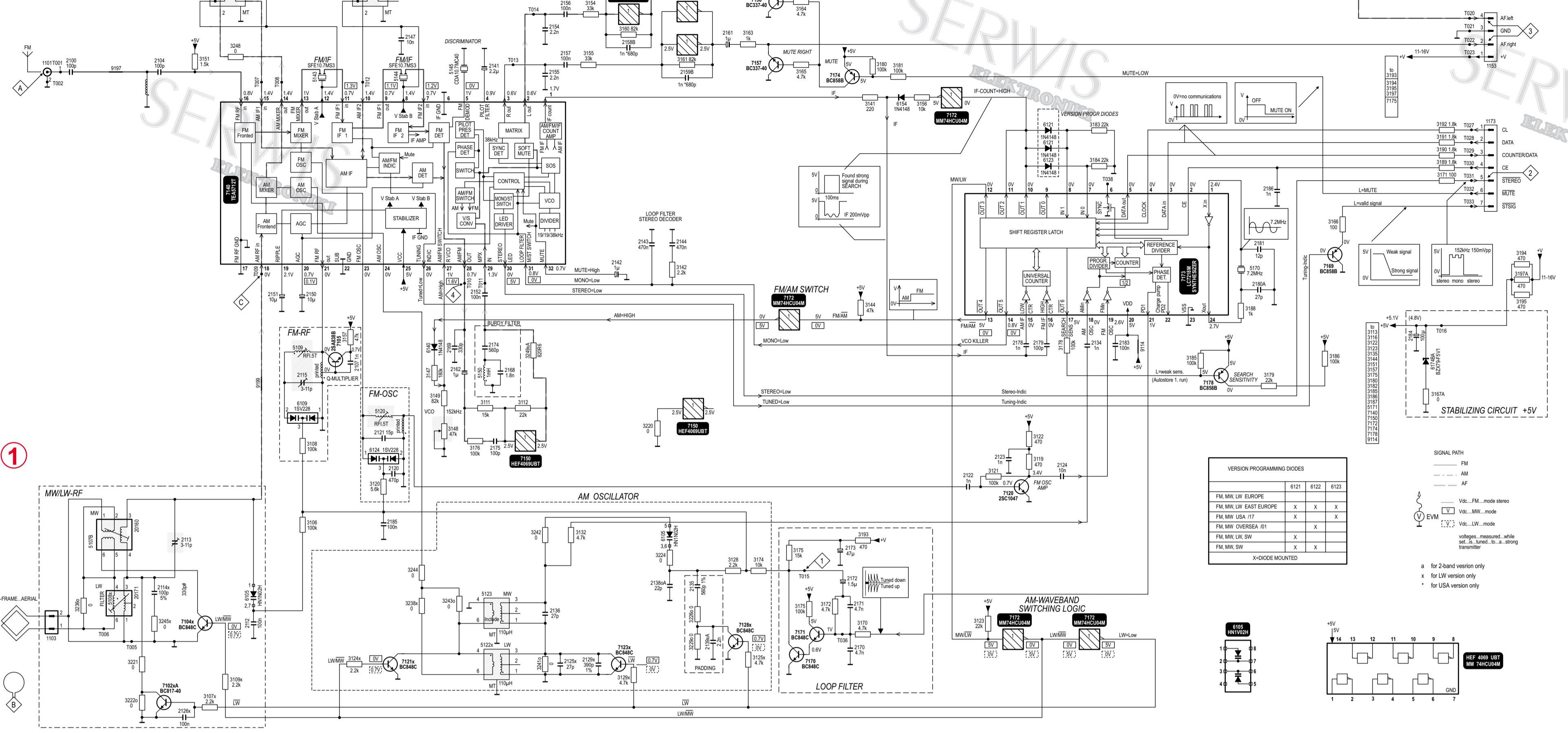
X = DIODE MOUNTED

TUNER

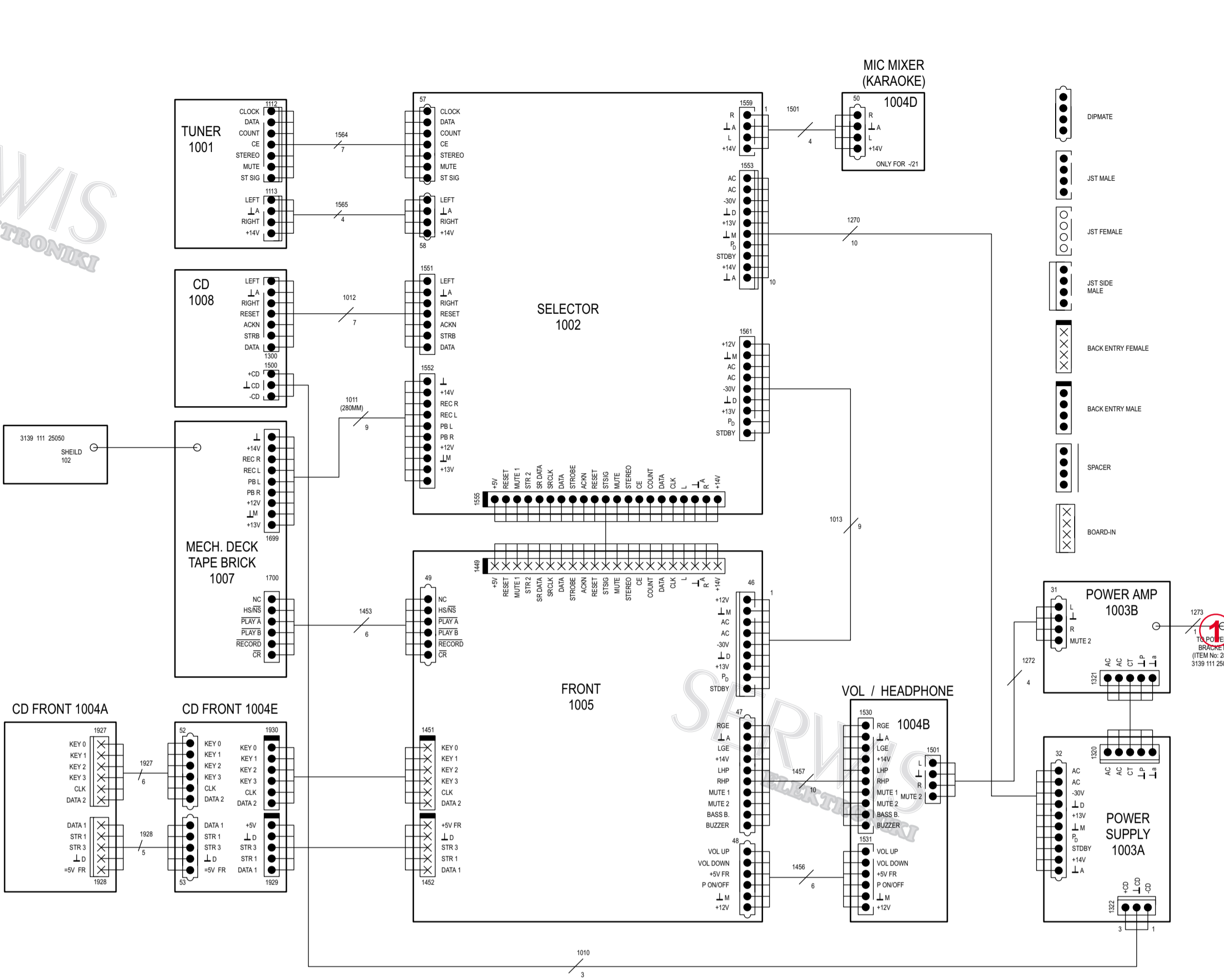


Zestaw audio Philips FW21/20/21/22/37

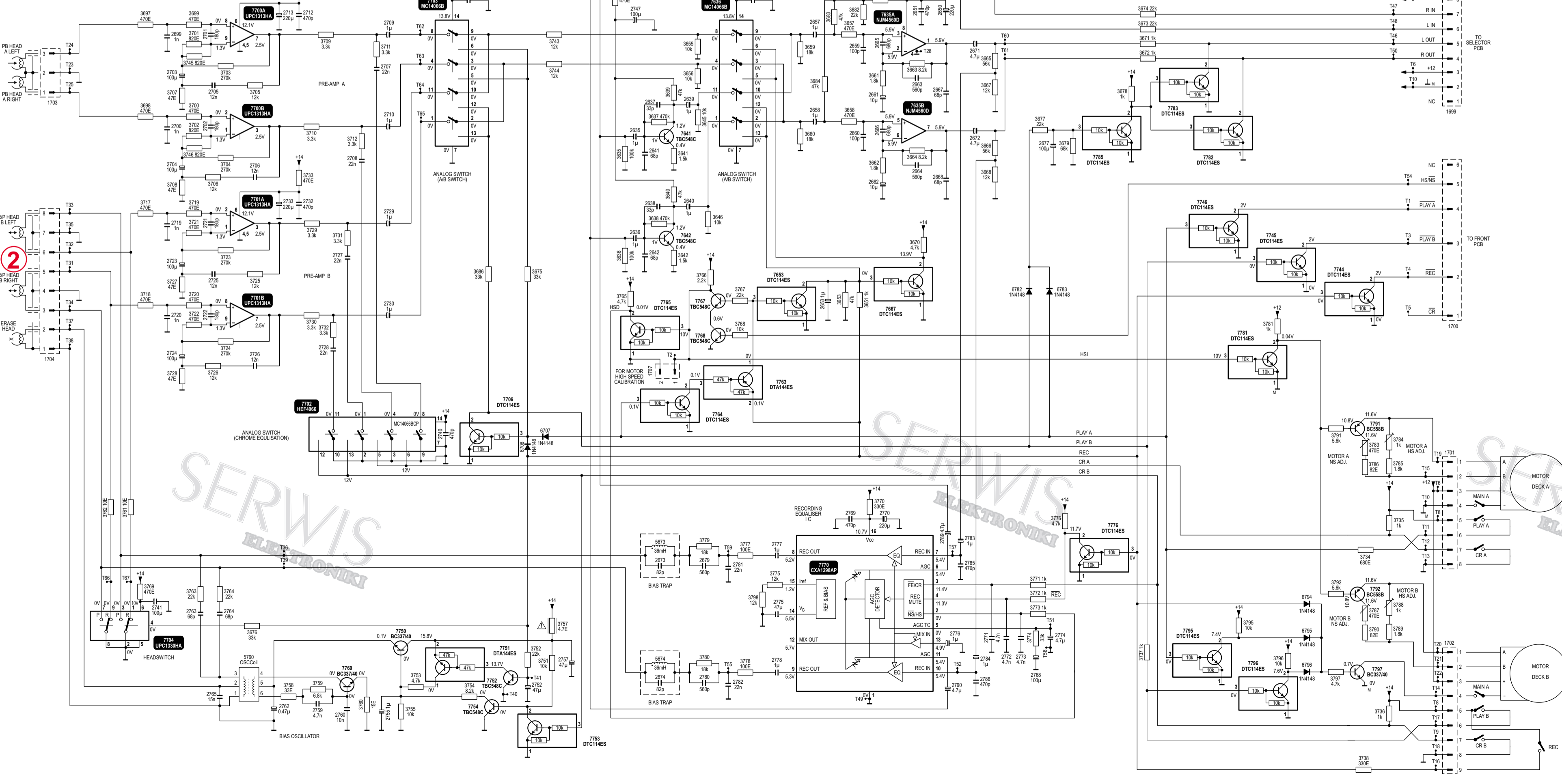
ECO4 CIRCUIT DIAGRAM TUNER UNIT ECO4 (MINI)



