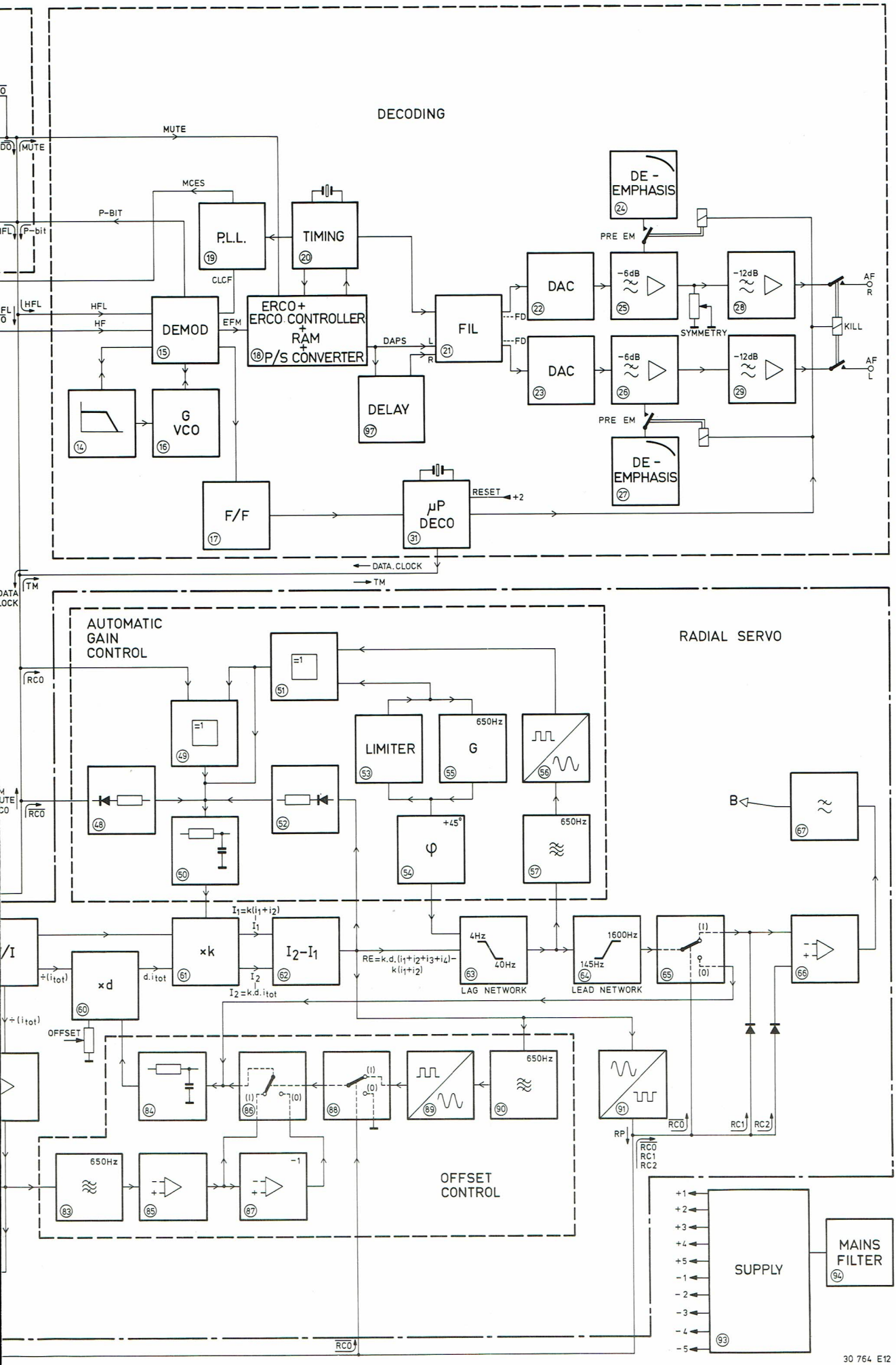
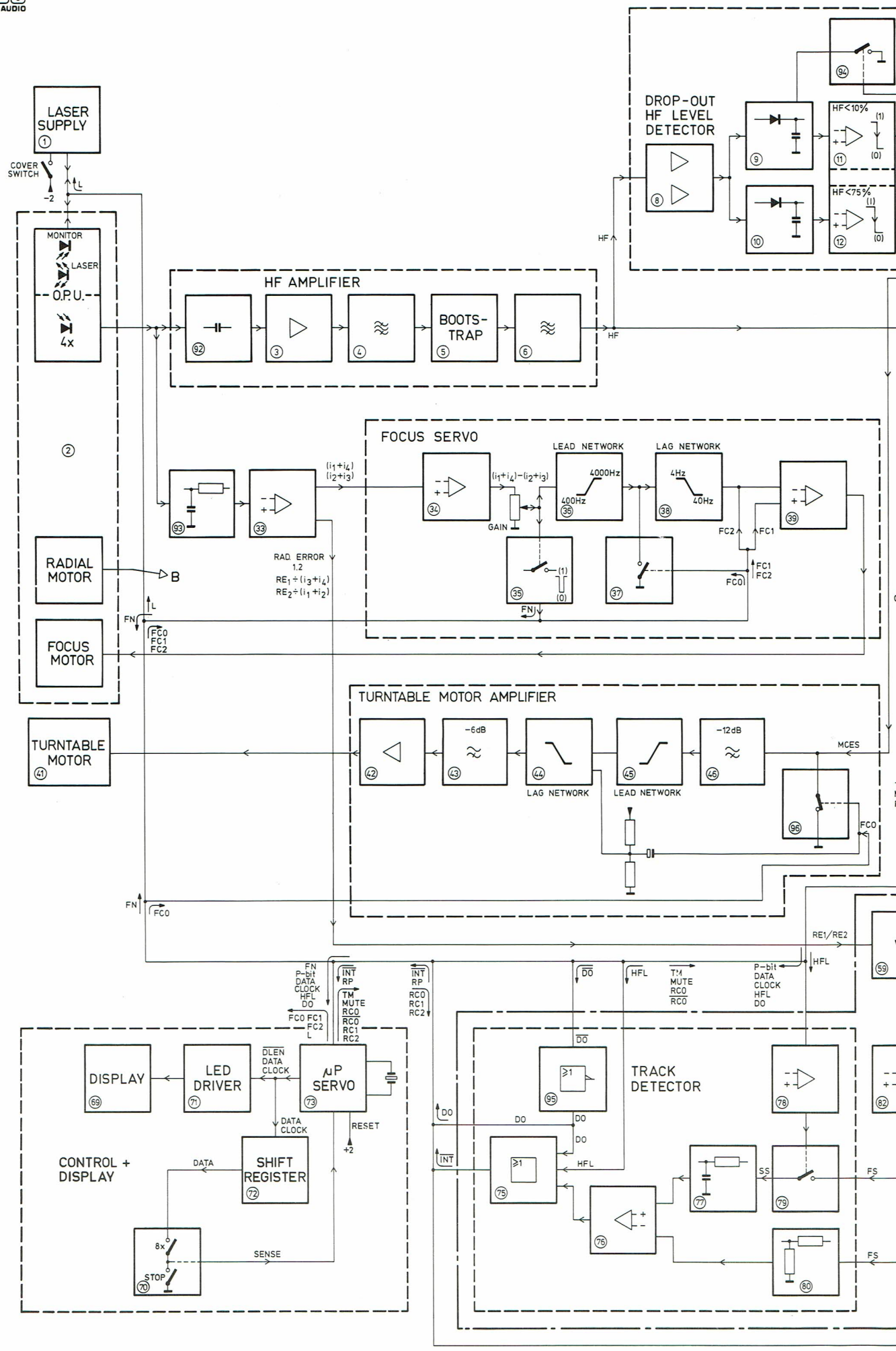
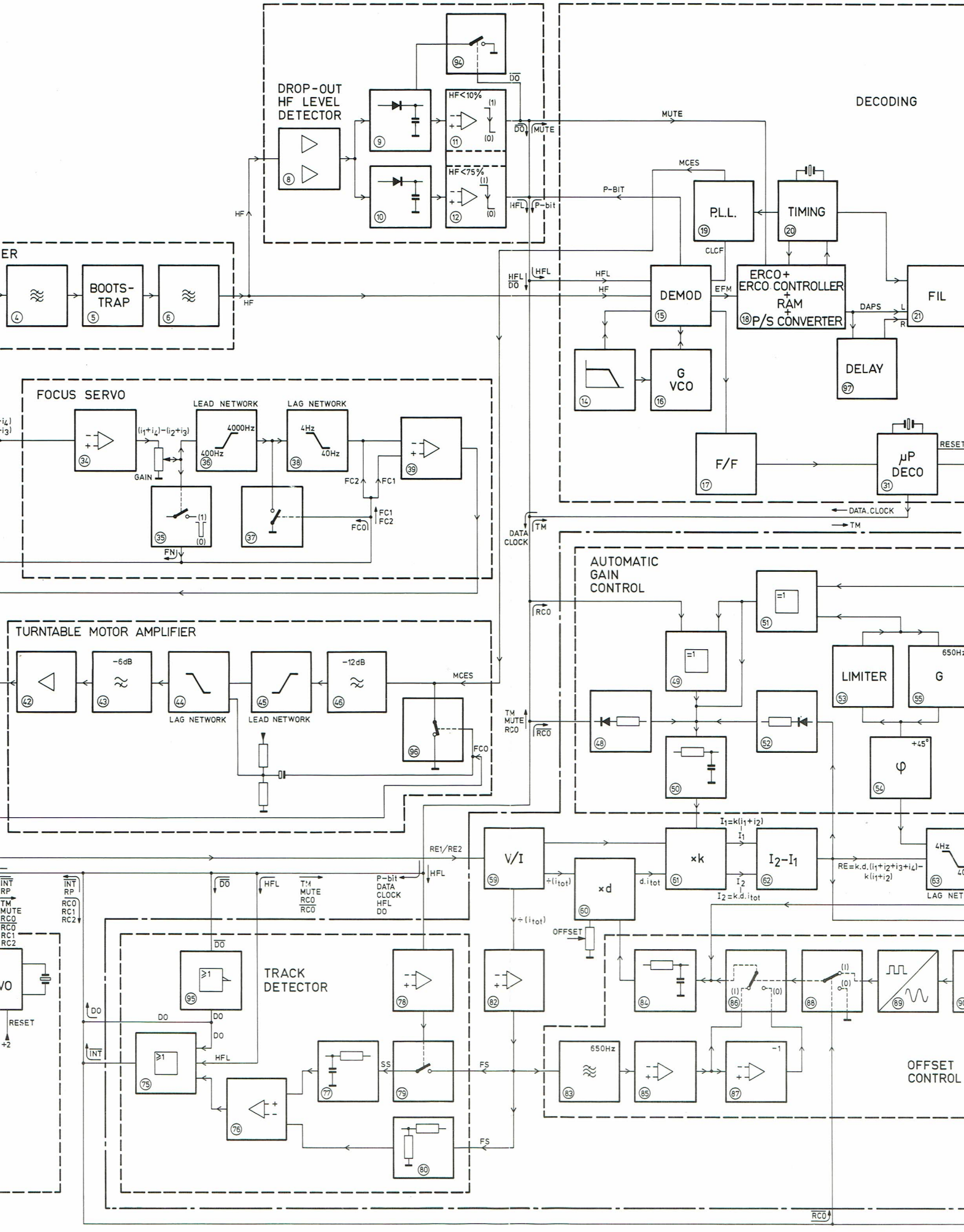
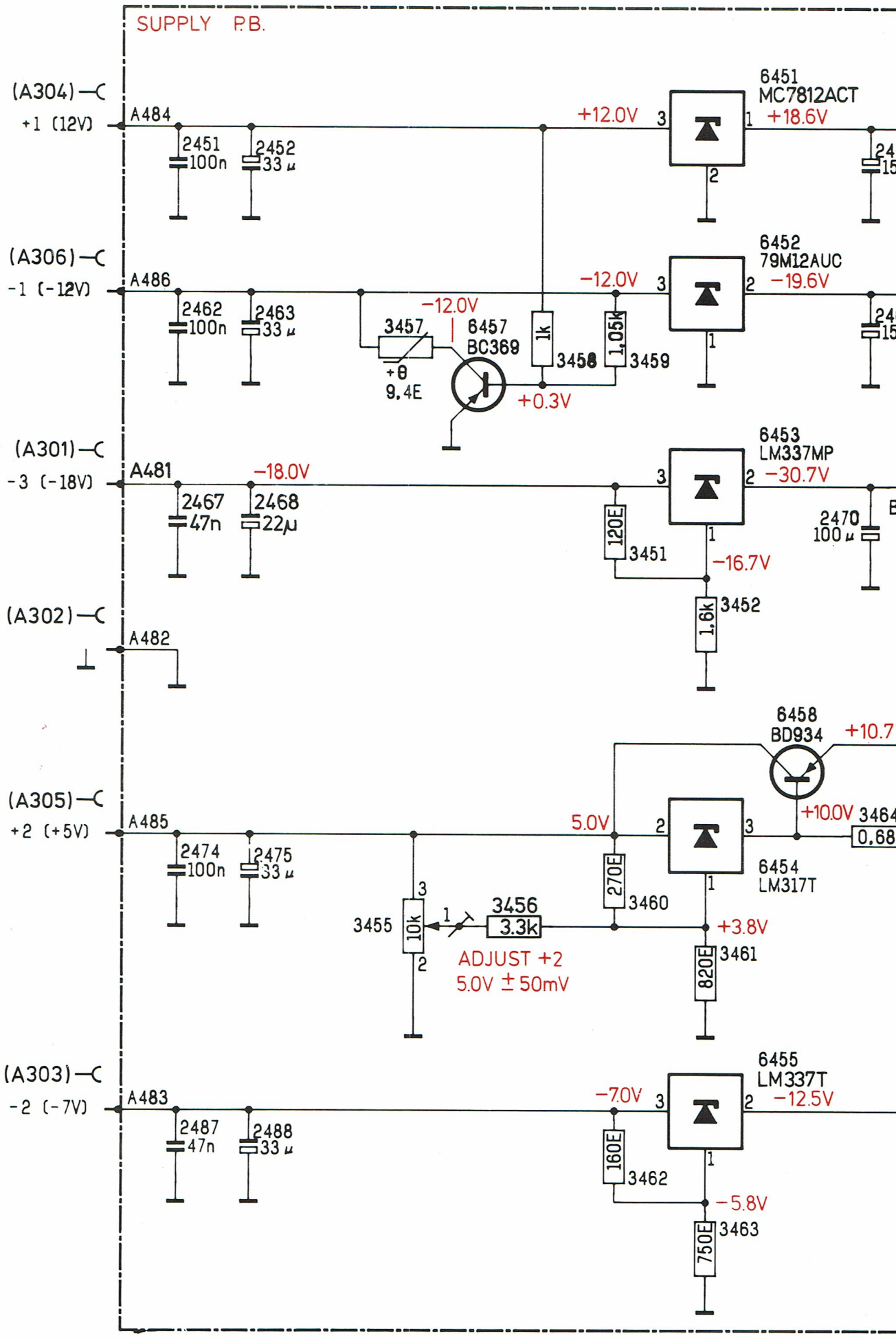
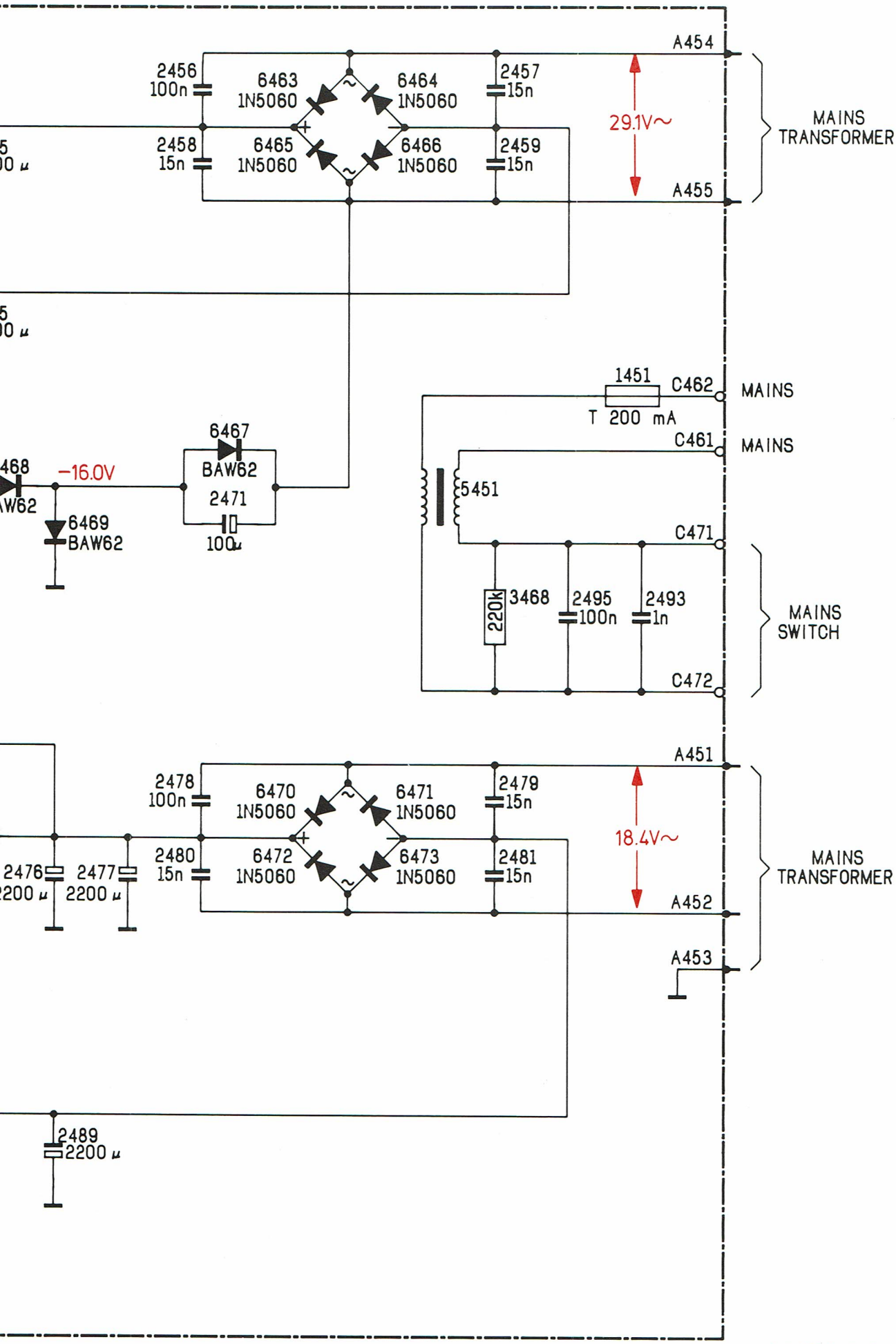