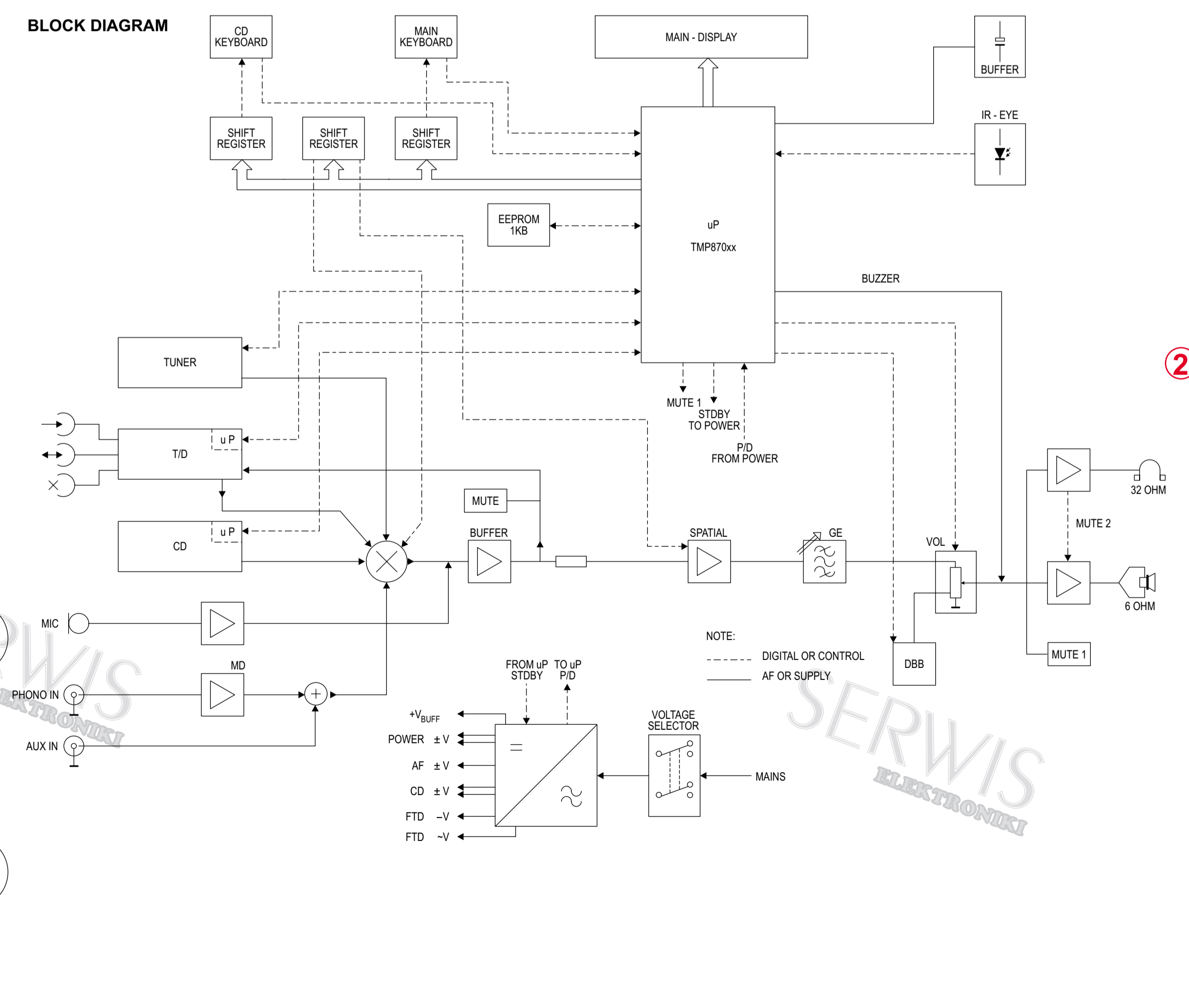
1



TAPECORE CIRCUIT DIAGRAM



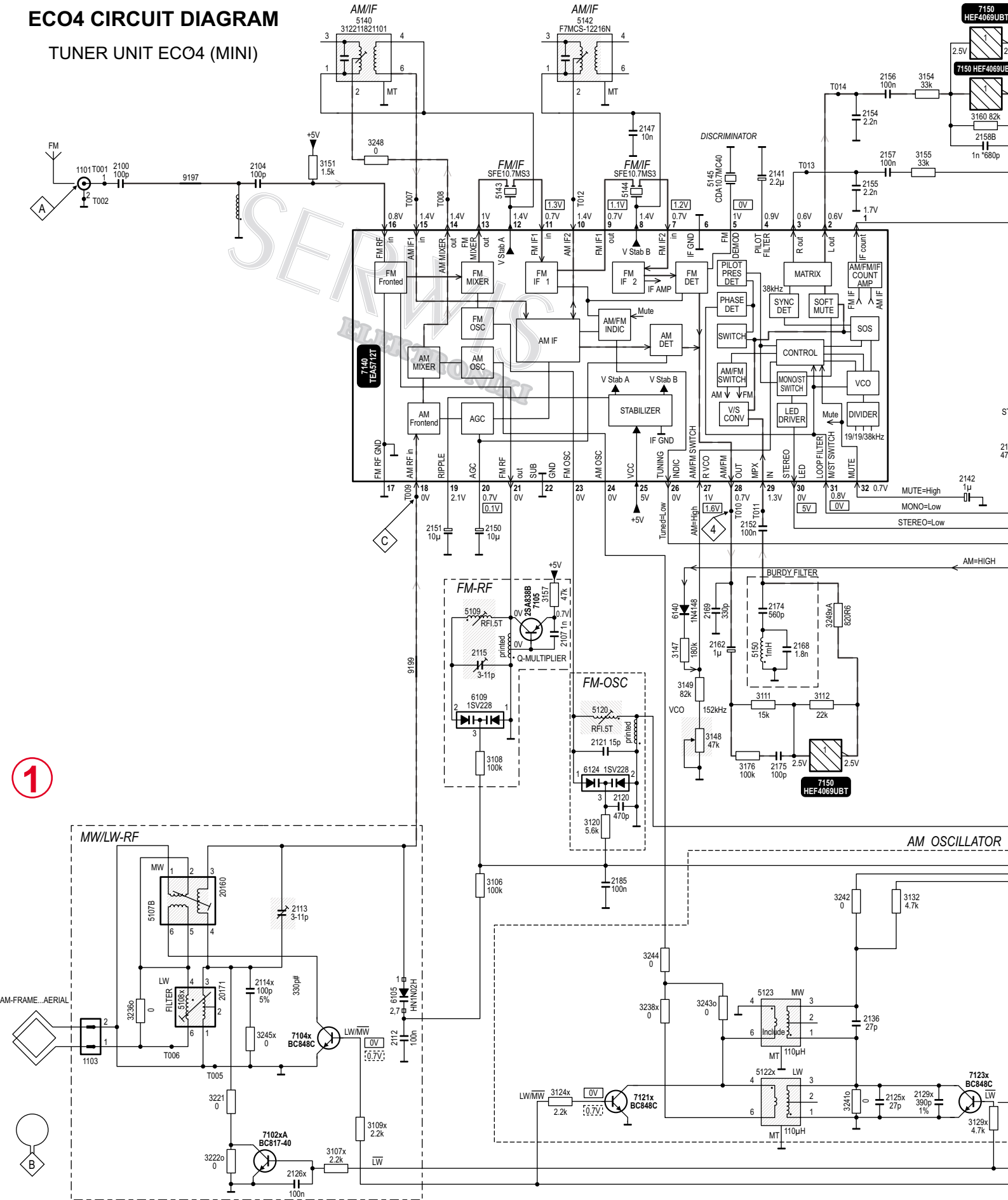
2



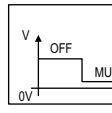
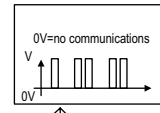
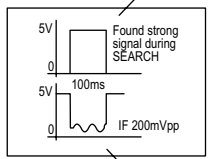
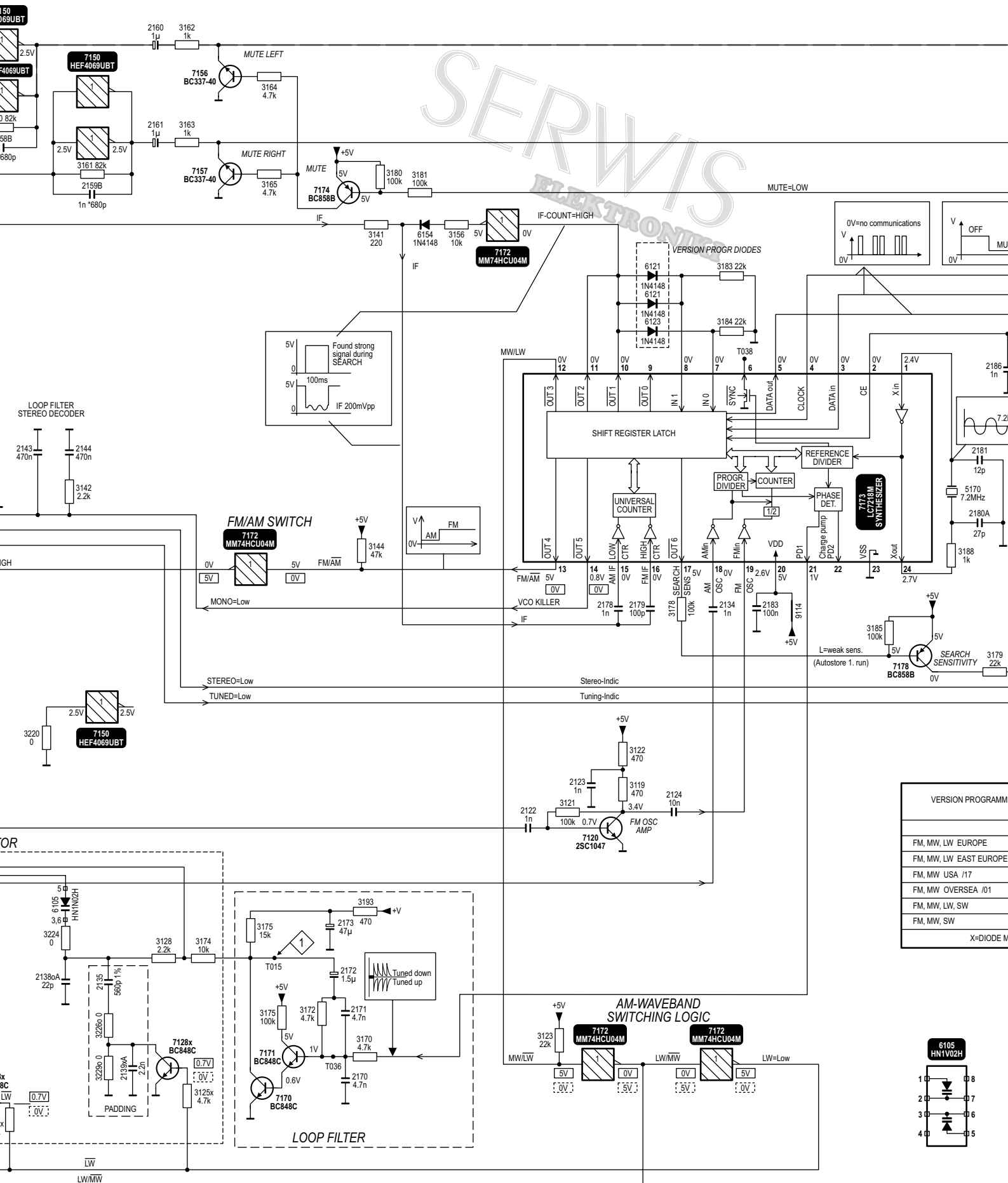
2

Zestaw audio Philips FW21/20/21/22/37

ECO4 CIRCUIT DIAGRAM TUNER UNIT ECO4 (MINI)



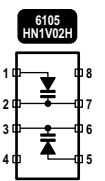
1

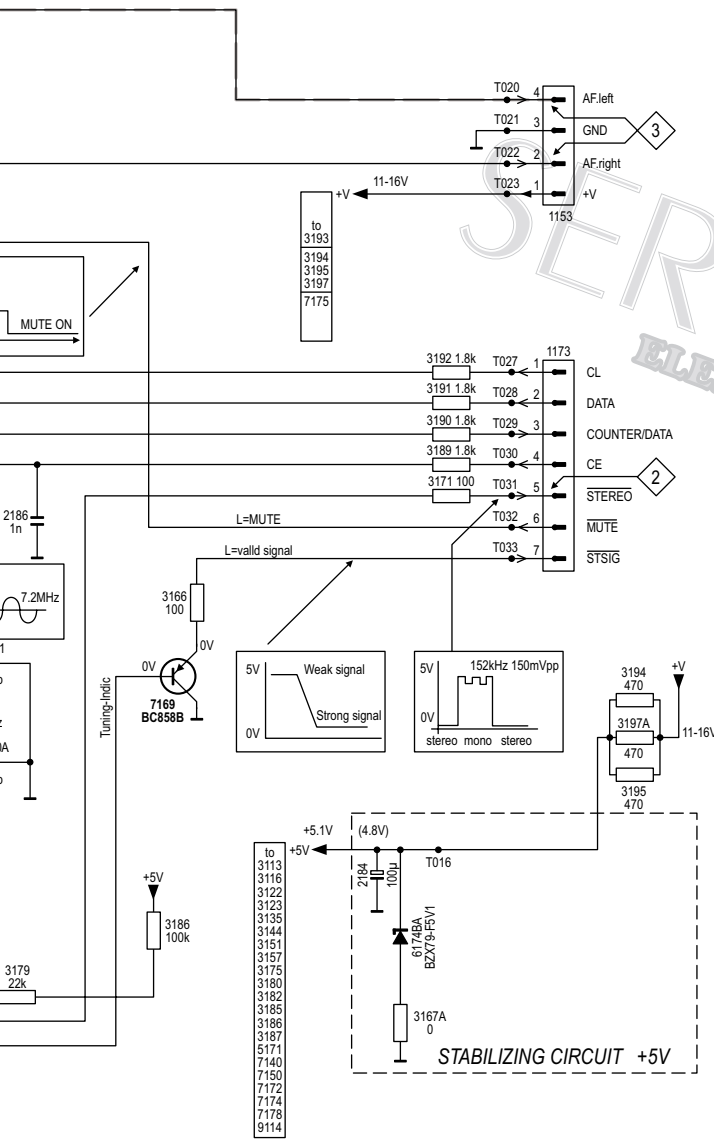


VERSION PROGRAMM

FM, MW, LW EUROPE
FM, MW, LW EAST EUROPE
FM, MW USA /17
FM, MW OVERSEA /01
FM, MW, LW, SW
FM, MW, SW

X=DIODE M

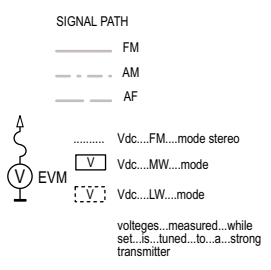




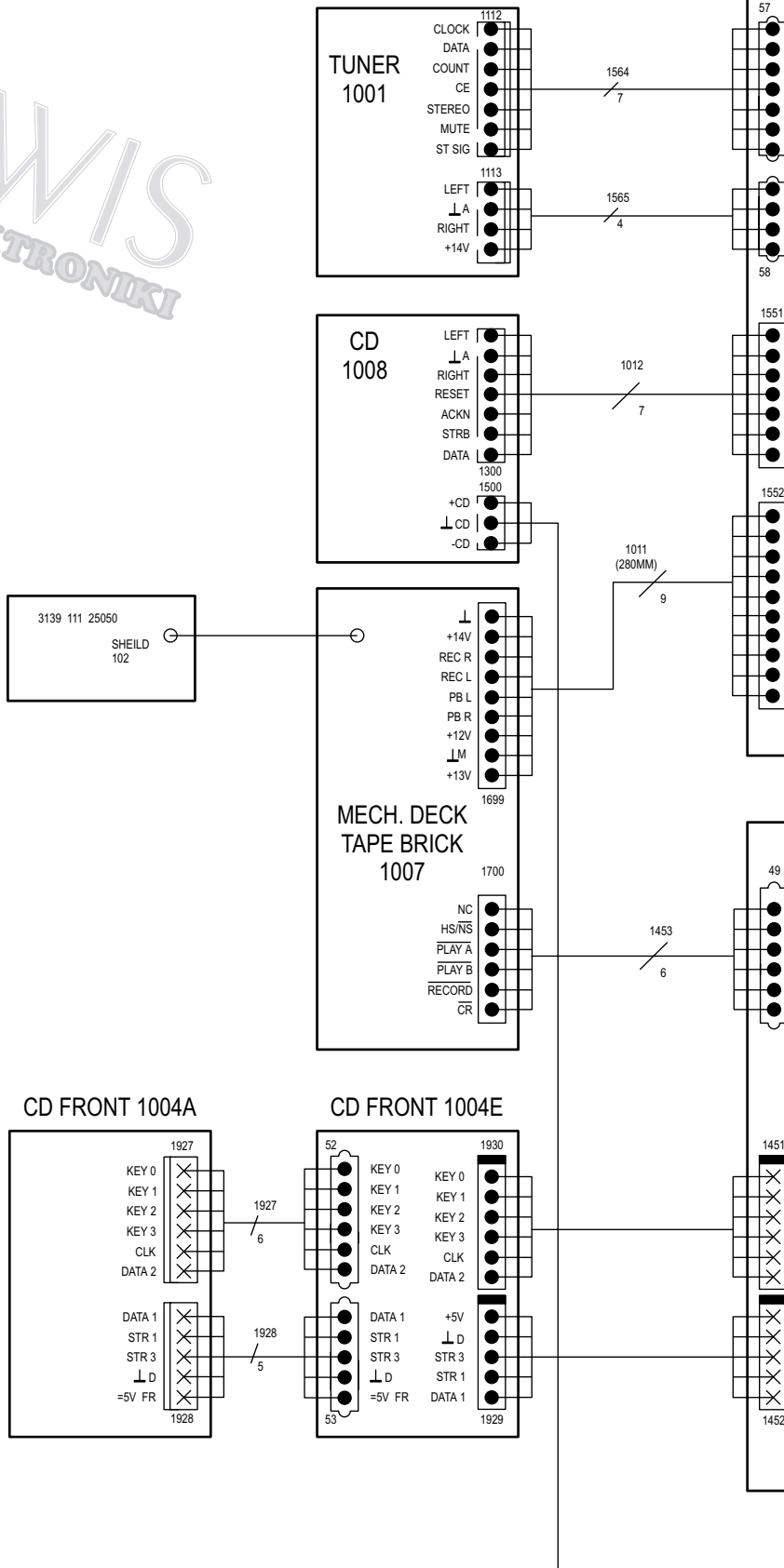
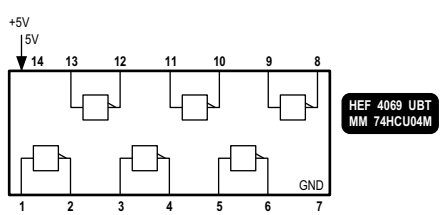
PROGRAMMING DIODES

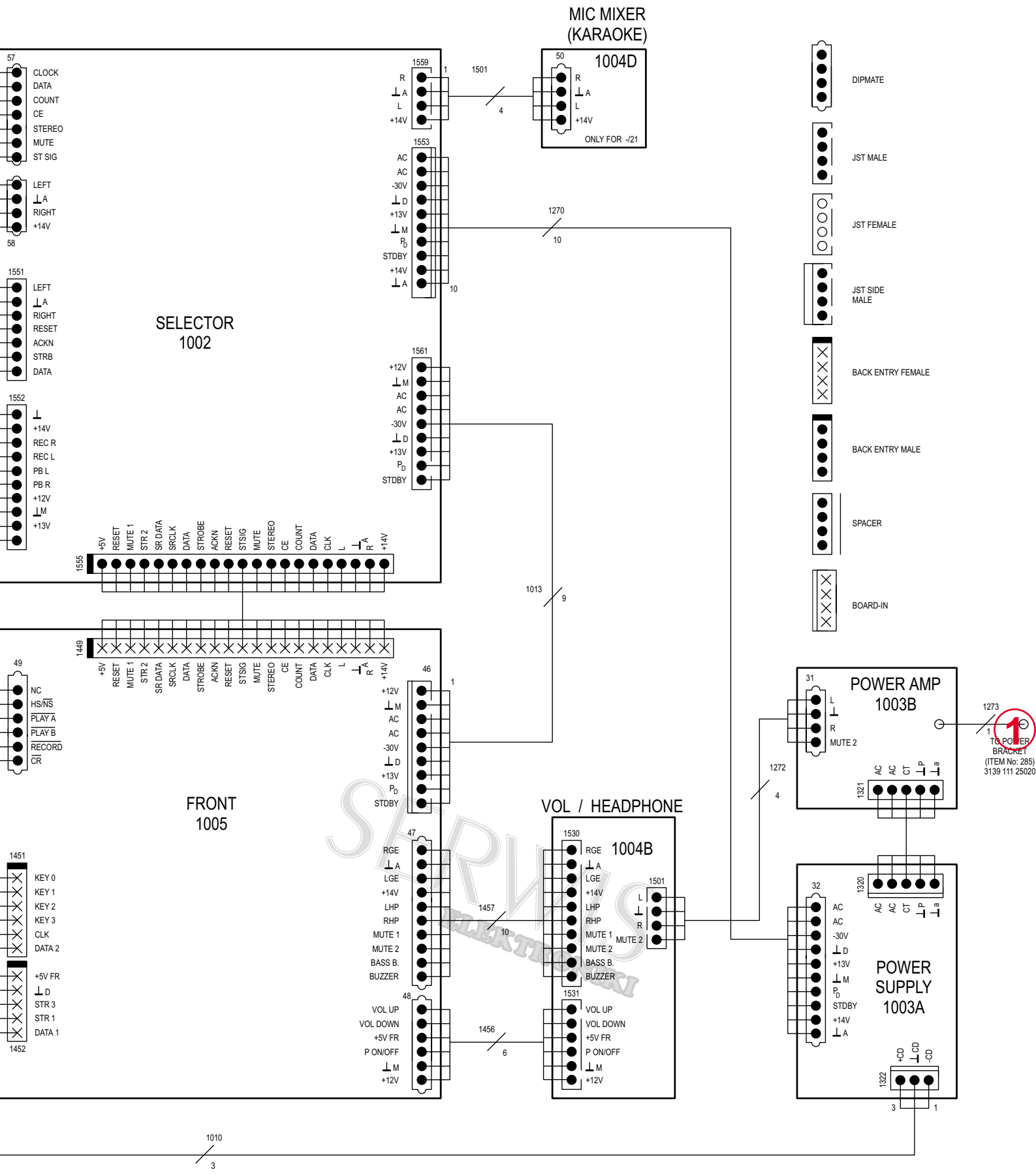
	6121	6122	6123
EUROPE	X	X	X
USA	X		X
101		X	
	X		
	X	X	