DECODING
MUTE
MCES
P-BIT
P.L.L.
19
TIMING
20
CLCF
HFL
HF
DEMOD
15
EFM
ERCO+
ERCO CONTROLLER
+
RAM
+
18 P/S CONVERTER
DAPS
L
R
FIL
21
FD
DAC
22
DAC
23
DE - EMPHASIS
24
PRE EM
-6dB
25
-6dB
26
-12dB
28
-12dB
29
SYMMETRY
AF
R
KILL
AF
L
DELAY
97
G
VCO
16
14
F/F
17
µP
DECO
31
RESET
+2
DE - EMPHASIS
27
DATA.CLOCK
TM
AUTOMATIC
GAIN
CONTROL
RADIAL SERVO
RCO
=1
51
=1
49
LIMITER
53
G
55
650Hz
56
48
52
50
+45°
54
650Hz
57
B
67
I1=k(i1+i2)
I1
×k
61
I2-I1
62
I2
I2=k.d.itot
RE=k.d.(i1+i2+i3+i4)-
k(i1+i2)
4Hz
40Hz
63
LAG NETWORK
1600Hz
145Hz
64
LEAD NETWORK
(1)
(0)
65
66
÷(itot)
×d
60
d.itot
OFFSET
84
86
88
89
650Hz
90
91
RP
RC0
RC1
RC2
650Hz
83
85
-1
87
OFFSET
CONTROL
+1
+2
+3
+4
+5
-1
-2
-3
-4
-5
SUPPLY
93
MAINS
FILTER
94

COMPACT disc DIGITAL AUDIO

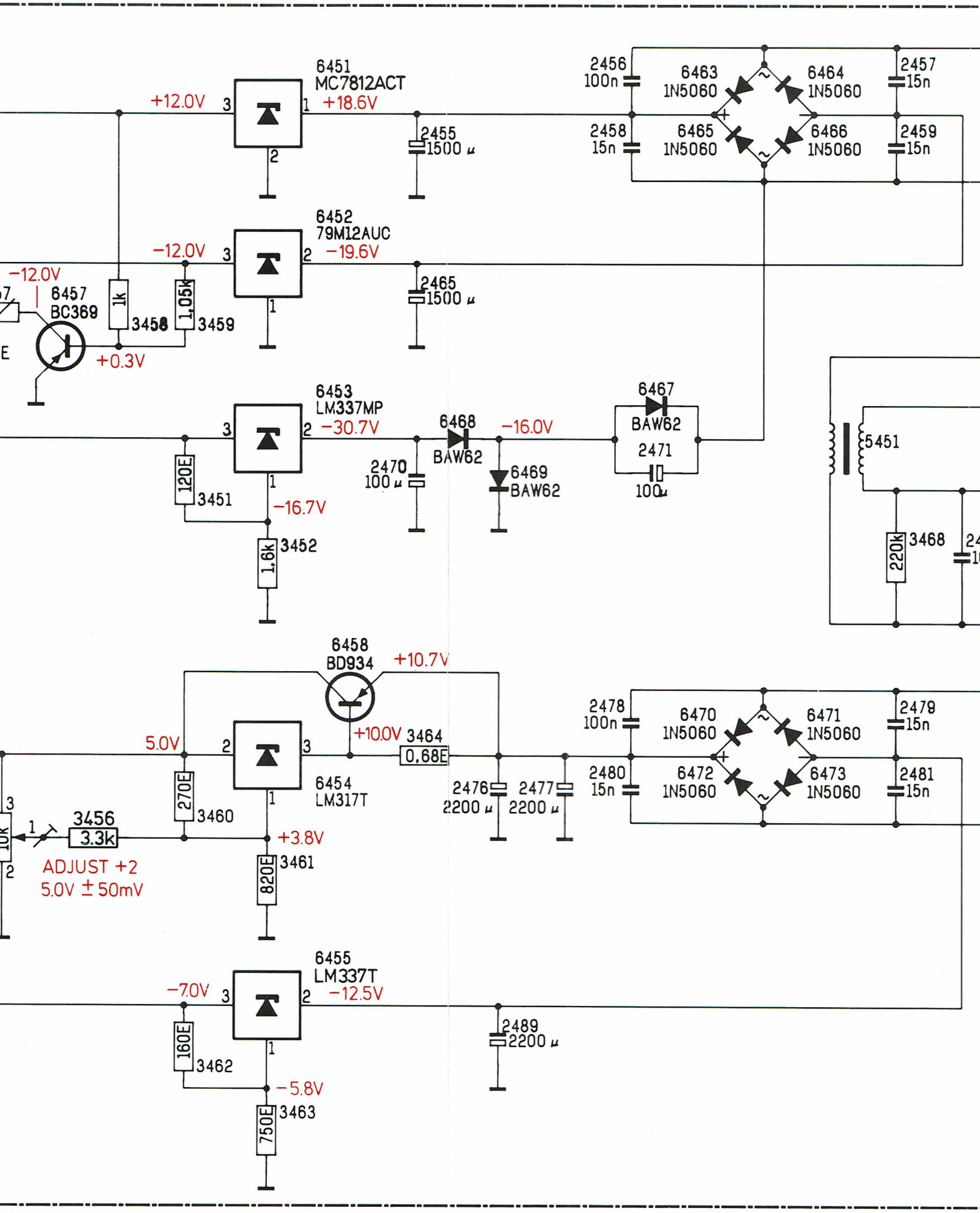


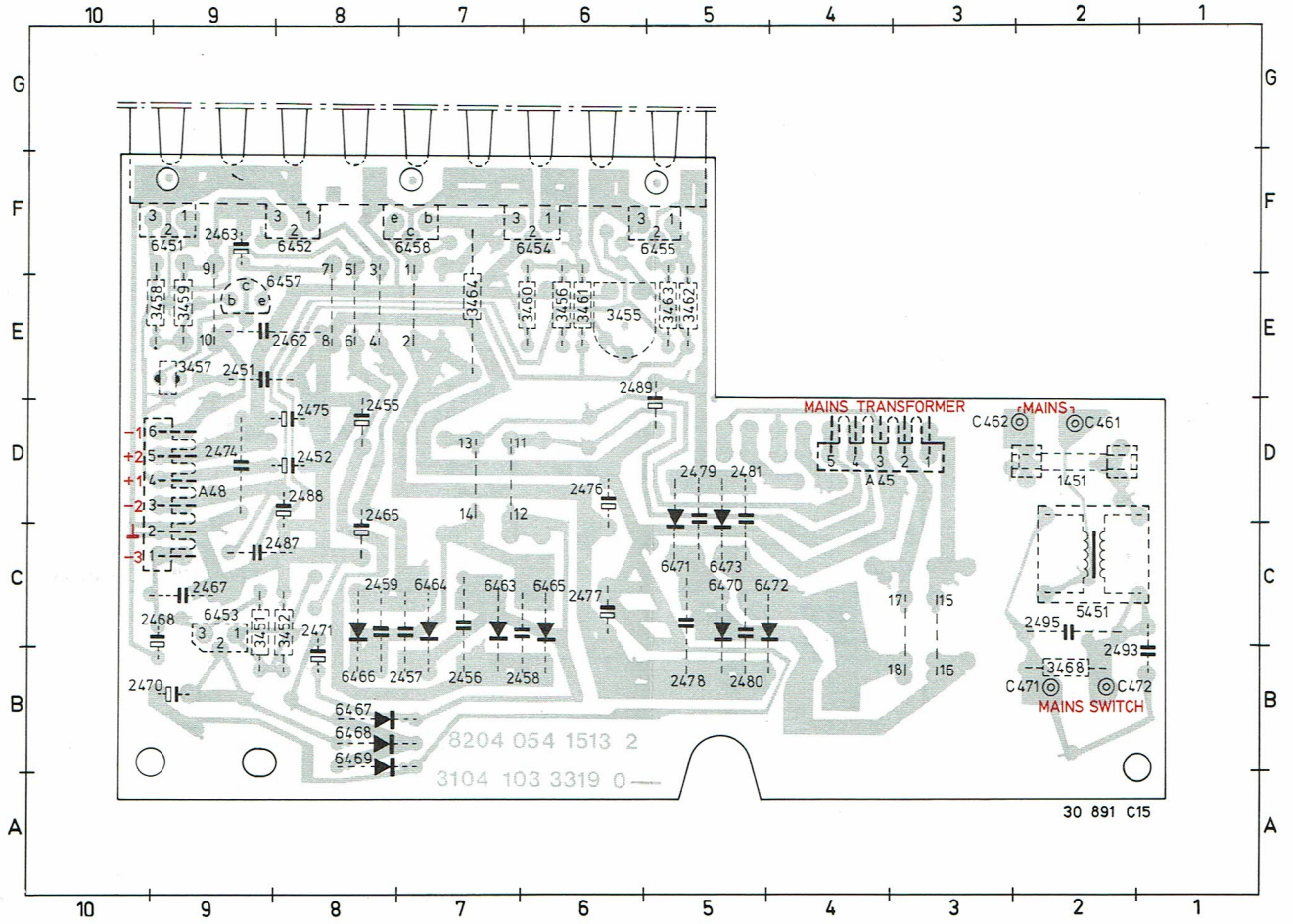

DROP-OUT
HF LEVEL
DETECTOR
HF<10%
HF<75%
DO
MUTE
HFL
P-bit
HF
DECODING
MCES
P-BIT
P.L.L.
TIMING
CLCF
DEMOD
EFM
ERCO+
ERCO CONTROLLER
+
RAM
+
P/S CONVERTER
DAPS
L
R
FIL
DELAY
G
VCO
F/F
µP
DECO
RESET
DATA.CLOCK
TM
BOOTS-
TRAP
FOCUS SERVO
LEAD NETWORK
LAG NETWORK
4000Hz
400Hz
4Hz
40Hz
GAIN
FC2
FC1
FC0
FN
TURNTABLE MOTOR AMPLIFIER
-6dB
-12dB
LAG NETWORK
LEAD NETWORK
MCES
FCO
AUTOMATIC
GAIN
CONTROL
RCO
LIMITER
G
650Hz
+45°
φ
V/I
×k
×d
I2-I1
LAG NET
RE1/RE2
OFFSET
TRACK
DETECTOR
SS
FS
650Hz
OFFSET
CONTROL
INT
RP
RC1
RC2
VO
RESET
+2


SUPPLY P.B.
(A304)
+1 (12V)
A484
2451
100n
2452
33 µ
+12.0V
6451
MC7812ACT
+18.6V
(A306)
-1 (-12V)
A486
2462
100n
2463
33 µ
-12.0V
3457
+θ
9.4E
6457
BC369
1k
3458
1,05k
3459
+0.3V
6452
79M12AUC
-19.6V
(A301)
-3 (-18V)
A481
-18.0V
2467
47n
2468
22µ
120E
3451
-16.7V
1,6k
3452
6453
LM337MP
-30.7V
2470
100 µ
(A302)
A482
(A305)
+2 (+5V)
A485
2474
100n
2475
33 µ
5.0V
270E
3460
3455
10k
3456
3.3k
ADJUST +2
5.0V ± 50mV
+3.8V
820E
3461
6458
BD934
+10.0V
6454
LM317T
(A303)
-2 (-7V)
A483
2487
47n
2488
33 µ
-7.0V
160E
3462
-5.8V
750E
3463
6455
LM337T
-12.5V

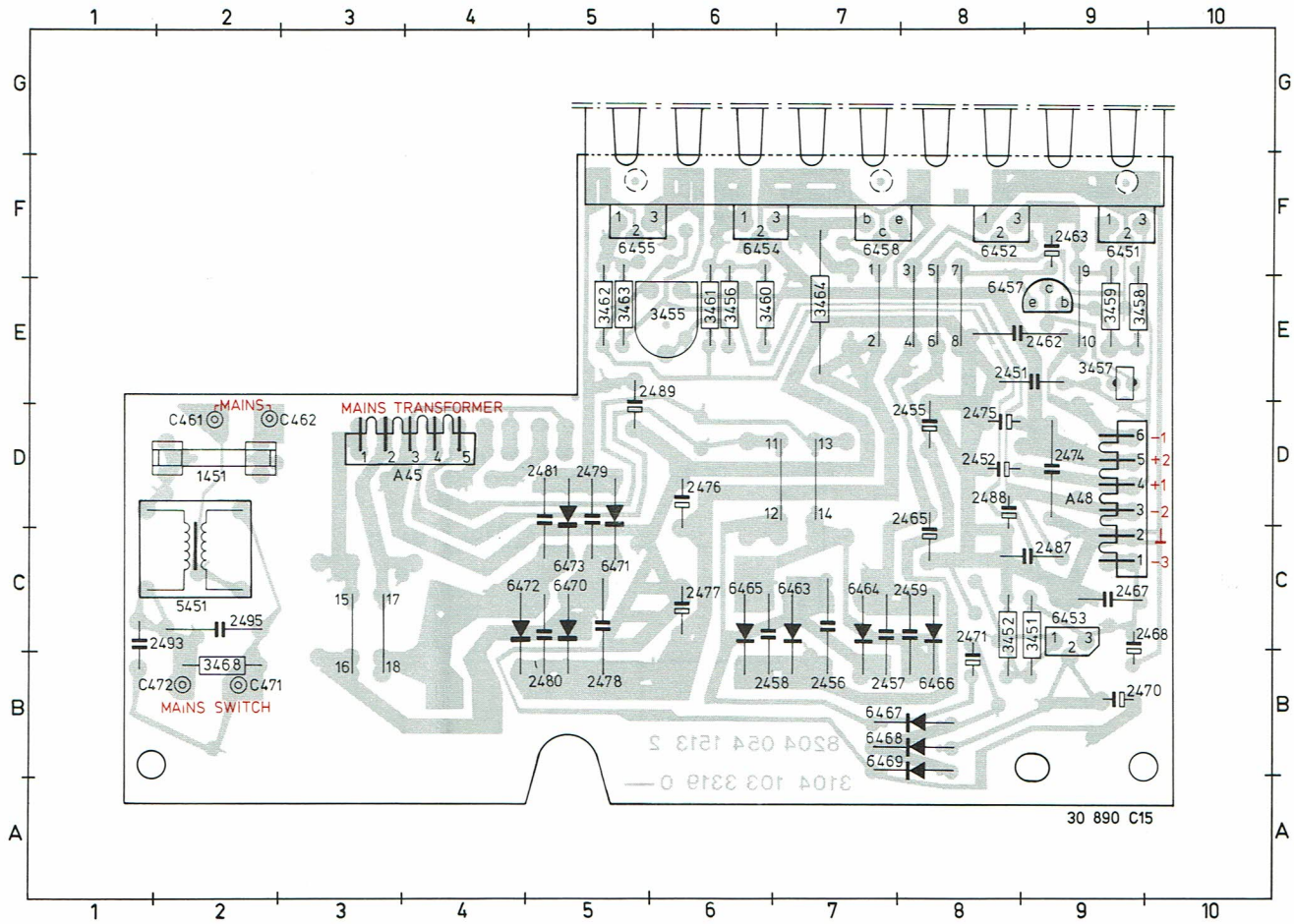

A454
2456
100n
6463
1N5060
6464
1N5060
2457
15n
29.1V~
MAINS
TRANSFORMER
2458
15n
6465
1N5060
6466
1N5060
2459
15n
A455
1451
C462
MAINS
T 200 mA
C461
MAINS
6467
BAW62
-16.0V
2471
100µ
6469
BAW62
5451
C471
220k
3468
2495
100n
2493
1n
MAINS
SWITCH
C472
A451
2478
100n
6470
1N5060
6471
1N5060
2479
15n
18.4V~
2476
2200 µ
2477
2200 µ
2480
15n
6472
1N5060
6473
1N5060
2481
15n
MAINS
TRANSFORMER
A452
A453
2489
2200 µ

30 889 C16


6451
MC7812ACT
+12.0V
+18.6V
2455
1500 µ
2456
100n
2458
15n
6463
1N5060
6464
1N5060
6465
1N5060
6466
1N5060
2457
15n
2459
15n
6452
79M12AUC
-12.0V
-19.6V
2465
1500 µ
-12.0V
6457
BC369
1k
3458
1,05k
3459
+0.3V
6453
LM337MP
-30.7V
120E
3451
-16.7V
1.6k
3452
6468
BAW62
-16.0V
2470
100 µ
6469
BAW62
6467
BAW62
2471
100µ
5451
220k
3468
6458
BD934
+10.7V
+10.0V
3464
0.68E
5.0V
270E
3460
6454
LM317T
+3.8V
820E
3461
3456
3.3k
ADJUST +2
5.0V ± 50mV
2476
2200 µ
2477
2200 µ
2478
100n
2480
15n
6470
1N5060
6471
1N5060
6472
1N5060
6473
1N5060
2479
15n
2481
15n
6455
LM337T
-7.0V
-12.5V
160E
3462
-5.8V
750E
3463
2489
2200 µ



ITEM						ITEM					
1451	D02	2479	D05	3468	B02	1451	D02	2479	D05	3468	B02
2451	E08	2480	B05	5451	C02	2451	E09	2480	B05	5451	C02
2452	D08	2481	D05	6451	F09	2452	D08	2481	D05	6451	F09
2455	D08	2487	C09	6452	F08	2455	D08	2487	C08	6452	F08
2456	B07	2488	D08	6453	C09	2456	B07	2488	D08	6453	C09
2457	B07	2489	E06	6454	F06	2457	B07	2489	E06	6454	F06
2458	B07	2493	C02	6455	F05	2458	B07	2493	B02	6455	F05
2459	C08	2495	C02	6457	E08	2459	C08	2495	C02	6457	E08
2462	E09	3451	C09	6458	F07	2462	E08	3451	C09	6458	F07
2463	F09	3452	C08	6463	C07	2463	F09	3452	C08	6463	C07
2465	D08	3455	E06	6464	C07	2465	D08	3455	E06	6464	C07
2467	C09	3456	E06	6465	C06	2467	C09	3456	E06	6465	C06
2468	C10	3457	E09	6466	B08	2468	C09	3457	E09	6466	B08
2470	B09	3458	E09	6467	B07	2470	B09	3458	E09	6467	B08
2471	C08	3459	E09	6468	B07	2471	C08	3459	E09	6468	B08
2474	D09	3460	E06	6469	B07	2474	D09	3460	E06	6469	B08
2475	D08	3461	E06	6470	C05	2475	D08	3461	E06	6470	C05
2476	D06	3462	E05	6471	C05	2476	D06	3462	E05	6471	C05
2477	C06	3463	E05	6472	C04	2477	C06	3463	E05	6472	C05
2478	B05	3464	E07	6473	C05	2478	B05	3464	E07	6473	C05

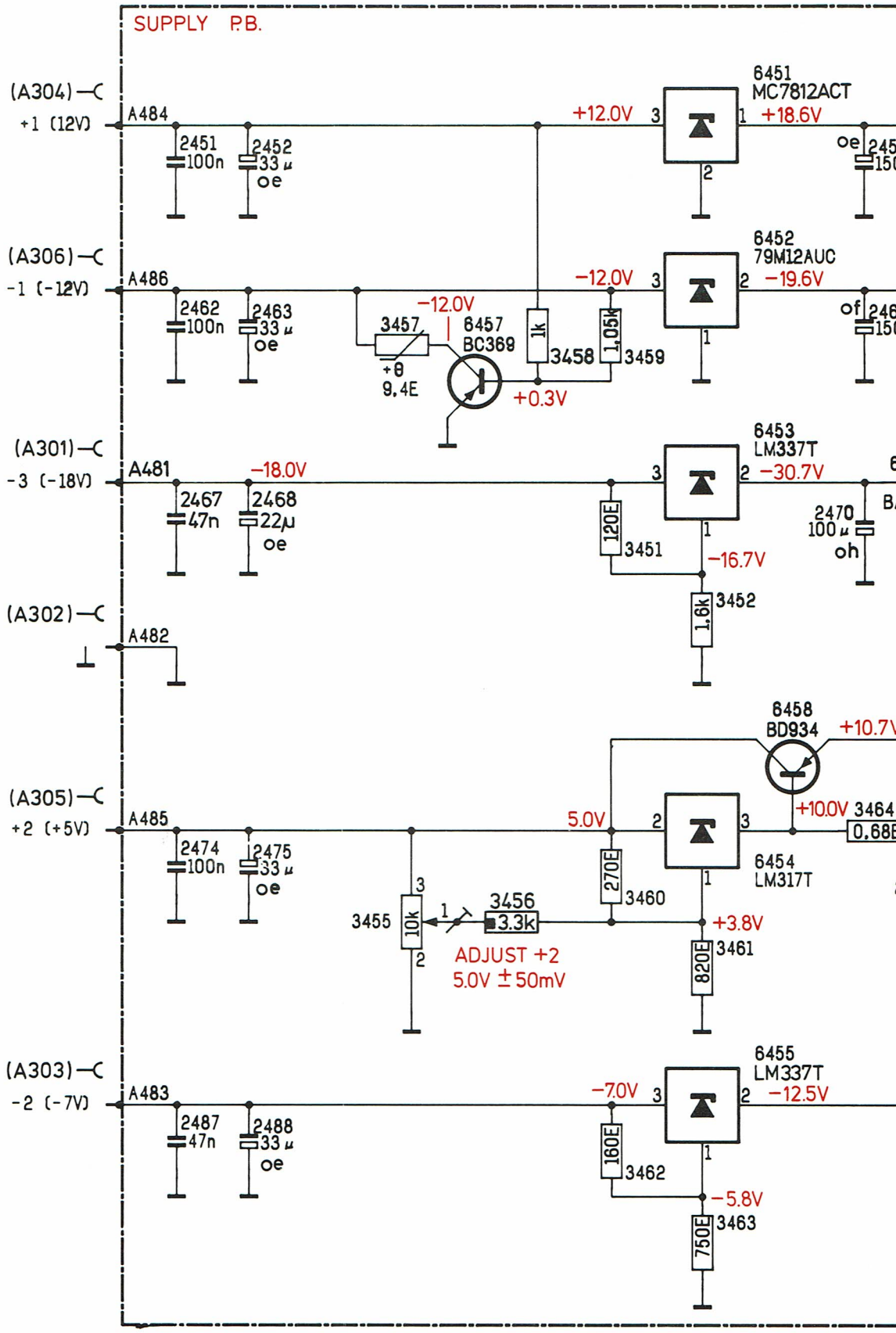


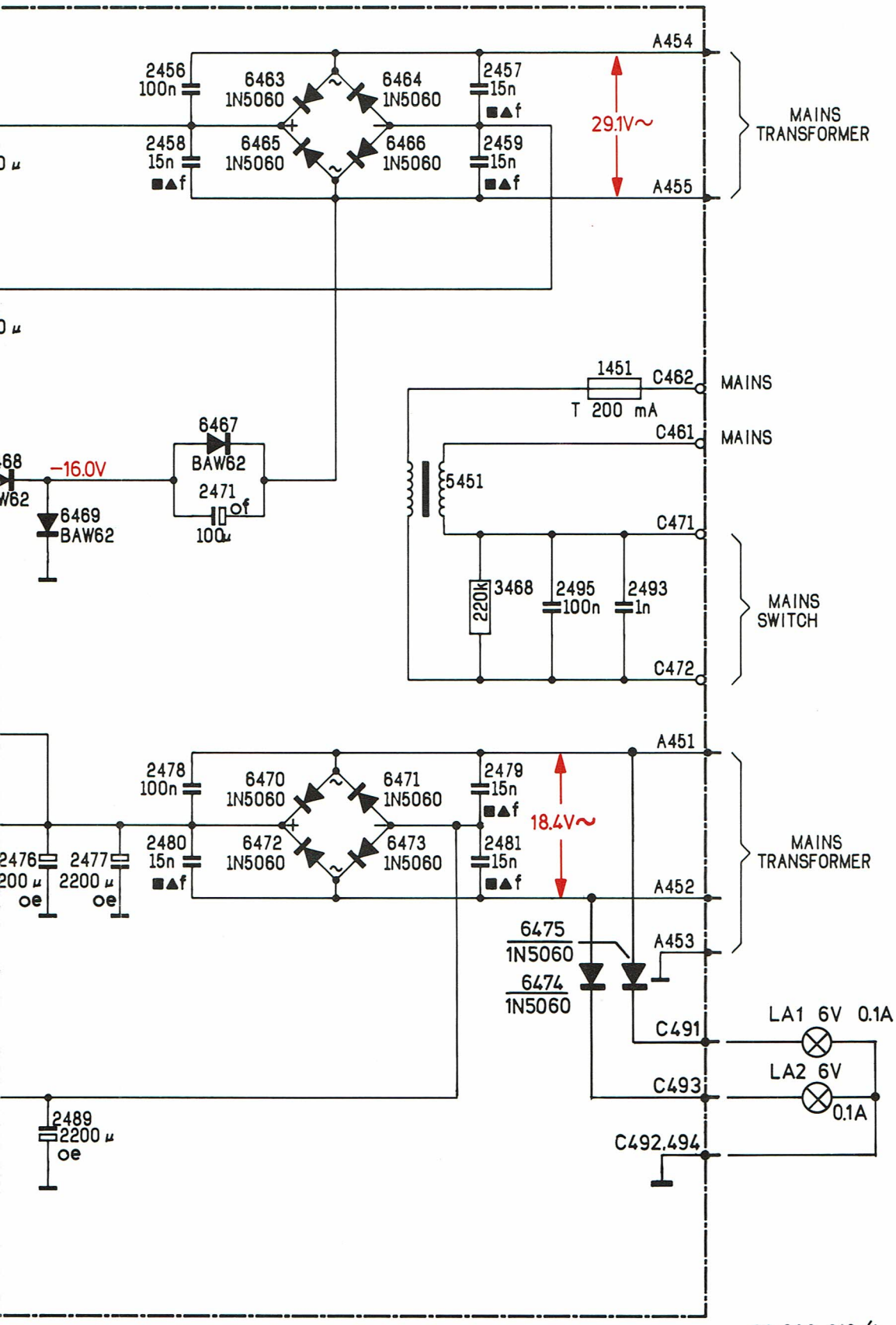
LM317T		4822 209 80591
LM337MP		4822 209 81452
LM337T		5322 209 81236
MC7812ACT		4822 209 81517
79M12AUC		5322 209 85769
BC369		5322 130 44593
BD934		4822 130 41992
1N5060		4822 130 31164
BAW62		4822 130 30613
5451	2x 25 mH	4822 157 51576
1006	Mains transformer	4822 145 20229
3455	10k	4822 100 10035
3457	P.T.C. 9.4E	4822 116 40031