DIODE MOUNTED



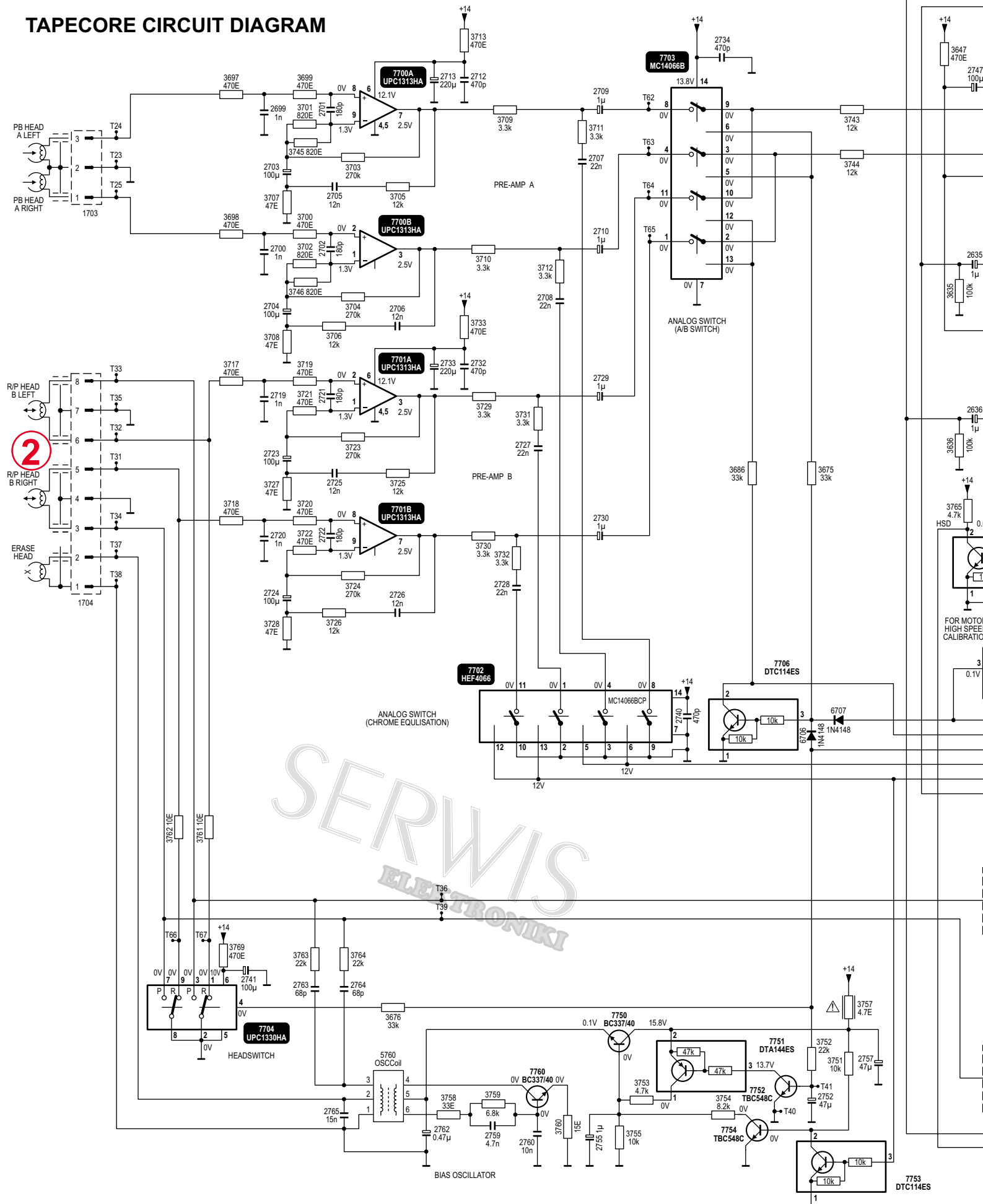
a for 2-band version only
 x for LW version only
 * for USA version only

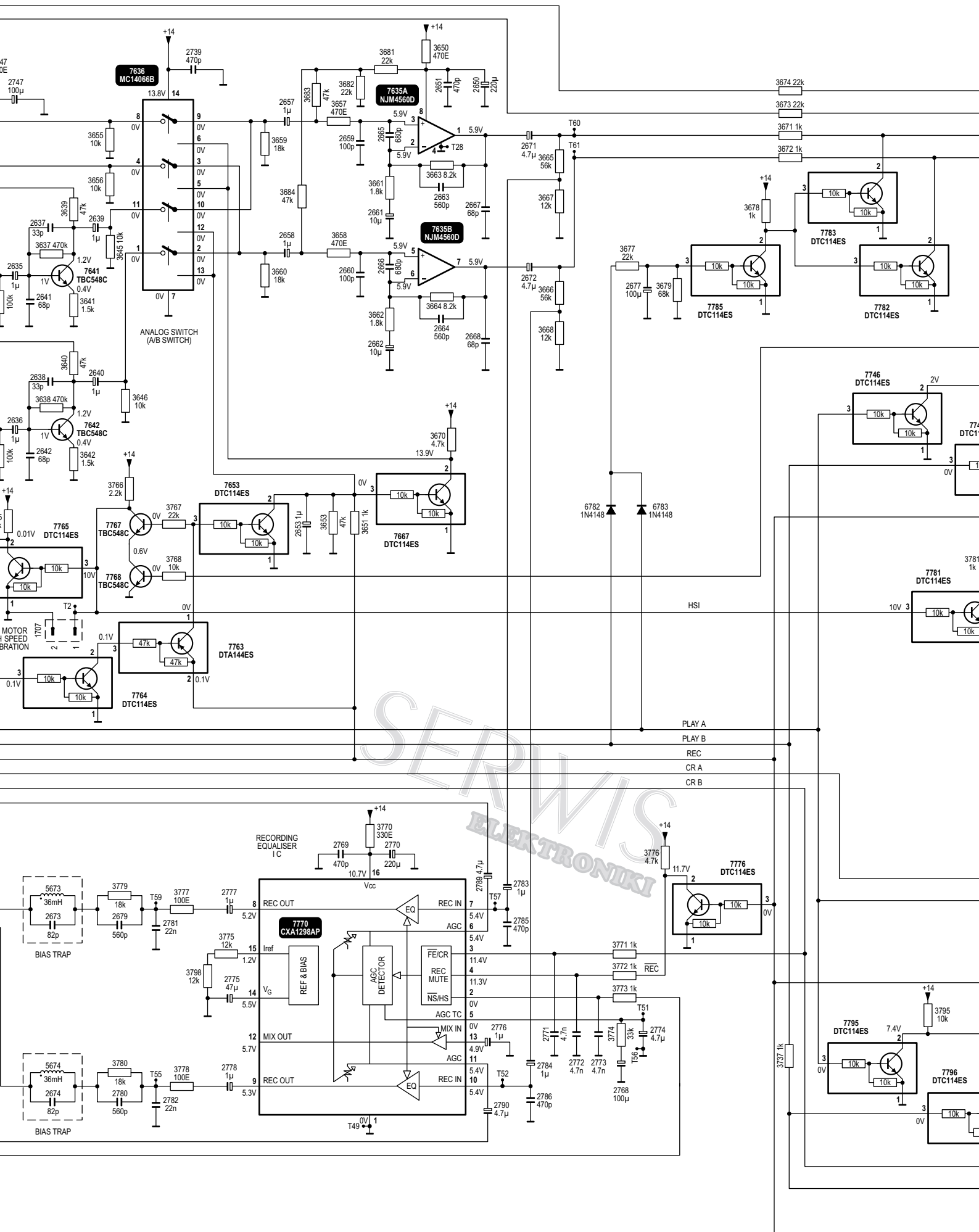


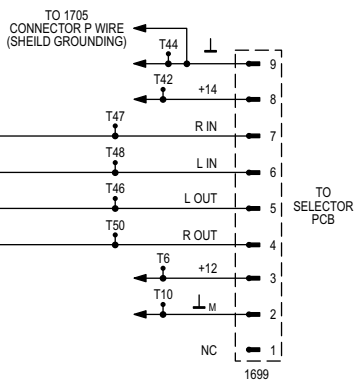


1273
TO POWER BRACKET (ITEM No: 285) 3139 111 25020

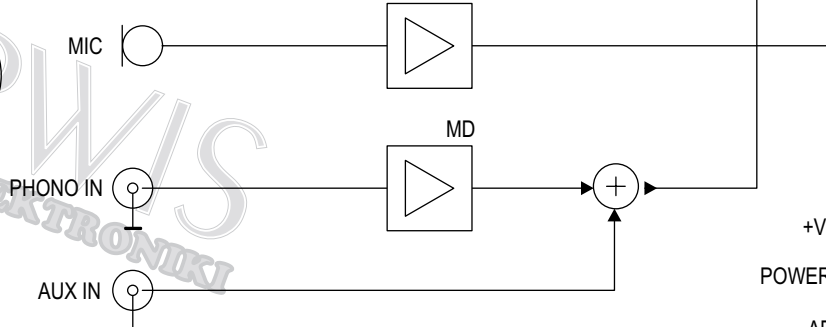
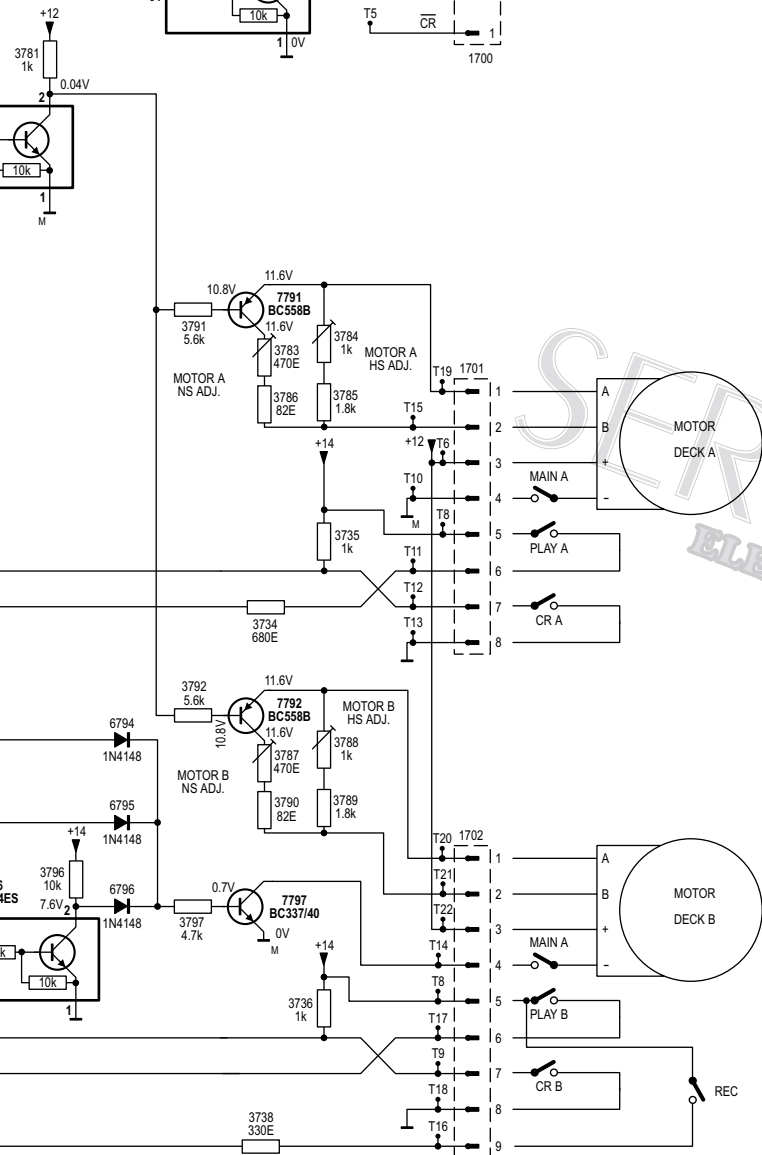
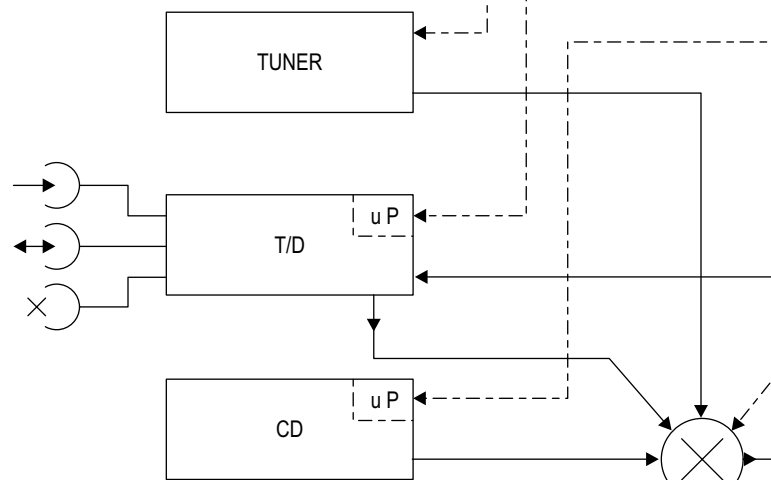
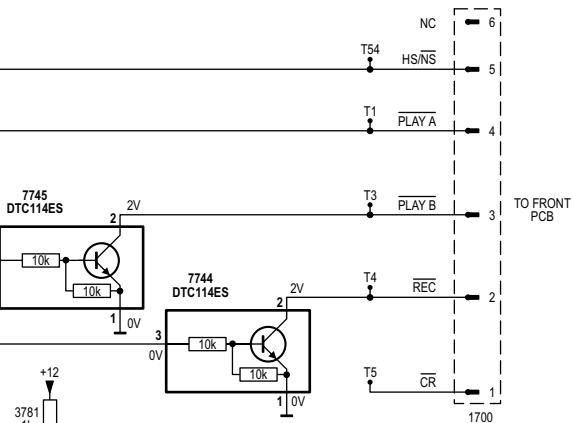
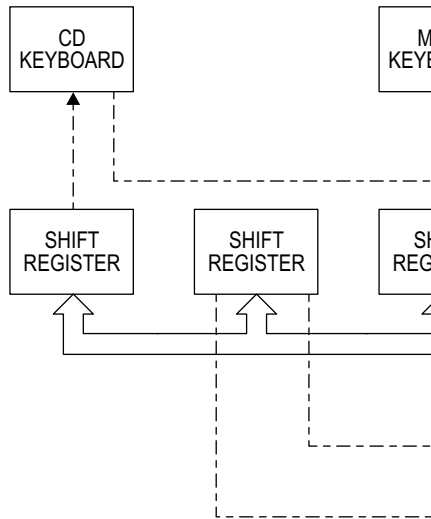
TAPECORE CIRCUIT DIAGRAM