	0.68E - 1%	4822 113 60025
	120E - 1% MR25	5322 116 54426
	160E - 1% MR25	5322 116 50417
	270E - 1% MR25	4822 116 51225
	750E - 1% MR25	4822 116 51234
	820E - 1% MR25	5322 116 54541
	1k - 1% MR25	4822 116 51235
	1k05 - 1% MR25	5322 116 55286
	1k6 - 1% MR25	4822 116 51241
	220k VR25	5322 116 64114
2451,2467,2487	47 nF - 10%	4822 121 40525
2456,2462,2474,2478	100 nF - 10%	4822 121 40334
2493	1 nF - 1 kV	4822 122 40347
2495	100 nF	5322 121 44302
1451	220/240 V version (200 mAT)	4822 253 30012
	110/127 V version (400 mAT)	4822 253 30016

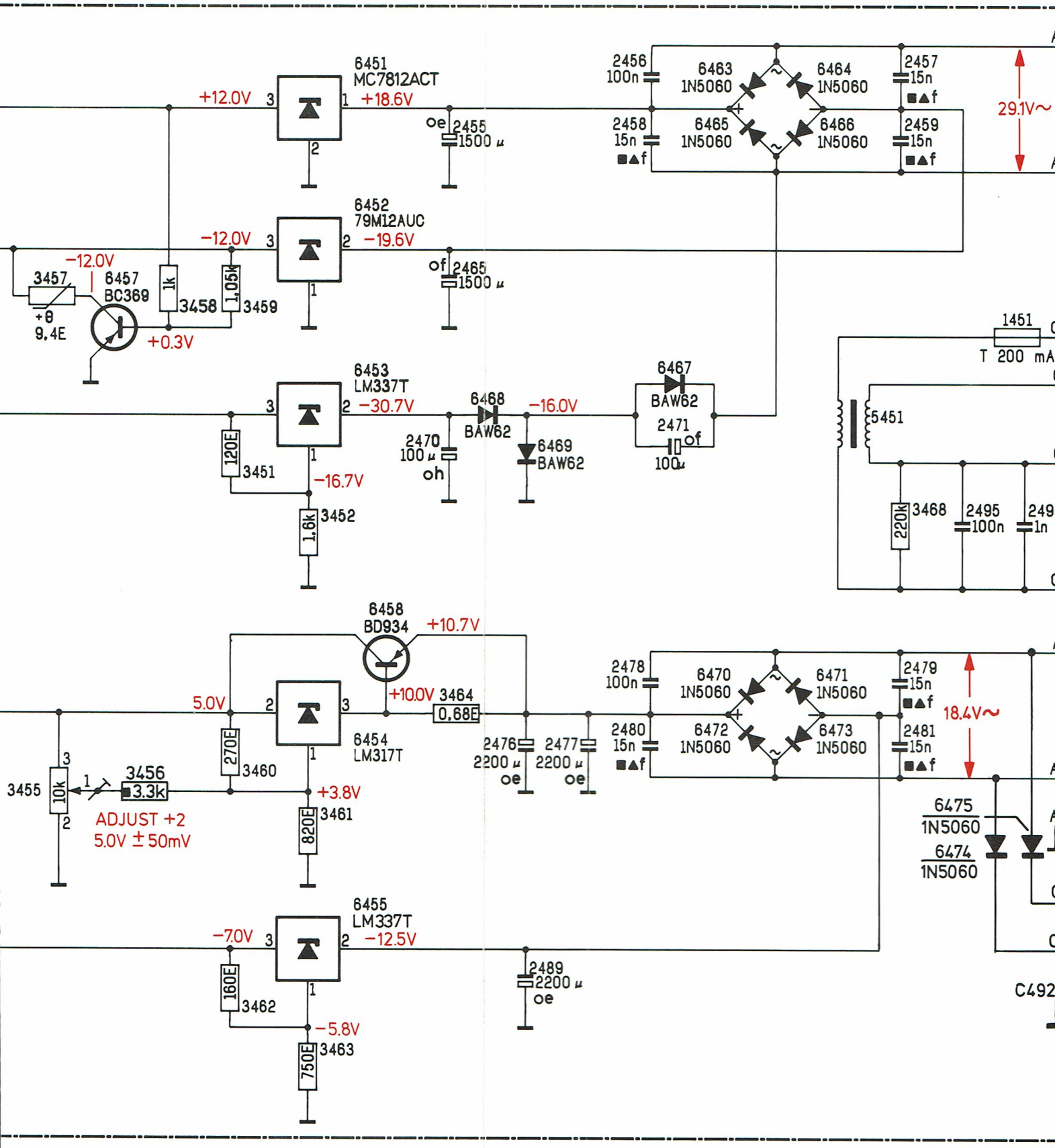
Miscellaneous

Mica washer	4822 255 40161
Spring clip	4822 492 62828
Insulating jig	4822 403 51043

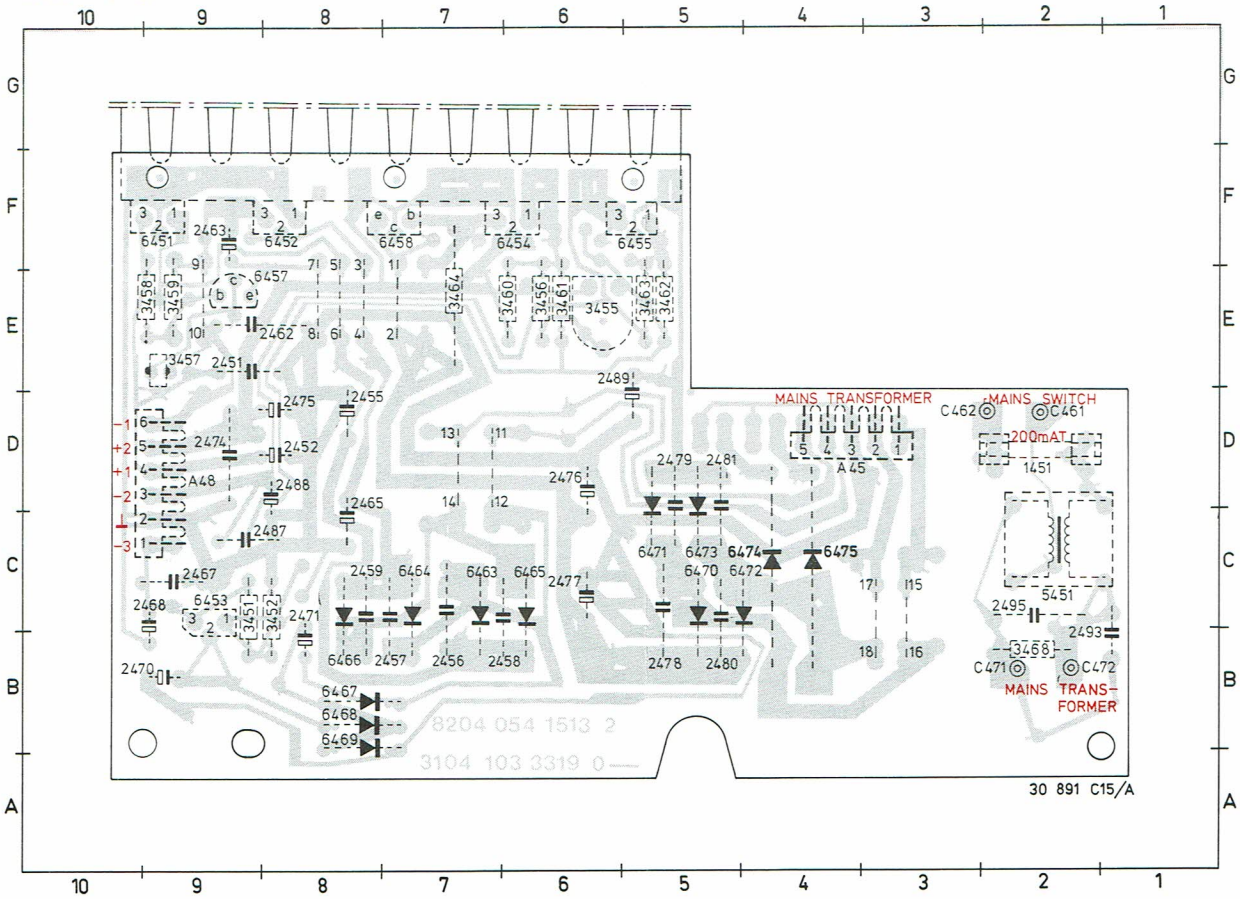

SUPPLY P.B.
(A304)
+1 (12V)
A484
2451
100n
2452
33 µ
oe
+12.0V
6451
MC7812ACT
+18.6V
oe
(A306)
-1 (-12V)
A486
2462
100n
2463
33 µ
oe
-12.0V
3457
+θ
9.4E
6457
BC369
1k
3458
1.05k
3459
+0.3V
6452
79M12AUC
-19.6V
of
(A301)
-3 (-18V)
A481
-18.0V
2467
47n
2468
22µ
oe
120E
3451
-16.7V
1.6k
3452
6453
LM337T
-30.7V
2470
100 µ
oh
(A302)
A482
6458
BD934
+10.7V
(A305)
+2 (+5V)
A485
2474
100n
2475
33 µ
oe
5.0V
270E
3460
+10.0V
3464
0.68
6454
LM317T
3455
10k
3456
3.3k
ADJUST +2
5.0V ± 50mV
+3.8V
820E
3461
(A303)
-2 (-7V)
A483
2487
47n
2488
33 µ
oe
-7.0V
160E
3462
6455
LM337T
-12.5V
-5.8V
750E
3463


A454
2456
100n
6463
1N5060
6464
1N5060
2457
15n
■▲f
29.1V~
MAINS
TRANSFORMER
2458
15n
■▲f
6465
1N5060
6466
1N5060
2459
15n
■▲f
A455
1451
C462
MAINS
T 200 mA
C461
MAINS
6467
BAW62
-16.0V
2471
0f
100µ
6469
BAW62
5451
C471
220k
3468
2495
100n
2493
1n
MAINS
SWITCH
C472
A451
2478
100n
6470
1N5060
6471
1N5060
2479
15n
■▲f
18.4V~
2476
200 µ
oe
2477
2200 µ
oe
2480
15n
■▲f
6472
1N5060
6473
1N5060
2481
15n
■▲f
MAINS
TRANSFORMER
A452
6475
1N5060
A453
6474
1N5060
LA1 6V 0.1A
C491
LA2 6V
C493
0.1A
2489
2200 µ
oe
C492,494

30 889 C16/A


6451
MC7812ACT
+12.0V
+18.6V
2455
1500 µ
2456
100n
6463
1N5060
6464
1N5060
2457
15n
2458
15n
6465
1N5060
6466
1N5060
2459
15n
29.1V~
6452
79M12AUC
-12.0V
-19.6V
2465
1500 µ
3457
+θ
9.4E
6457
BC369
1k
3458
1,05k
3459
+0.3V
1451
T 200 mA
5451
6453
LM337T
-30.7V
120E
3451
-16.7V
1,6k
3452
6468
BAW62
-16.0V
2470
100 µ
6469
BAW62
6467
BAW62
2471
100µ
220k
3468
2495
100n
1n
6458
BD934
+10.7V
5.0V
+10.0V
3464
0,68E
270E
3460
6454
LM317T
2476
2200 µ
2477
2200 µ
2478
100n
6470
1N5060
6471
1N5060
2479
15n
18.4V~
2480
15n
6472
1N5060
6473
1N5060
2481
15n
3455
10k
3456
3.3k
ADJUST +2
5.0V ± 50mV
+3.8V
820E
3461
6475
1N5060
6474
1N5060
6455
LM337T
-7.0V
-12.5V
160E
3462
2489
2200 µ
-5.8V
750E
3463

SUPPLY PB.



ITEM	PCB														
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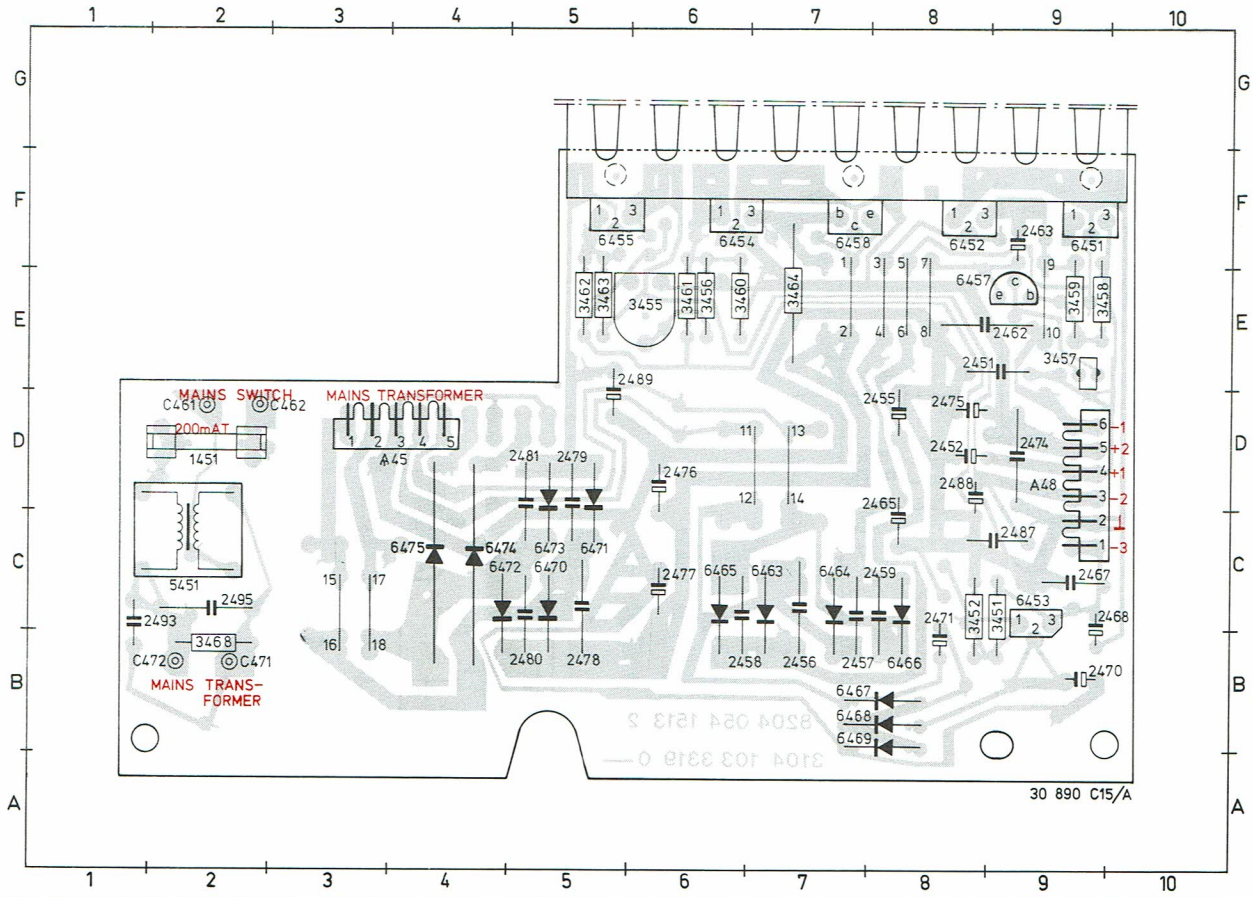
2451	E08	2458	B06	2467	C09	2475	D08	2480	B05	2493	C02	3456	E06	3461	E06
2452	D08	2459	C08	2468	C10	2476	D06	2481	D05	2495	C02	3457	E09	3462	E05
2455	D08	2462	E09	2470	B09	2477	C06	2487	C09	3451	C09	3458	E09	3463	E05
2456	B07	2463	F09	2471	C08	2478	B05	2488	D08	3452	C08	3459	E09	3464	E06
3468	B02	6454	F06	6464	C07	6469	B07	6474	C04						
5451	C02	6455	F05	6465	C06	6470	C05	6475	C04						
6451	F09	6457	E08	6466	B08	6471	C05								
6452	F08	6458	F07	6467	B07	6472	C04								
6453	C09	6463	C07	6468	B07	6473	C05								

SUPPLY PB.



LM317T		4822 209 80591
LM337T		5322 209 81236
MC7812CT		4822 209 81517
79M12AUC		5322 209 85913
BC369		5322 130 44593
BD934		4822 130 41992
1N5060		4822 130 31164
BAW62		4822 130 30613
5451	2x 25 mH	4822 157 51576
1006 (T1)	Mains transformer	4822 145 20229
3455	10k	4822 100 10035
3457	P.T.C. 9.4E	4822 116 40031

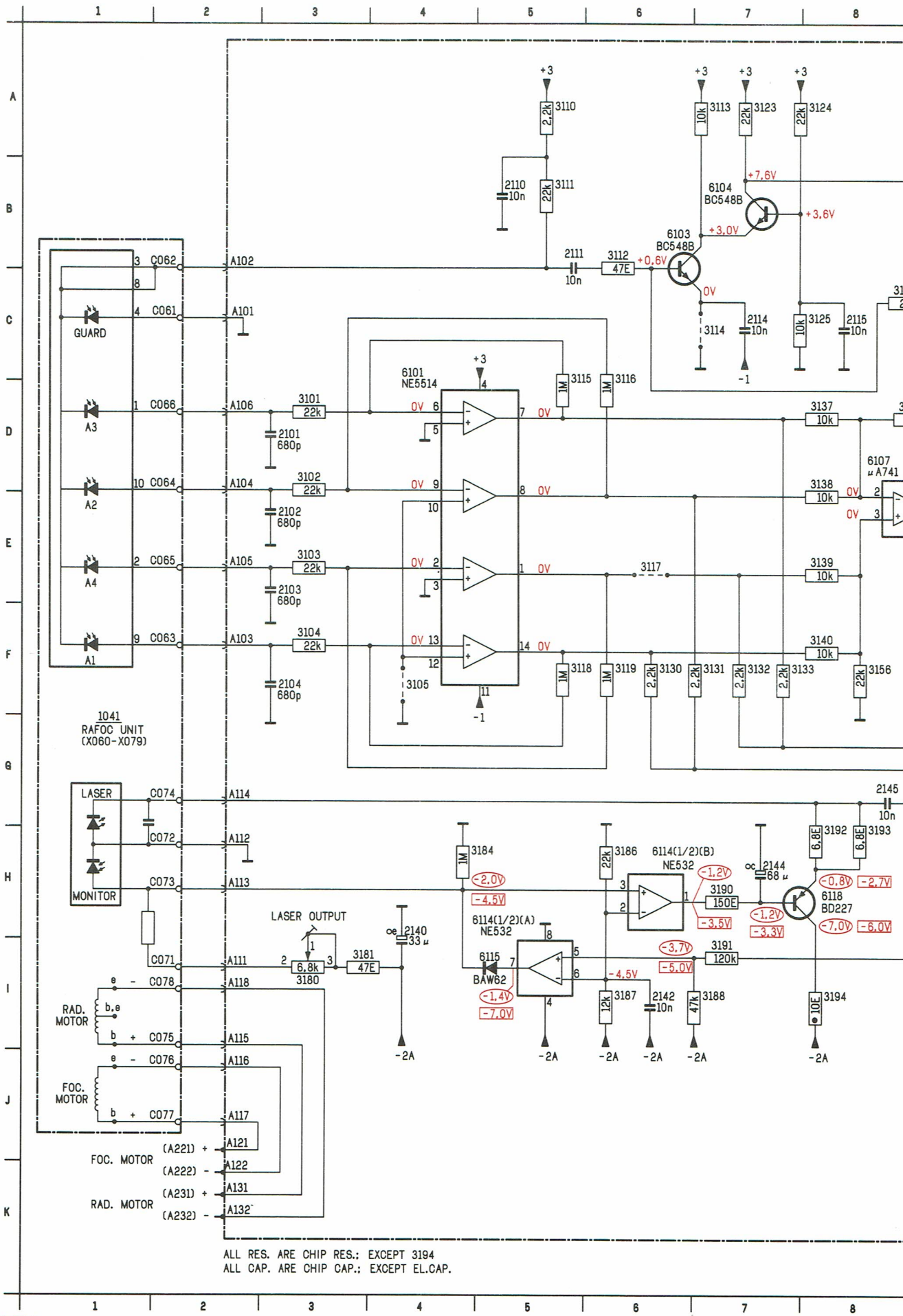
0.68E	- 1%		4822 113 60025
120E	- 1%	MR25	5322 116 54426
160E	- 1%	MR25	5322 116 50417
270E	- 1%	MR25	4822 116 51225
750E	- 1%	MR25	4822 116 51234
820E	- 1%	MR25	5322 116 54541
1k	- 1%	MR25	4822 116 51235
1k05	- 1%	MR25	5322 116 55286
1k6	- 1%	MR25	4822 116 51241
220k	VR25		5322 116 64114

2451,2467, 2487	47 nF - 10%	4822 121 40525
2456,2462, 2474,2478	100 nF - 10%	4822 121 40334
2493	1 nF - 1 kV	4822 122 40347
2495	100 nF	5322 121 44302
1451	220/240 V version (200 mAT)	4822 253 30012
	110/127 V version (400 mAT)	4822 253 30016

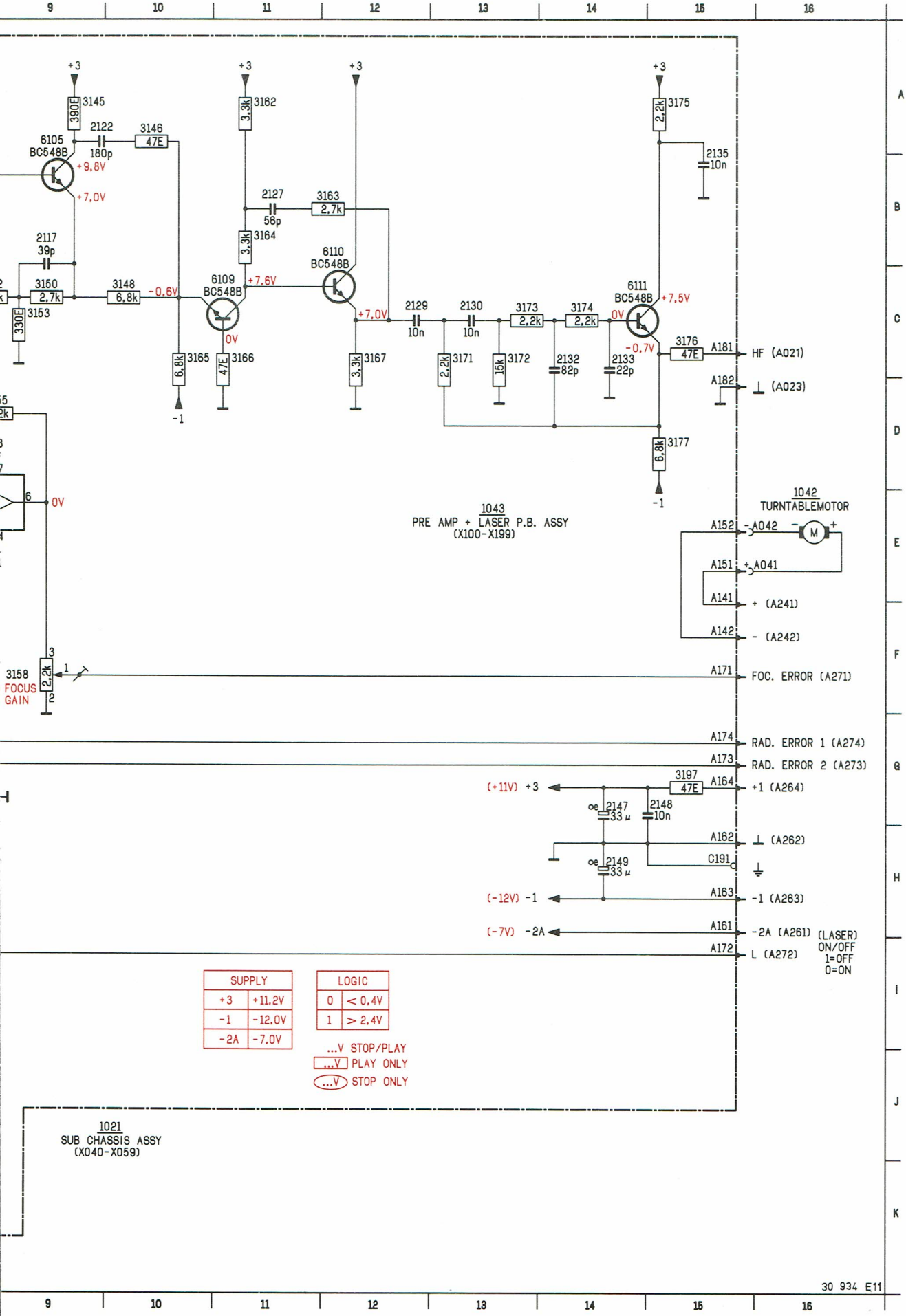
Miscellaneous

Mica washer	4822 255 40161
Spring clip	4822 492 62828
Insulating jig	4822 403 51043
Fuse holder	4822 492 60063
LA1.2 6 V 0.1A	4822 134 40523
Transf. fuse 125°C/0.25A	4822 252 20007

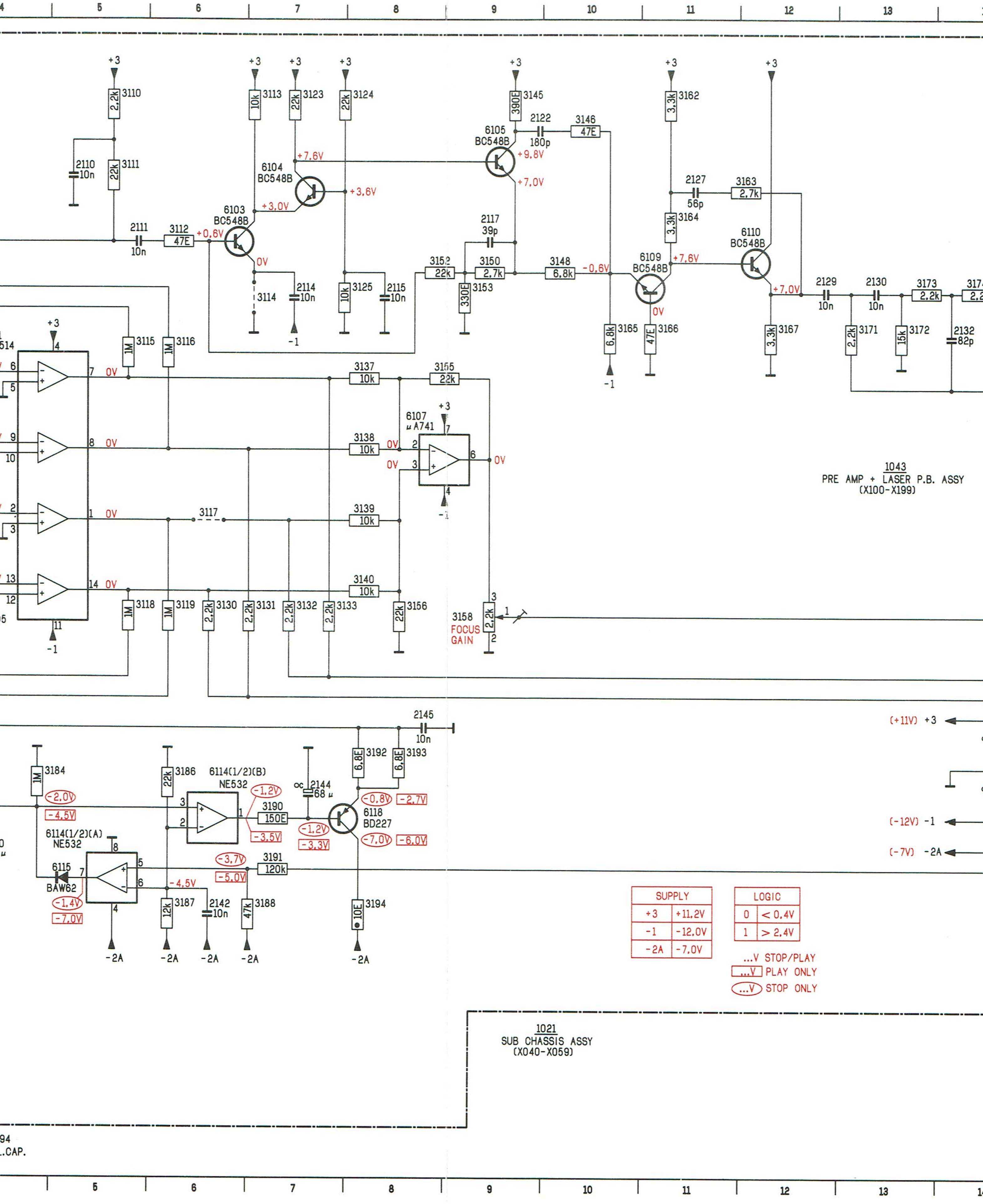
2101	D 3	2111	B 5	2127	B11	2135	A15	2147	G14	3103	E 3	3112	B 6	3117	E 6	3125	C 8	3137	D 8	3146	K 1	3
2102	E 3	2114	C 7	2129	C12	2140	H 4	2148	G15	3104	F 3	3113	A 7	3118	F 5	3130	F 6	3138	D 8	3148	K 1	3
2103	E 3	2115	C 8	2130	C13	2142	I 6	2149	H14	3105	F 4	3114	C 7	3119	F 6	3131	F 7	3139	E 8	3150	K 1	3
2104	F 3	2117	B 9	2132	C14	2144	H 7	3101	D 3	3110	A 5	3115	C 5	3123	A 7	3132	F 7	3140	F 8	3152	K 1	3
2110	B 5	2122	A 9	2133	C14	2145	G 8	3102	D 3	3111	B 5	3116	C 6	3124	A 8	3133	F 8	3145	A 9	3153	C 9	3