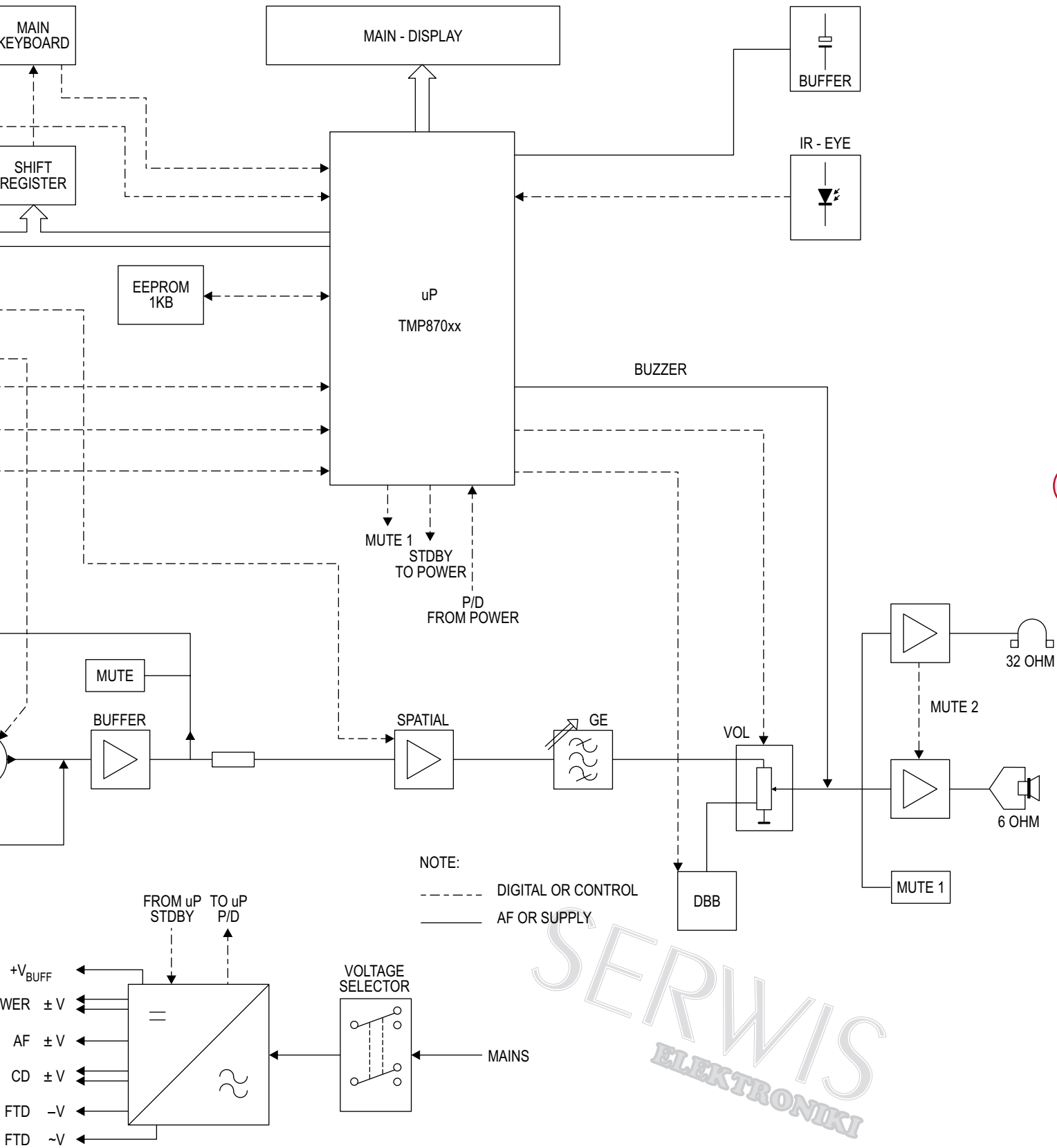




BLOCK DIAGRAM



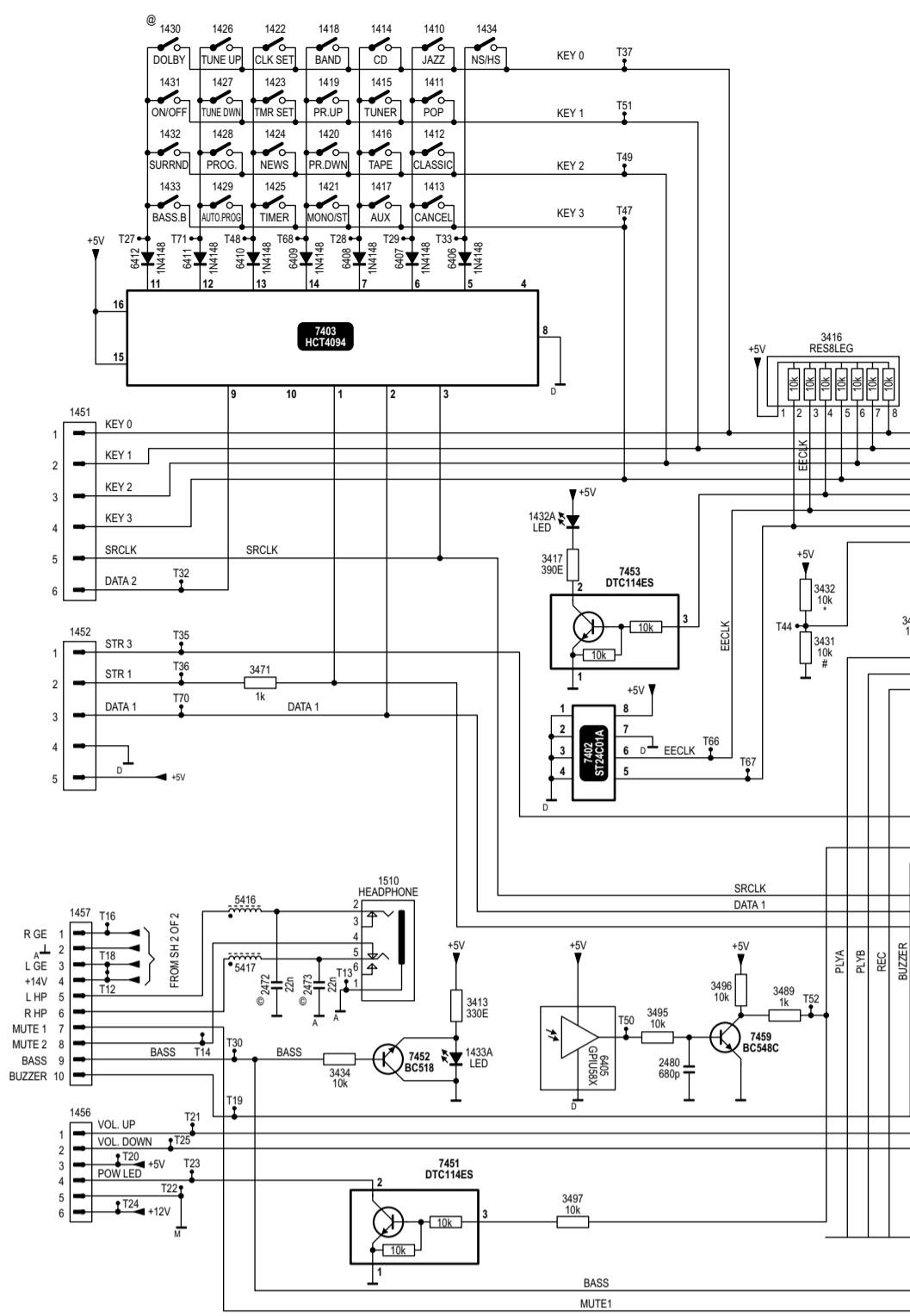
+V
POWER
AF
CD
FTD
FTD



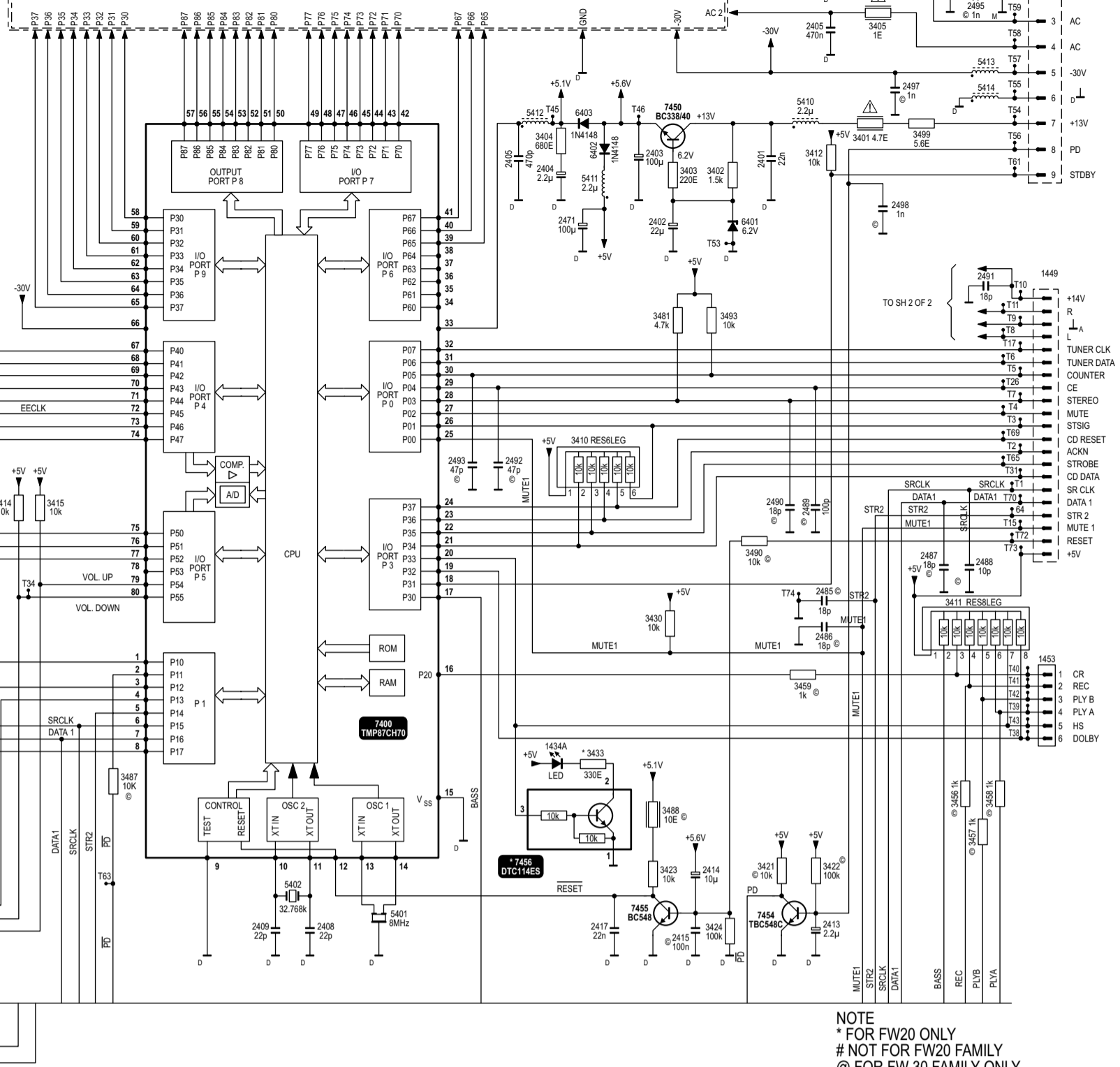
2

SERWIS
ELEKTRONIKI

FRONT CIRCUIT I

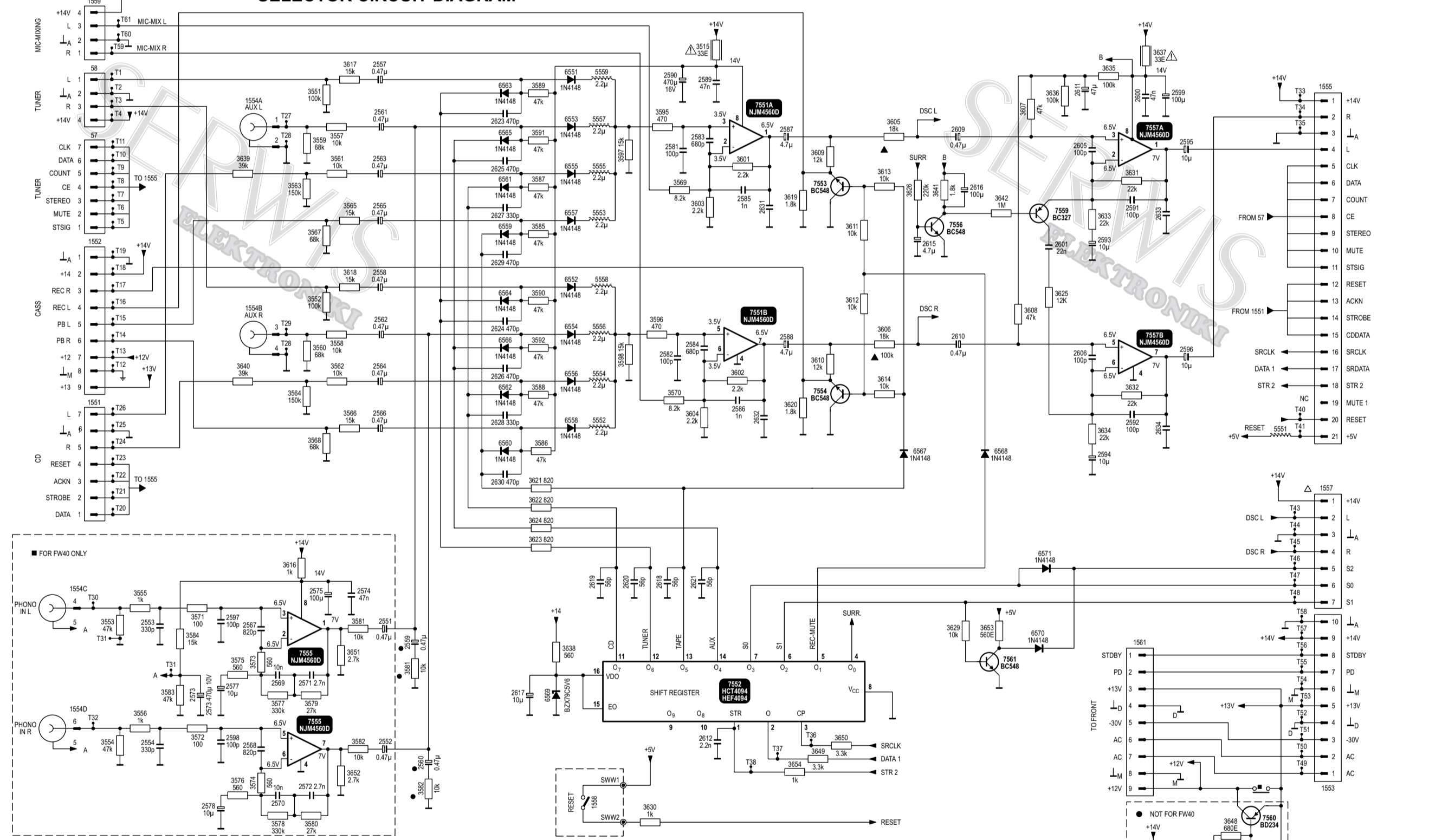