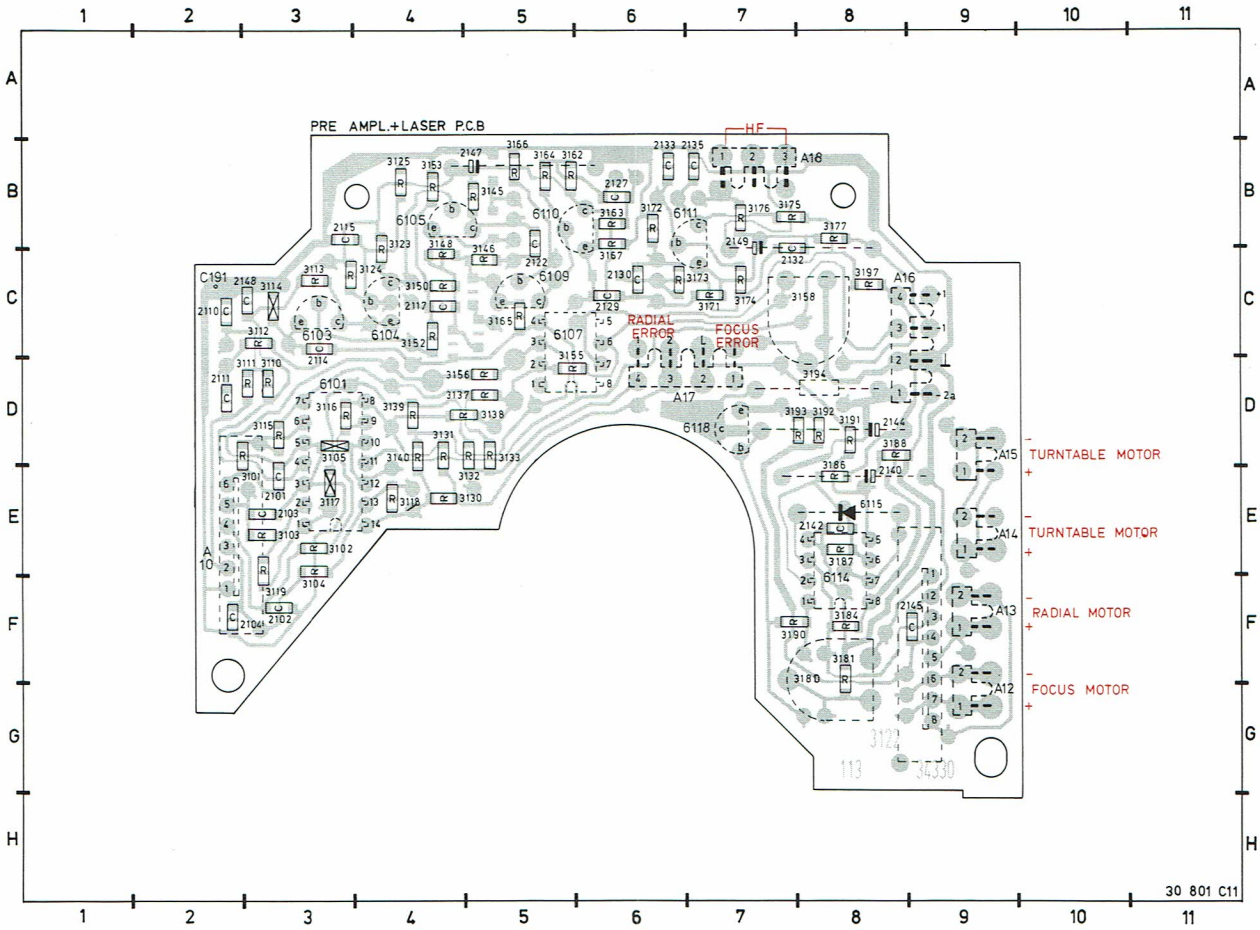


5	D 9	3164	B11	3172	C13	3177	D15	3187	I 6	3193	H 8	6104	B 7	6111	C14
6	F 8	3165	C10	3173	C13	3180	I 3	3188	I 7	3194	I 8	6105	A 9	6114	H 6
8	F 9	3166	C11	3174	C14	3181	I 3	3190	H 7	3197	G15	6107	D 8	6114	H 5
2	A11	3167	C12	3175	A15	3184	H 5	3191	I 7	6101	C 4	6109	C11	6115	I 5
3	B12	3171	C13	3176	C15	3186	H 6	3192	H 8	6103	B 6	6110	B12	6118	H 8



3103	E 3	3112	B 6	3117	E 6	3125	C 8	3137	D 8	3146	K 1	3155	D 9	3164	B11	3172	C13	3177	D15	3187	I 6	3193	H 8	6104	B 7	6111	C1
3104	F 3	3113	A 7	3118	F 5	3130	F 6	3138	D 8	3148	K 1	3156	F 8	3165	C10	3173	C13	3180	I 3	3188	I 7	3194	I 8	6105	A 9	6114	H
3105	F 4	3114	C 7	3119	F 6	3131	F 7	3139	E 8	3150	K 1	3158	F 9	3166	C11	3174	C14	3181	I 3	3190	H 7	3197	G15	6107	D 8	6114	H
3110	A 5	3115	C 5	3123	A 7	3132	F 7	3140	F 8	3152	K 1	3162	A11	3167	C12	3175	A15	3184	H 5	3191	I 7	6101	C 4	6109	C11	6115	I
3111	B 5	3116	C 6	3124	A 8	3133	F 8	3145	A 9	3153	C 9	3163	B12	3171	C13	3176	C15	3186	H 6	3192	H 8	6103	B 6	6110	B12	6118	H





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2110	C02	3111	D03	3153	B04	3192	D08
2111	D02	3112	C02	3155	D06	3193	D07
2114	D03	3113	C03	3156	D05	3194	D08
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2130	C06	3119	F03	3166	B05	6107	C05
2132	C07	3123	B04	3167	C06	6109	C05
2133	B06	3124	C03	3171	C07	6110	B05
2135	B07	3125	B04	3172	B06	6111	B07
2140	E08	3130	E04	3173	C06	6114	F08
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2144	D08	3132	E05	3175	B07	6118	D07
2145	F09	3133	D05	3176	B07		
2147	B05	3137	D05	3177	B08		
2148	C03	3138	D05	3180	F08		
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3101	E03	3140	D04	3184	F08		
3102	E03	3145	B04	3186	D08		

ITEM

2101	E03	3103	E03	3146	C05	3187	E08
2102	F03	3104	F03	3148	B04	3188	D08
2103	E03	3105	D03	3150	C04	3190	F07
2104	F03	3110	D03	3152	C04	3191	D08
2110	C02	3111	D03	3153	B04	3192	D08
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2114	D03	3113	C03	3156	D04	3194	D08
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2144	D08	3132	E05	3175	B07	6118	D07
2145	F09	3133	D05	3176	B07		
2147	B05	3137	D04	3177	B08		
2148	C03	3138	D05	3180	F08		
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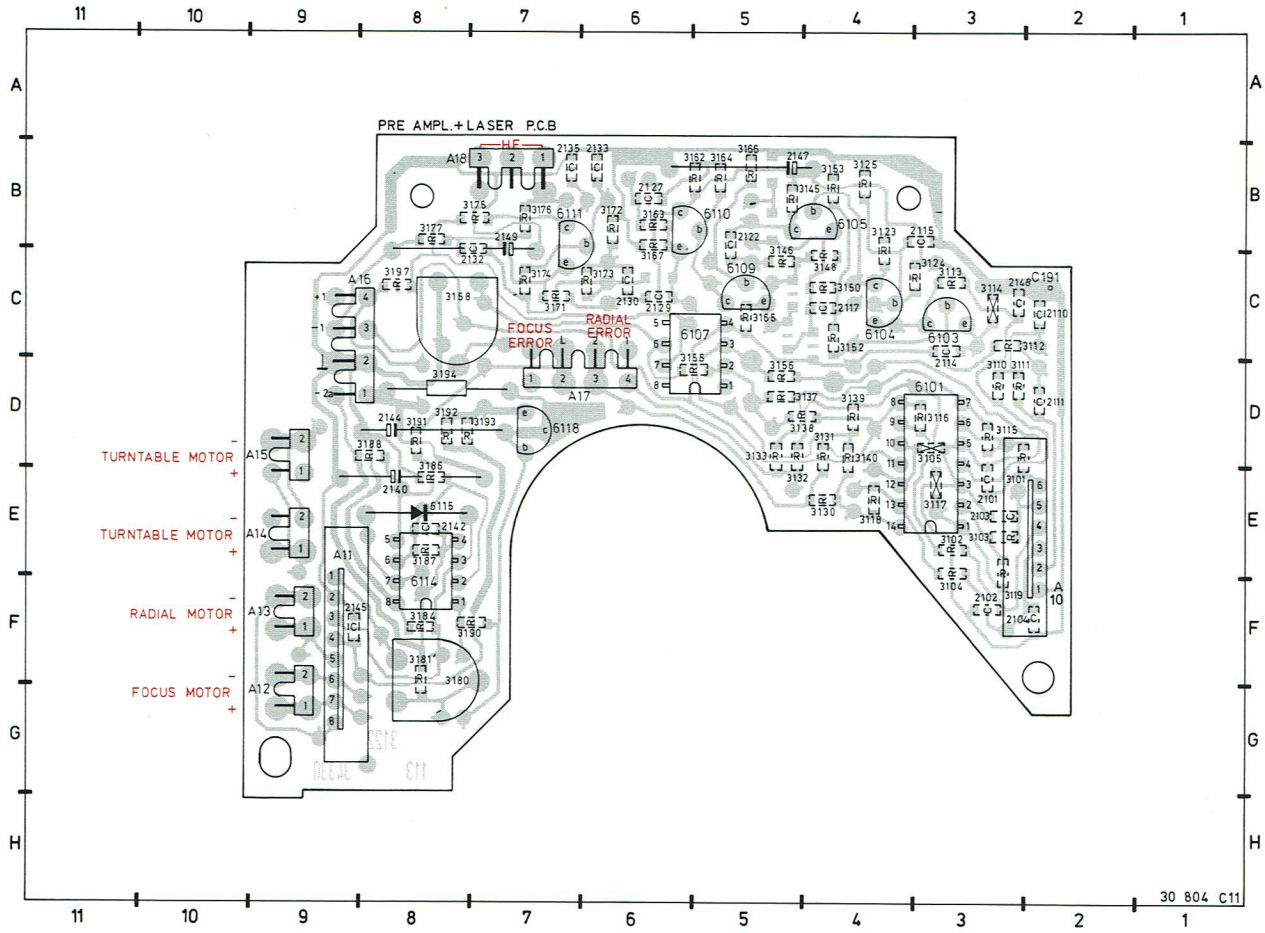
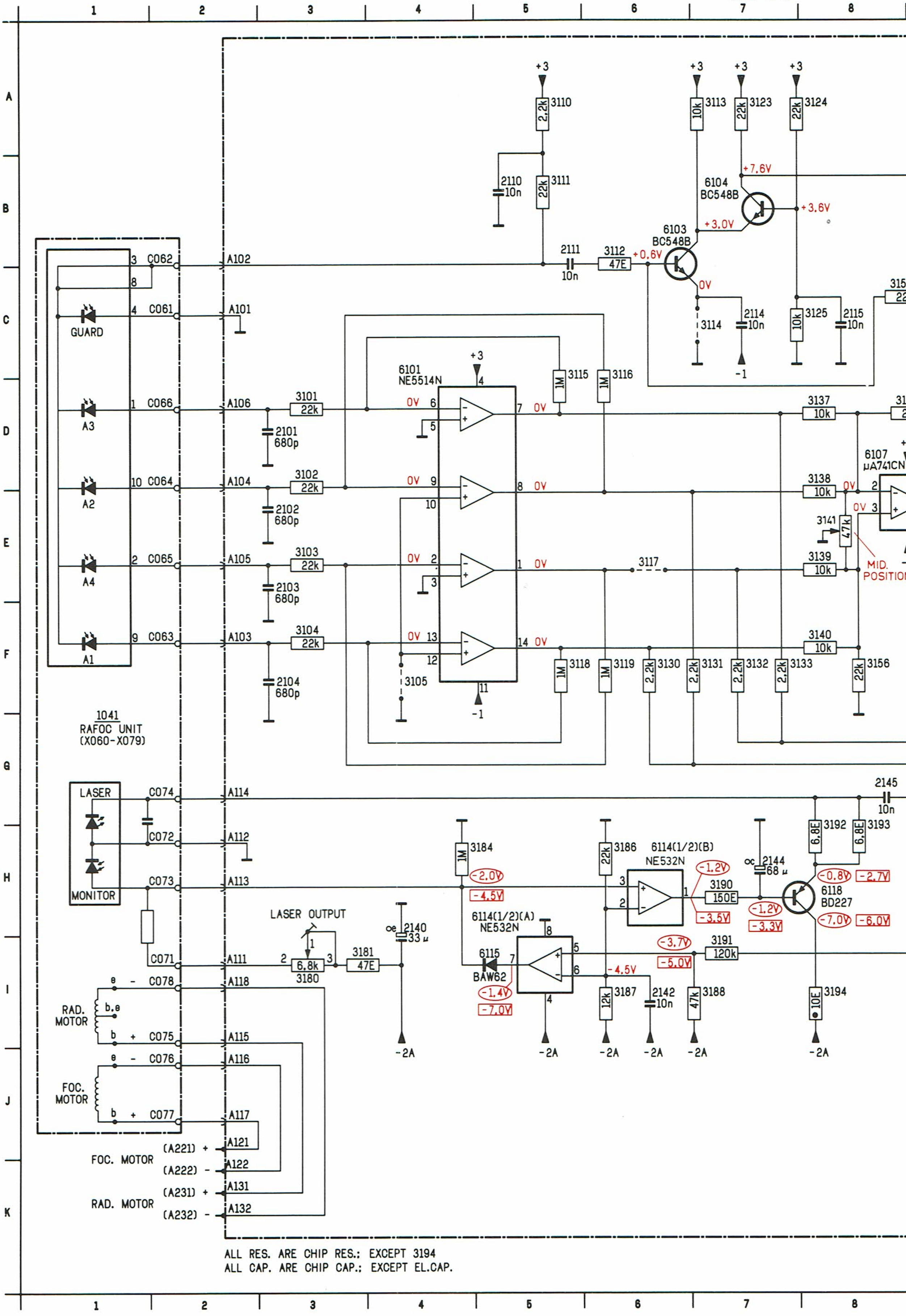


Pre-amplifier + laser print 4822 214 50307

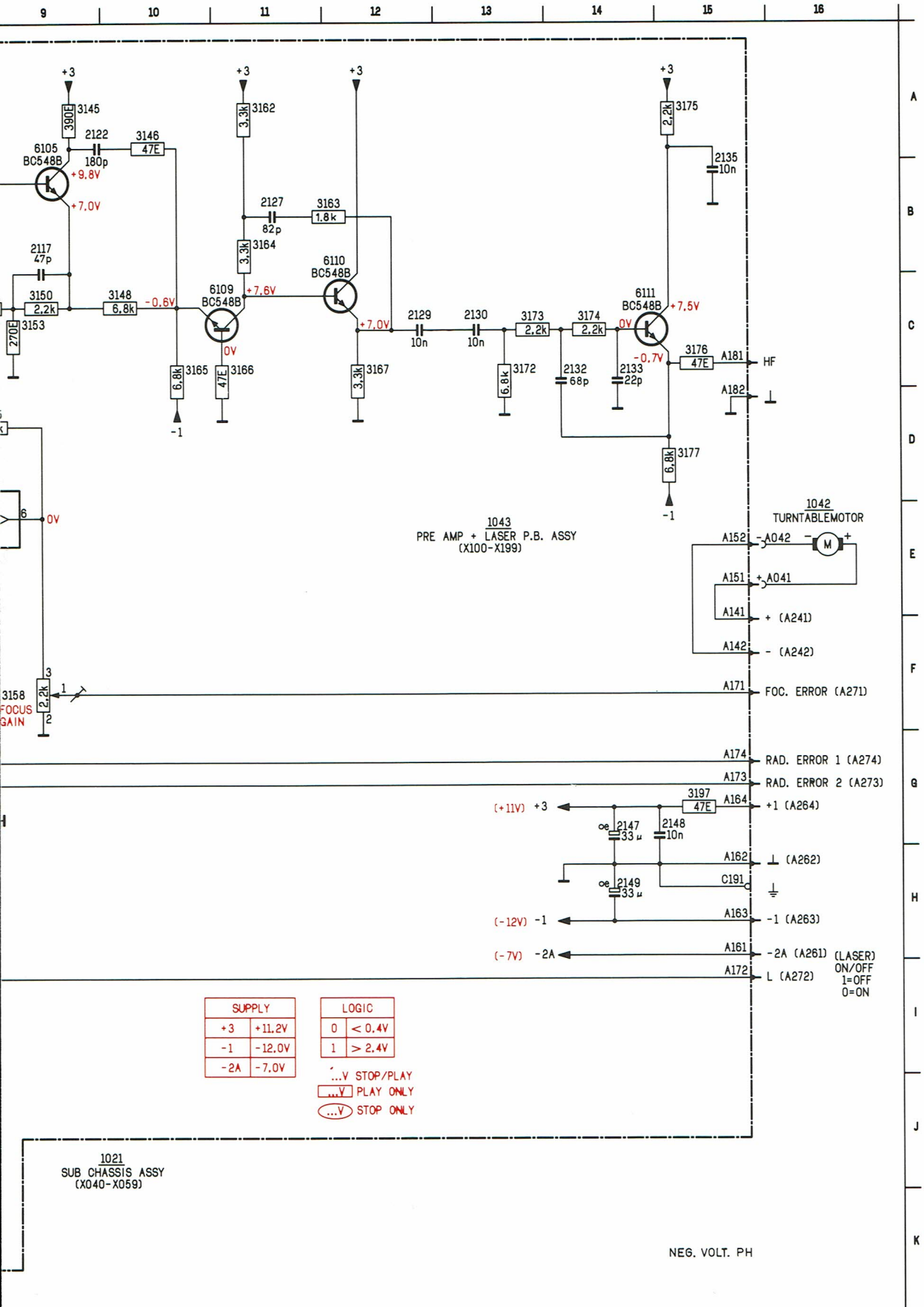
BC548B	4822 130 40937
BD227	5322 130 44661
NE5514	4822 209 81451
NE532	4822 209 80818
µA741CN	4822 209 80617
BAW62	4822 130 30613
3158 2k2	4822 100 10029
3180 6k8	4822 100 10569
0E	4822 111 90163
6E8	4822 111 90254
10E	4822 110 53054
47E	4822 111 90217
150E	5322 111 90098
330E	5322 111 90106
390E	5322 111 90138
1k2	5322 111 90096
2k2	4822 111 90248
2k7	4822 111 90179
3k3	4822 111 90157
6k8	5322 111 90117
10k	4822 111 90249
12k	4822 111 90253
15k	4822 111 90196
22k	4822 111 90251
47k	5322 111 90112
120k	4822 111 90149
1M	4822 111 90252
22 pF	4822 122 31837
39 pF	4822 122 31777
56 pF	4822 122 31779
82 pF	4822 122 31839
180 pF	4822 122 31757
680 pF	4822 122 31809
10 nF	4822 122 31728
6p - A10	4822 267 50412
8p - A11	4822 267 50413

2101	D 3	2111	B 5	2127	B11	2135	A15	2147	G14	3103	E 3	3112	B 6	3117	E 6	3125	C 8	3137	D 8	3146	K 1	315
2102	E 3	2114	C 7	2129	C12	2140	H 4	2148	G15	3104	F 3	3113	A 7	3118	F 5	3130	F 6	3138	D 8	3148	K 1	315
2103	E 3	2115	C 8	2130	C13	2142	I 6	2149	H14	3105	F 4	3114	C 7	3119	F 6	3131	F 7	3139	E 8	3150	K 1	315
2104	F 3	2117	B 9	2132	C14	2144	H 7	3101	D 3	3110	A 5	3115	C 5	3123	A 7	3132	F 7	3140	F 8	3152	K 1	316
2110	B 5	2122	A 9	2133	C14	2145	G 8	3102	D 3	3111	B 5	3116	C 6	3124	A 8	3133	F 8	3141	E 8	3153	C 9	316
																		3145	A 9			



ALL RES. ARE CHIP RES.: EXCEPT 3194
ALL CAP. ARE CHIP CAP.: EXCEPT EL.CAP.

D 9	3164	B11	3172	C13	3177	D15	3187	I 6	3193	H 8	6104	B 7	6111	C14
F 8	3165	C10	3173	C13	3180	I 3	3188	I 7	3194	I 8	6105	A 9	6114	H 6
F 9	3166	C11	3174	C14	3181	I 3	3190	H 7	3197	G15	6107	D 8	6114	H 5
A11	3167	C12	3175	A15	3184	H 5	3191	I 7	6101	C 4	6109	C11	6115	I 5
B12			3176	C15	3186	H 6	3192	H 8	6103	B 6	6110	B12	6118	H 8

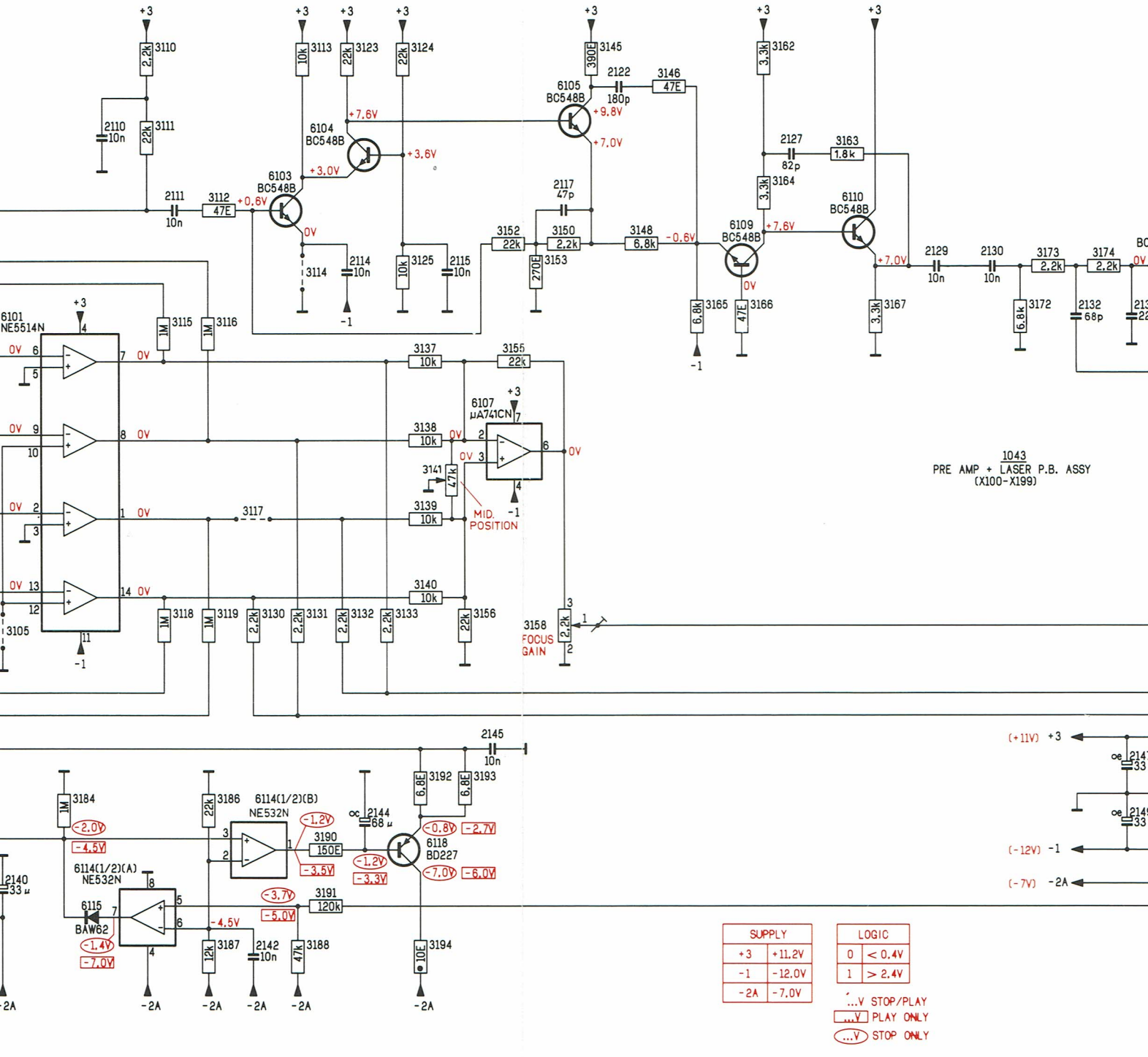


SUPPLY	
+3	+11.2V
-1	-12.0V
-2A	-7.0V

LOGIC	
0	< 0.4V
1	> 2.4V

...V STOP/PLAY
...V PLAY ONLY
...V STOP ONLY

3103	E 3	3112	B 6	3117	E 6	3125	C 8	3137	D 8	3146	K 1	3155	D 9	3164	B11	3172	C13	3177	D15	3187	I 6	3193	H 8	6104	B 7	6111	C14
3104	F 3	3113	A 7	3118	F 5	3130	F 6	3138	D 8	3148	K 1	3156	F 8	3165	C10	3173	C13	3180	I 3	3188	I 7	3194	I 8	6105	A 9	6114	H 6
3105	F 4	3114	C 7	3119	F 6	3131	F 7	3139	E 8	3150	K 1	3158	F 9	3166	C11	3174	C14	3181	I 3	3190	H 7	3197	G15	6107	D 8	6114	H 5
3110	A 5	3115	C 5	3123	A 7	3132	F 7	3140	F 8	3152	K 1	3162	A11	3167	C12	3175	A15	3184	H 5	3191	I 7	6101	C 4	6109	C11	6115	I 5
3111	B 5	3116	C 6	3124	A 8	3133	F 8	3141	E 8	3153	C 9	3163	B12			3176	C15	3186	H 6	3192	H 8	6103	B 6	6110	B12	6118	H 8
								3145	A 9																		

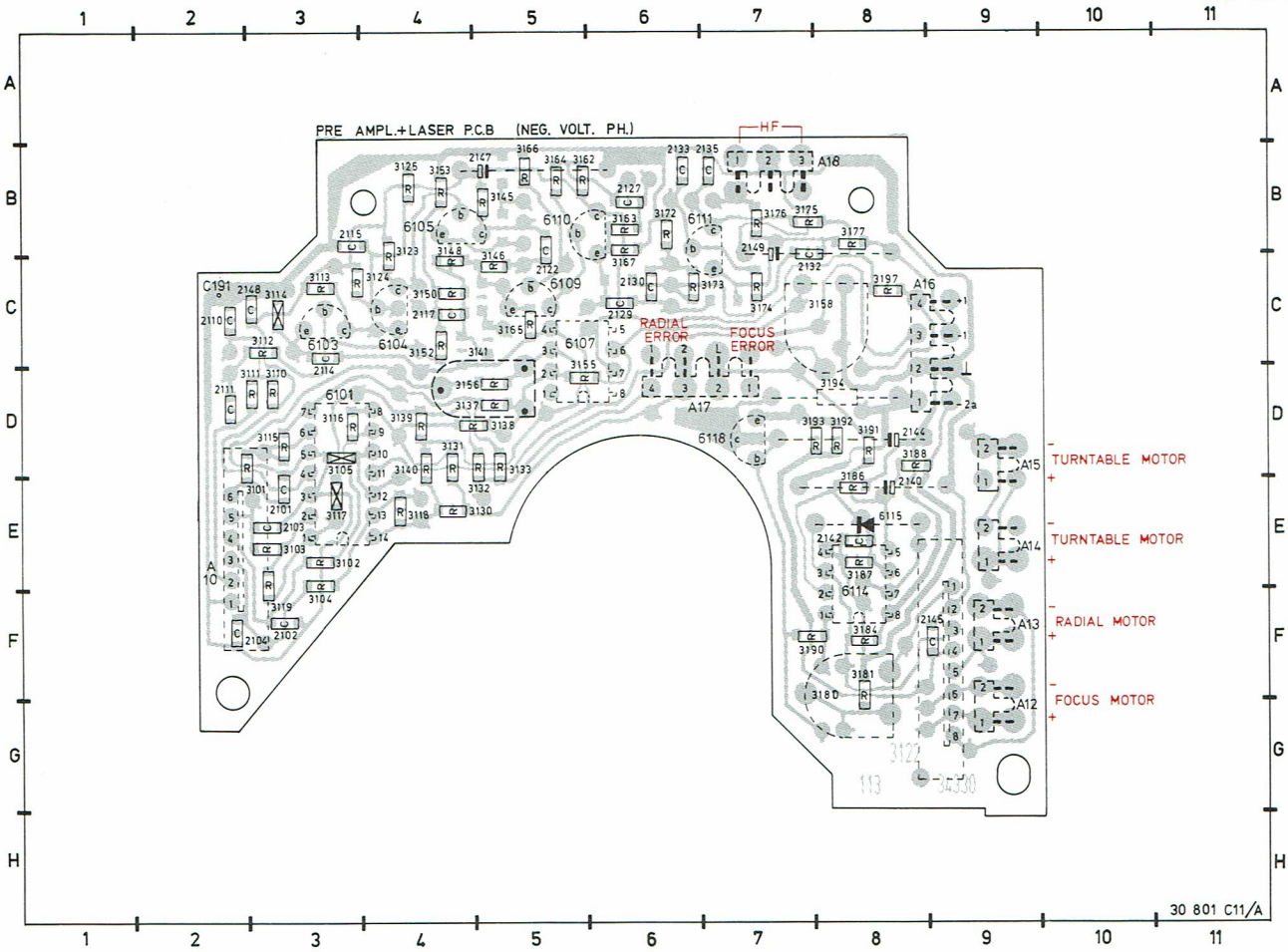


SUPPLY	
+3	+11.2V
-1	-12.0V
-2A	-7.0V

LOGIC	
0	< 0.4V
1	> 2.4V

...V STOP/PLAY
...V PLAY ONLY
...V STOP ONLY

PT 3194
PT EL.CAP.