DISPLAY CONNECTION

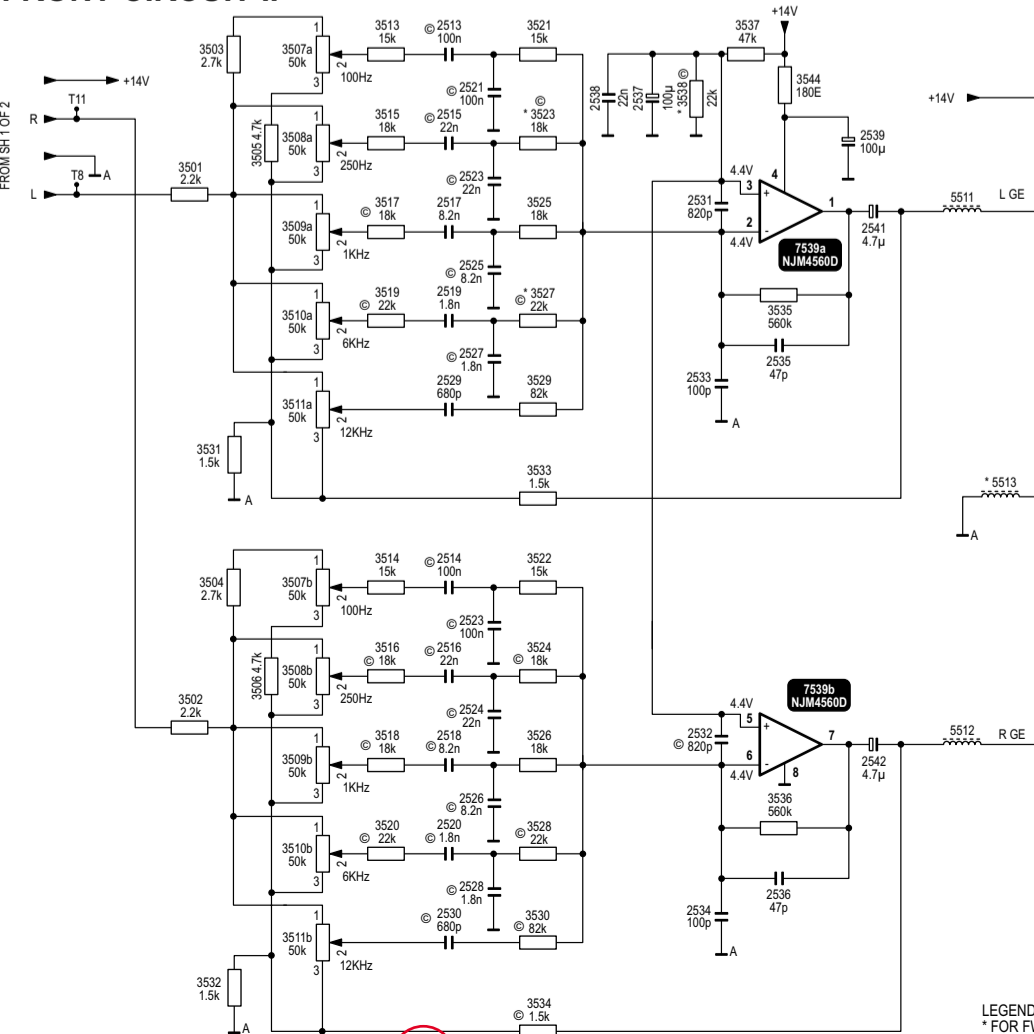


NOTE * FOR FW20 ONLY # NOT FOR FW20 FAMILY @ FOR FW 30 FAMILY ONLY

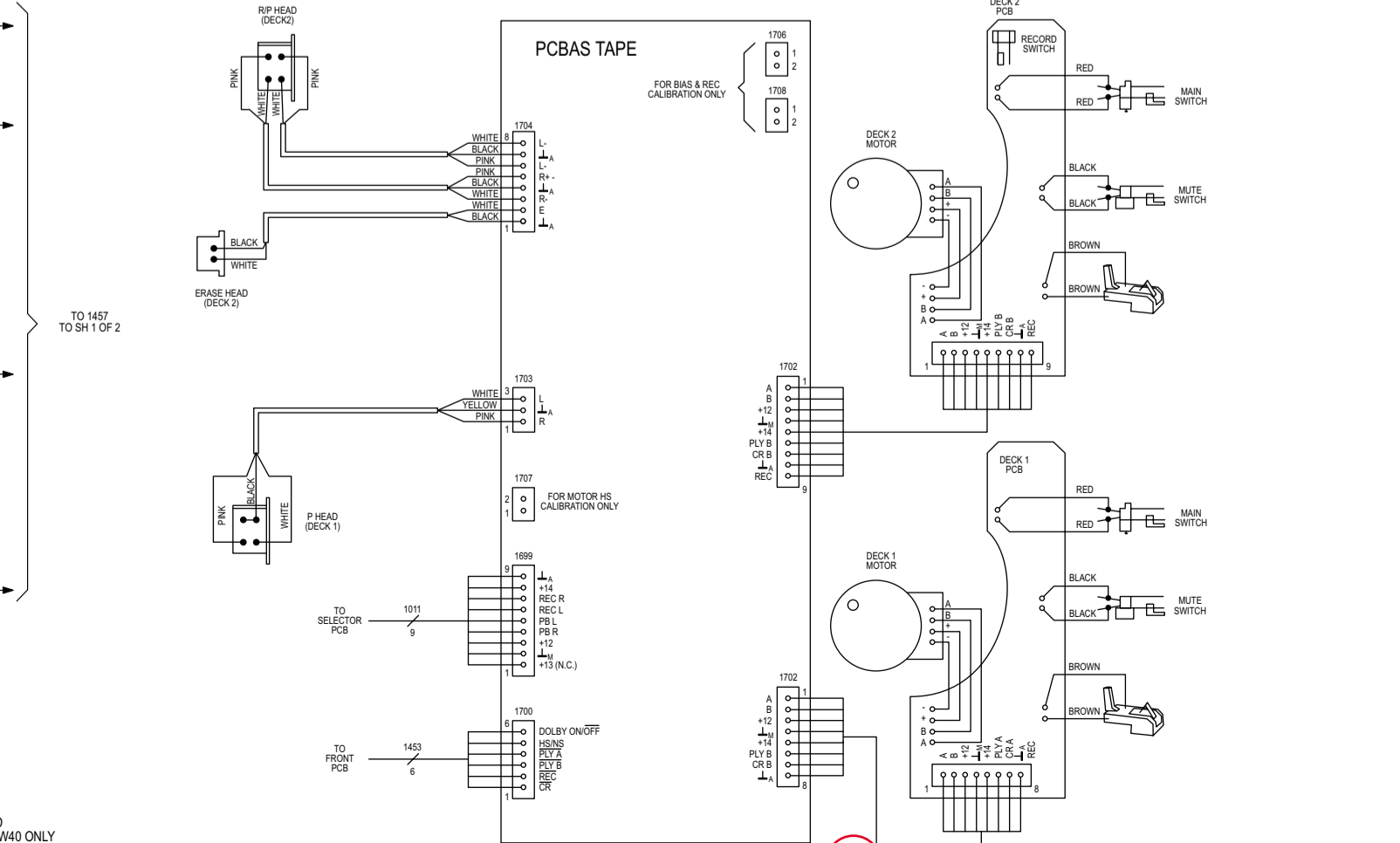
SELECTOR CIRCUIT DIAGRAM



FRONT CIRCUIT II



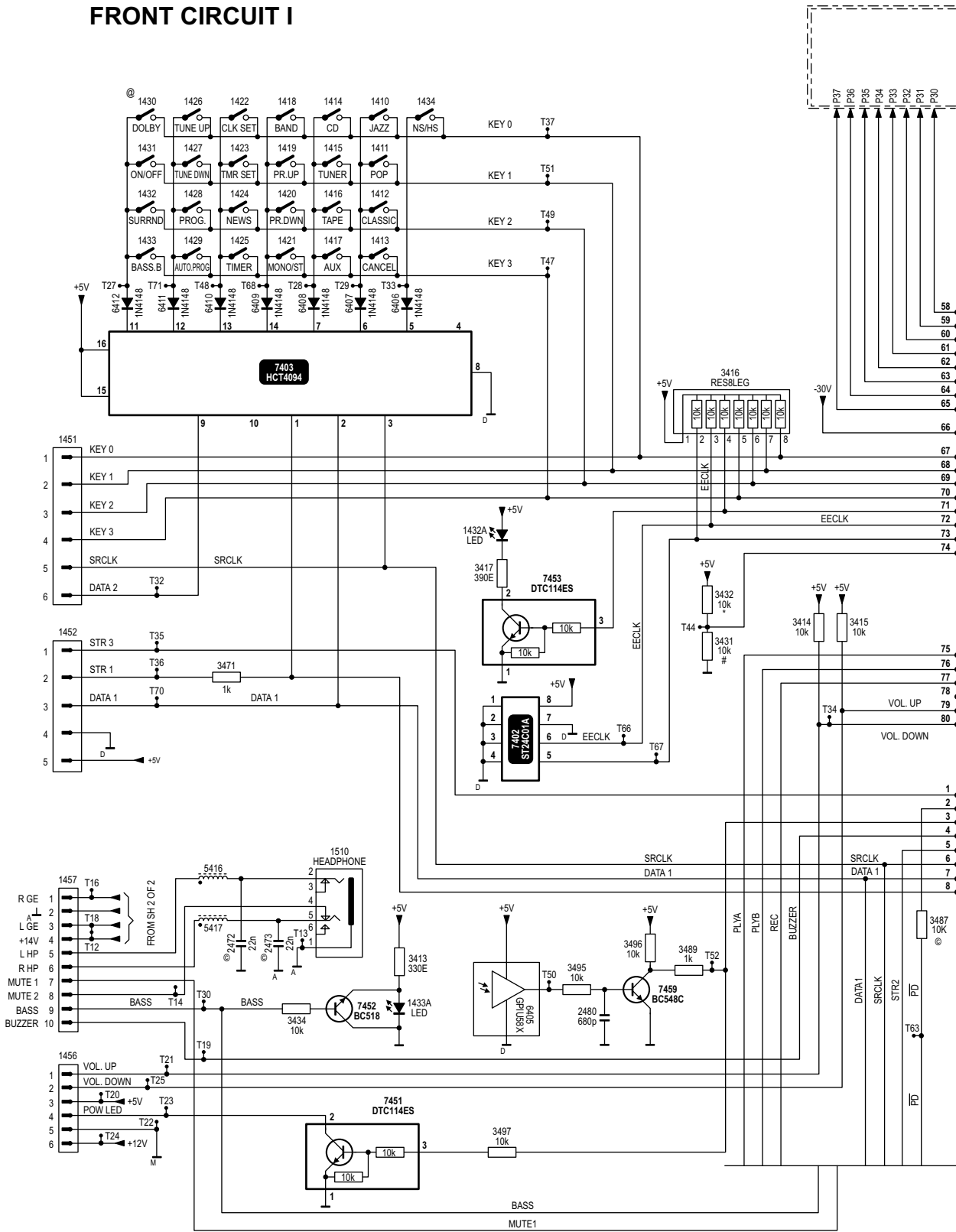
TAPE UNIT WIRING



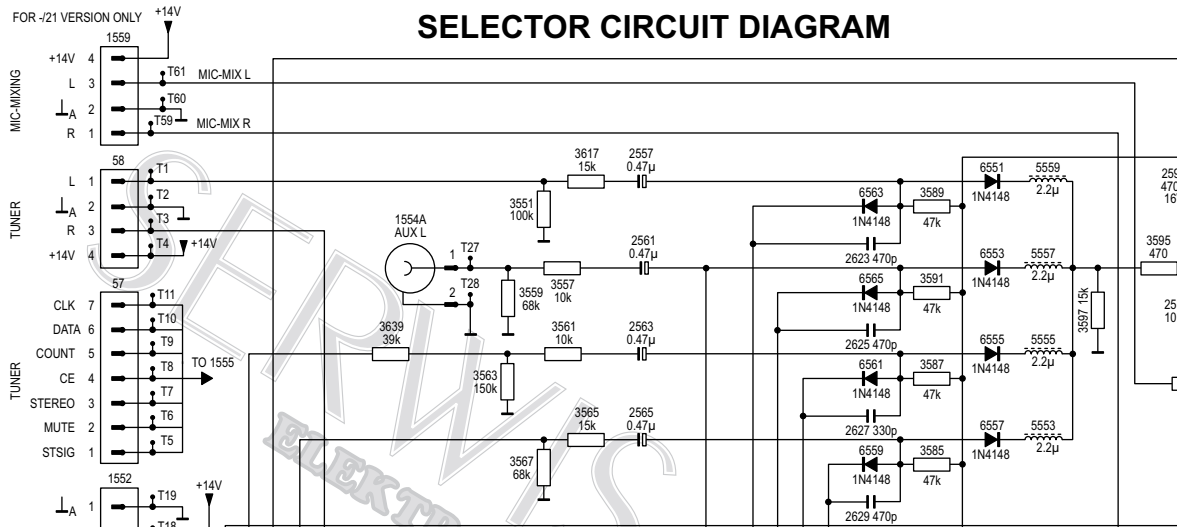
Zestaw audio Philips FW21/20/21/22/37

1

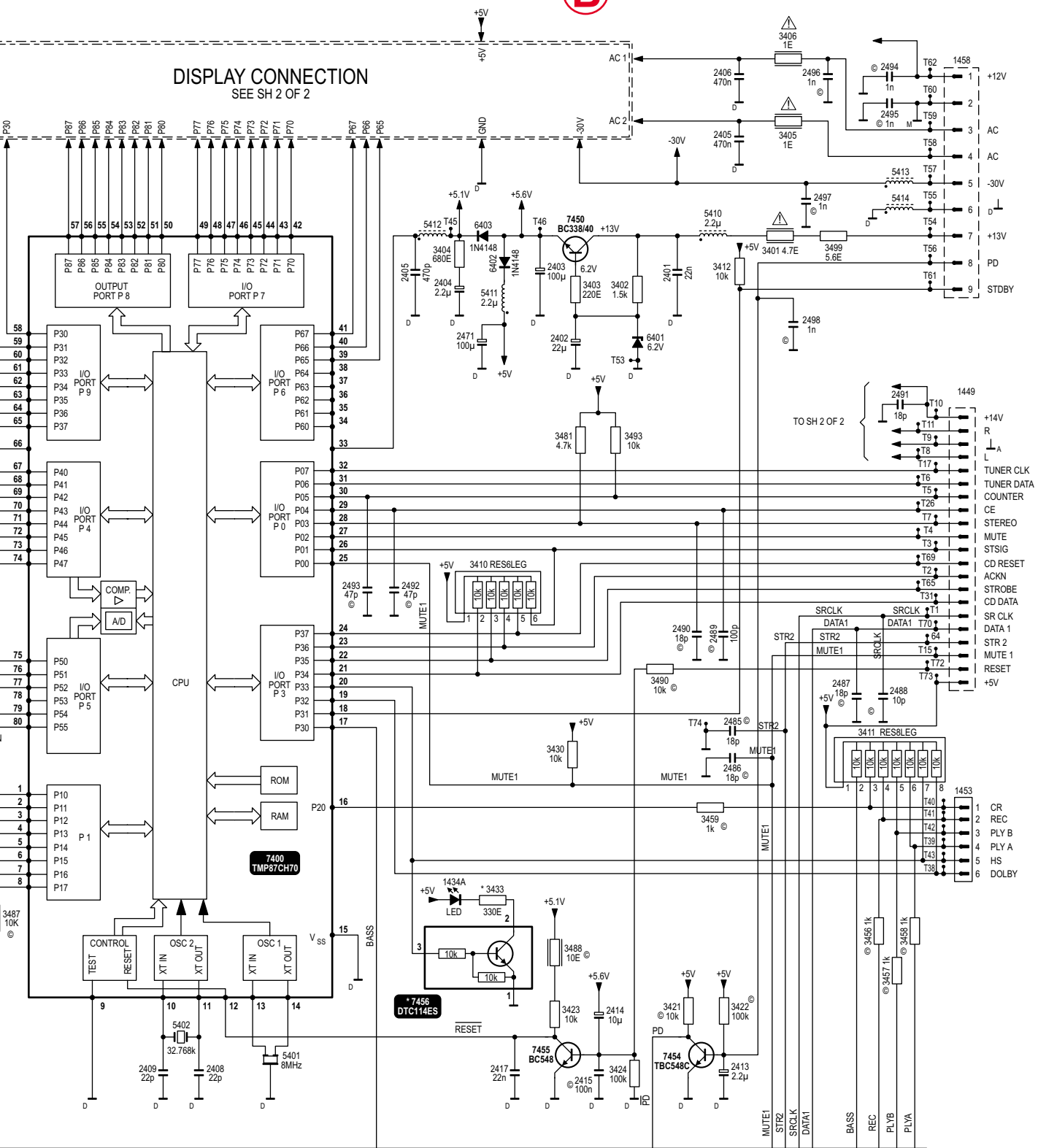
FRONT CIRCUIT I



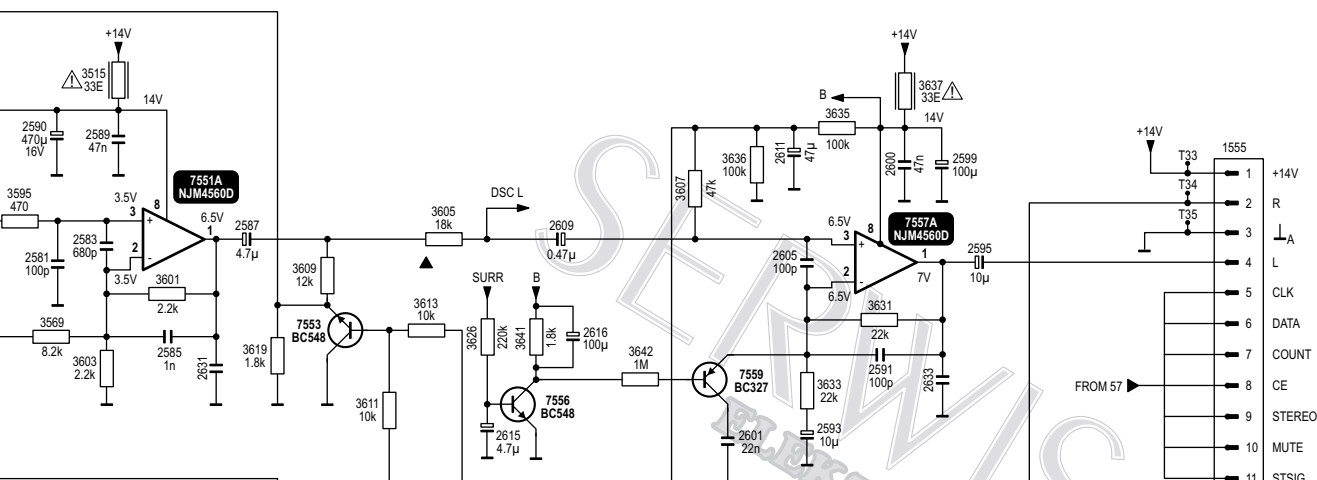
SELECTOR CIRCUIT DIAGRAM



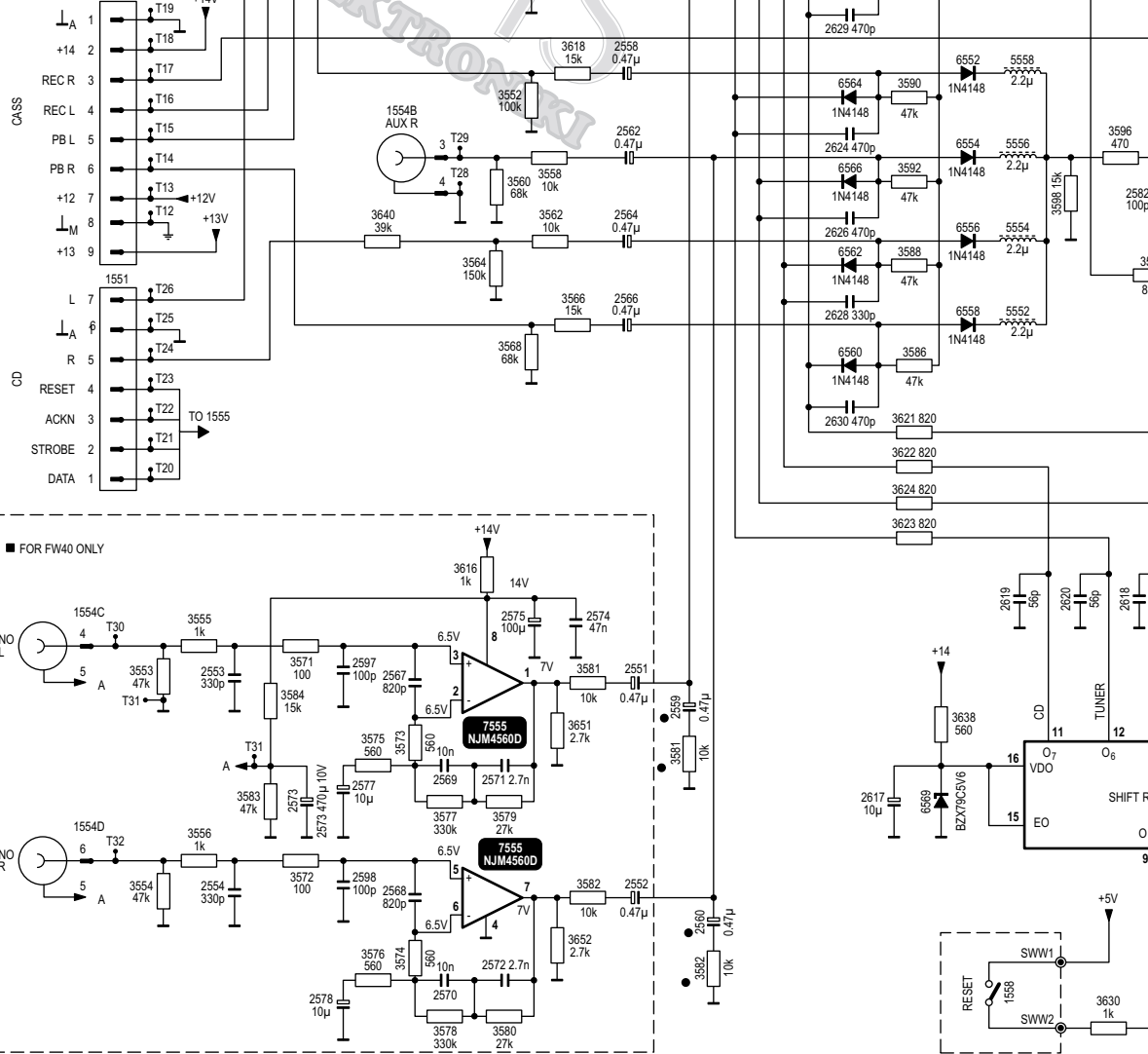
DISPLAY CONNECTION
SEE SH 2 OF 2



NOTE
 * FOR FW20 ONLY
 # NOT FOR FW20 FAMILY
 @ FOR FW 30 FAMILY ONLY

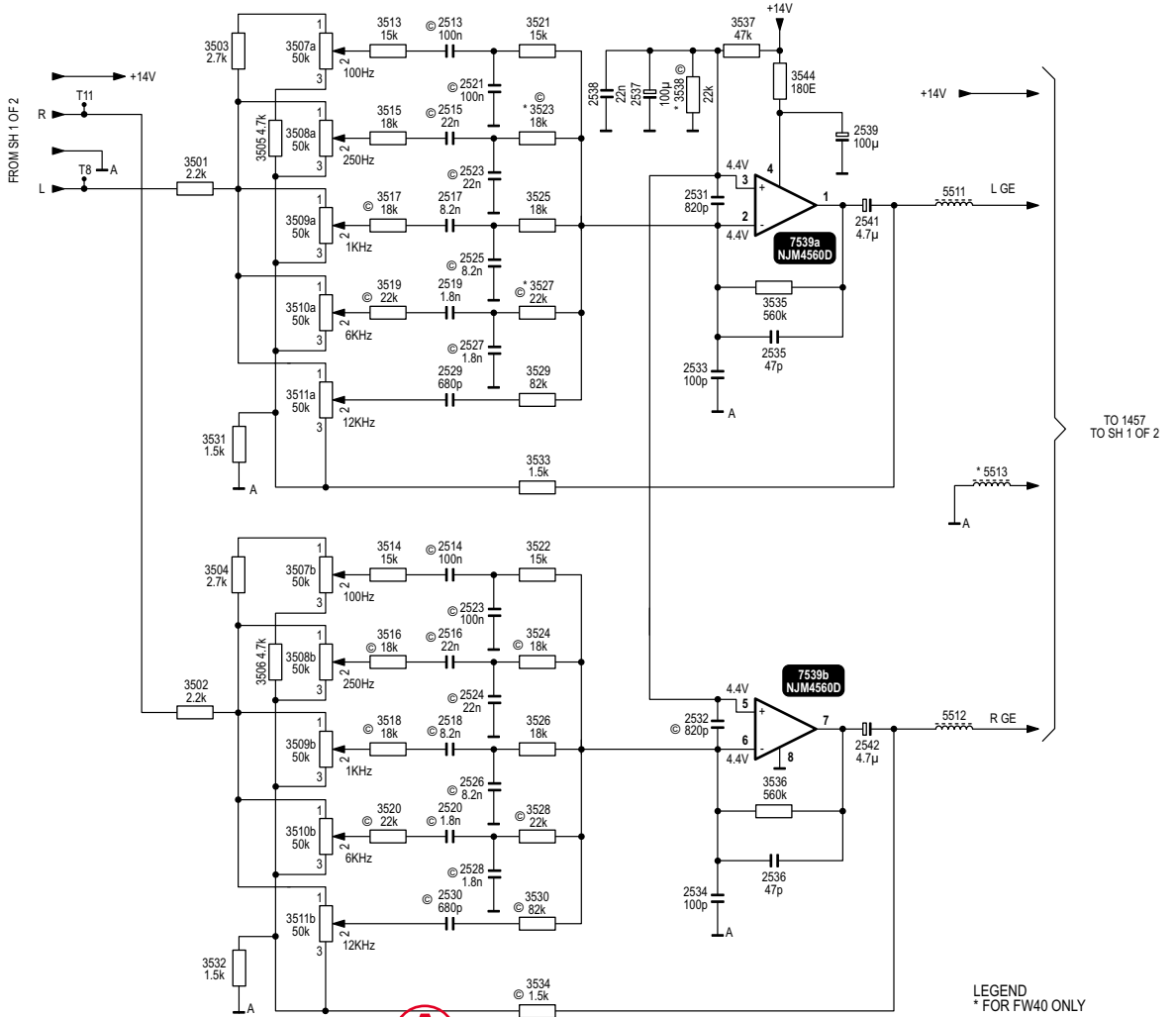


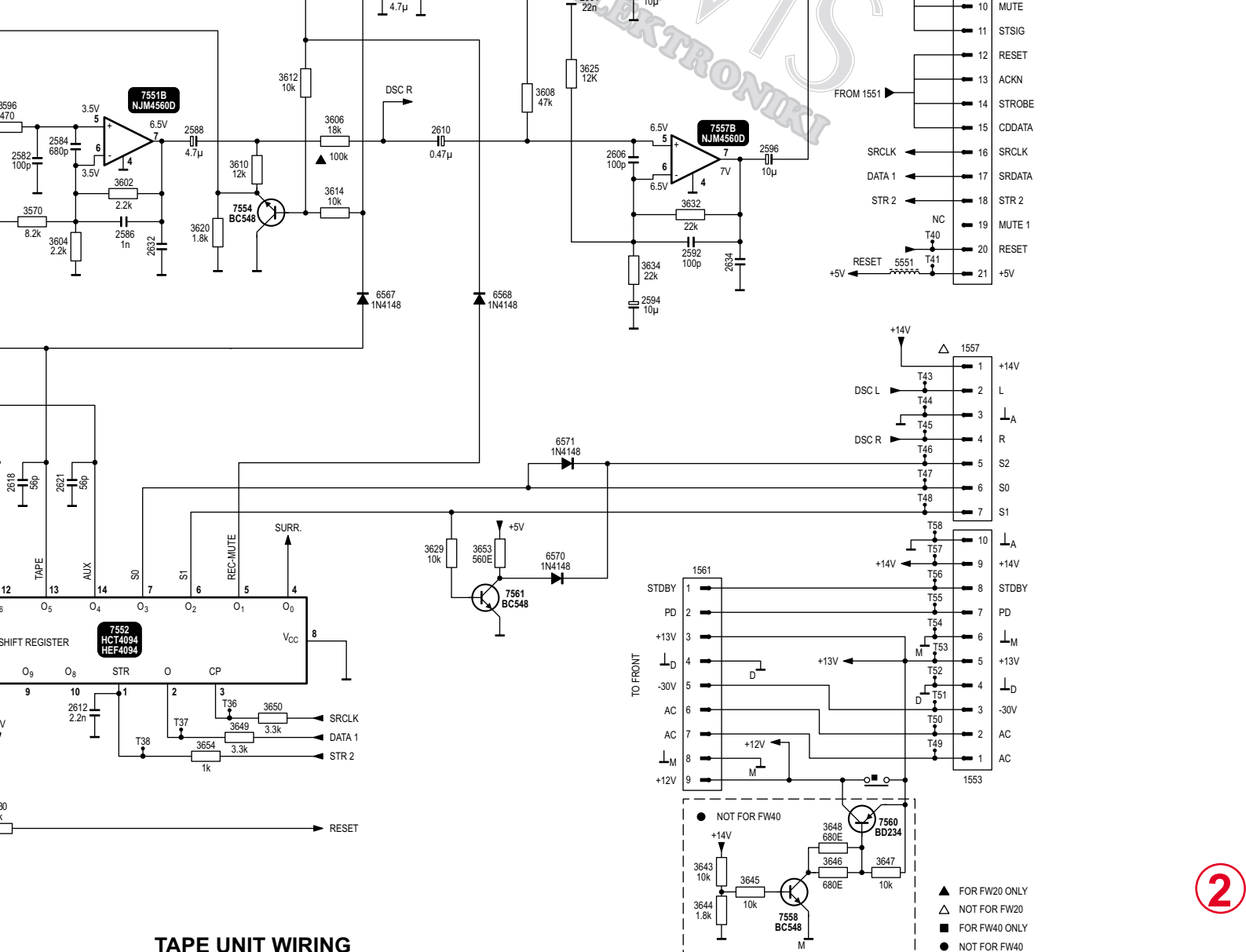
1



2

FRONT CIRCUIT II





TAPE UNIT WIRING