ITEM	PCB
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2104	F03
2110	C02
2111	D02
2114	D03
2115	B03
2117	C04
2122	B05
2127	B06
2129	C06
2130	C06
2132	C07
2133	B06
2135	B07
2140	E08
2142	E08
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3150	C04
3152	C04
3153	B04
3155	D06
3156	D05
3158	C08
3162	B05
3163	B06
3164	B05
3165	C05
3166	B05
3167	C06
3172	B06
3173	C06
3174	C07
3175	B07
3176	B07
3177	B08
3180	F08
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6101	D03
6103	C03
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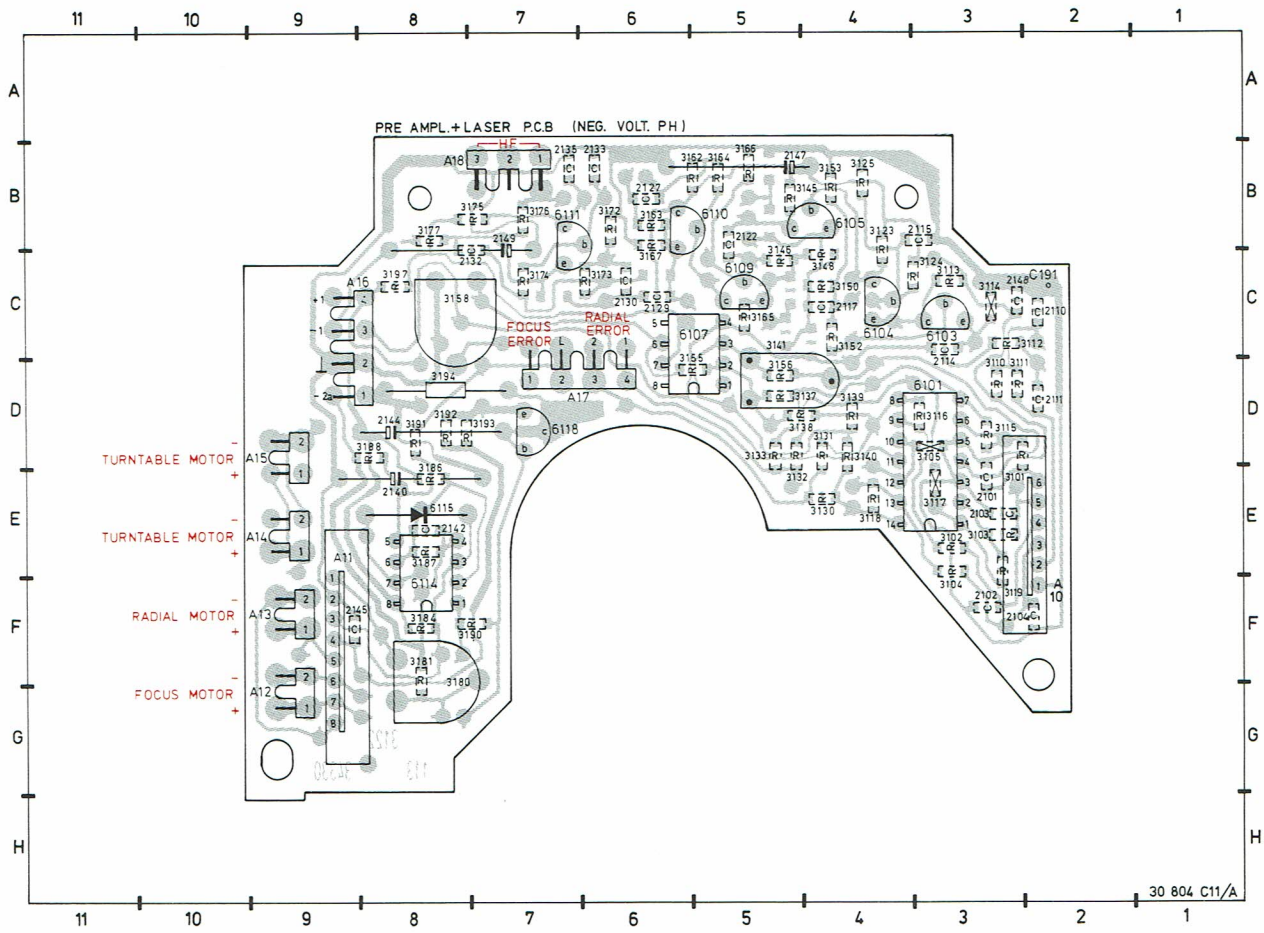

Pre-amplifier + laser print 4822 214 50307

BC548B	4822 130 40937
BD227	5322 130 44661
NE5514N	4822 209 81451
NE532N	4822 209 80818
μA741CN	4822 209 80617
BAW62	4822 130 30613
3141 47k	4822 100 10079
3158 2k2	4822 100 10029
3180 6k8	4822 100 10569
0E	4822 111 90163
6E8	4822 111 90254
47E	4822 111 90217
150E	5322 111 90098
270E	4822 111 90154
390E	5322 111 90138
1k8	5322 111 90101
2k2	4822 111 90248
2k7	4822 111 90179
3k3	4822 111 90157
6k8	5322 111 90117
10k	4822 111 90249
12k	4822 111 90253
22k	4822 111 90251
47k	5322 111 90112
120k	4822 111 90149
1M	4822 111 90252
22 pF	4822 122 31837
47 pF	4822 122 31772
68 pF	4822 111 90308
82 pF	4822 122 31839
180 pF	4822 122 31757
680 pF	4822 122 31809
10 nF	4822 122 31728
6p - A10	4822 267 50412
8p - A11	4822 267 50413

2101	D 3	2111	B 5	2127	B11	2135	A15	2147	G14	3103	E 3	3112	B 6	3117	E 6	3125	C 8	3137	D 8	3146	K 1
2102	E 3	2114	C 7	2129	C12	2140	H 4	2148	G15	3104	F 3	3113	A 7	3118	F 5	3130	F 6	3138	D 8	3148	K 1
2103	E 3	2115	C 8	2130	C13	2142	I 6	2149	H14	3105	F 4	3114	C 7	3119	F 6	3131	F 7	3139	E 8	3150	K 1
2104	F 3	2117	B 9	2132	C14	2144	H 7	3101	D 3	3110	A 5	3115	C 5	3123	A 7	3132	F 7	3140	F 8	3152	K 1
2110	B 5	2122	A 9	2133	C14	2145	G 8	3102	D 3	3111	B 5	3116	C 6	3124	A 8	3133	F 8	3141	E 8	3153	C 9
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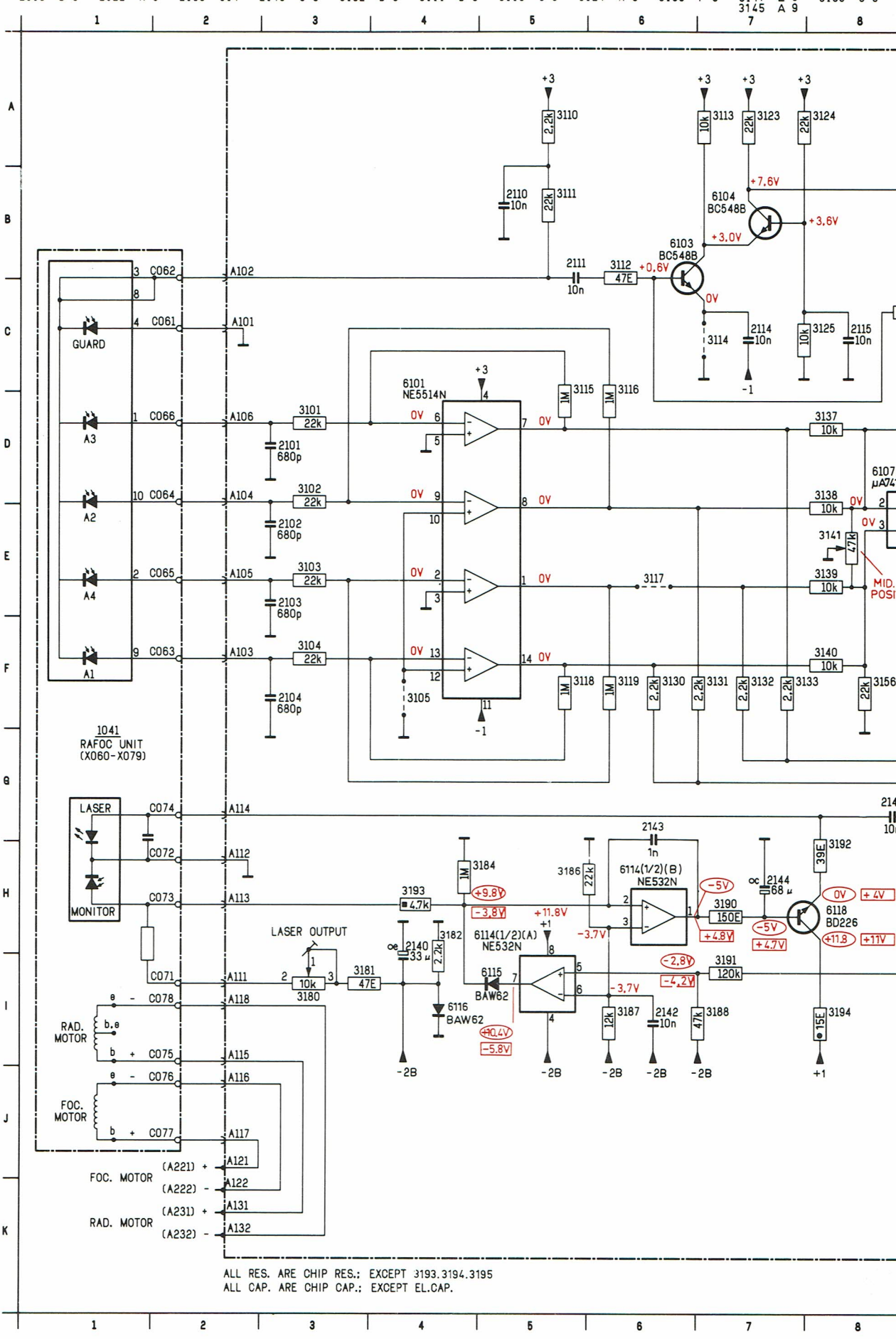

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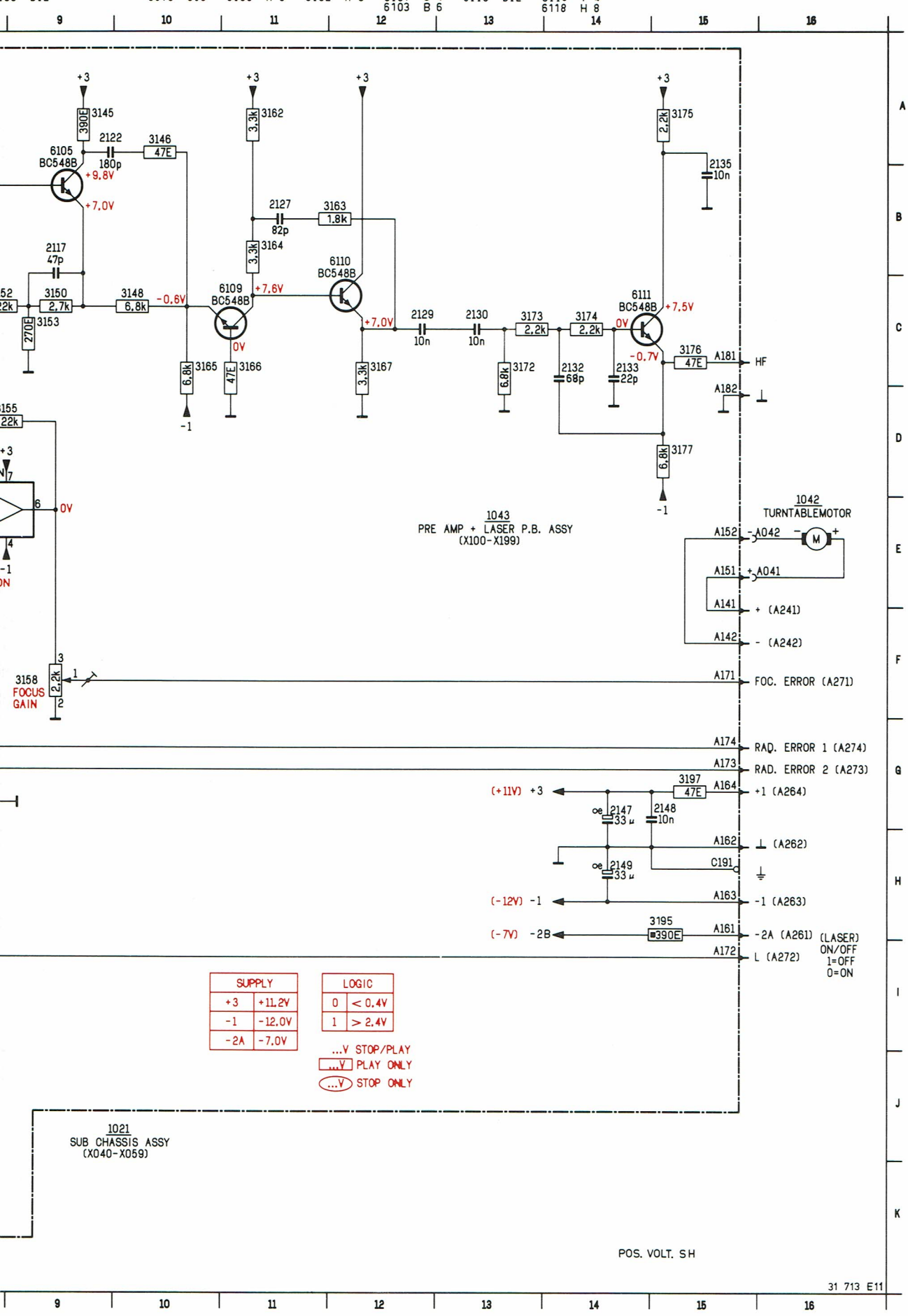
156	F 8	3165	C10	3173	C13	3180	I 3	3188	I 7	3194	I 8	6105	A 9	6114	H 6
158	F 9	3166	C11	3174	C14	3181	I 3	3190	H 7	3195	H14	6107	D 8	6114	H 5
162	A11	3167	C12	3175	A15	3184	H 5	3191	I 7	3197	C15	6109	C11	6115	I 5
163	B12			3176	C15	3186	H 6	3192	H 8	6101	C 4	6110	B12	6116	I 4
										6103	B 6			6118	H 8

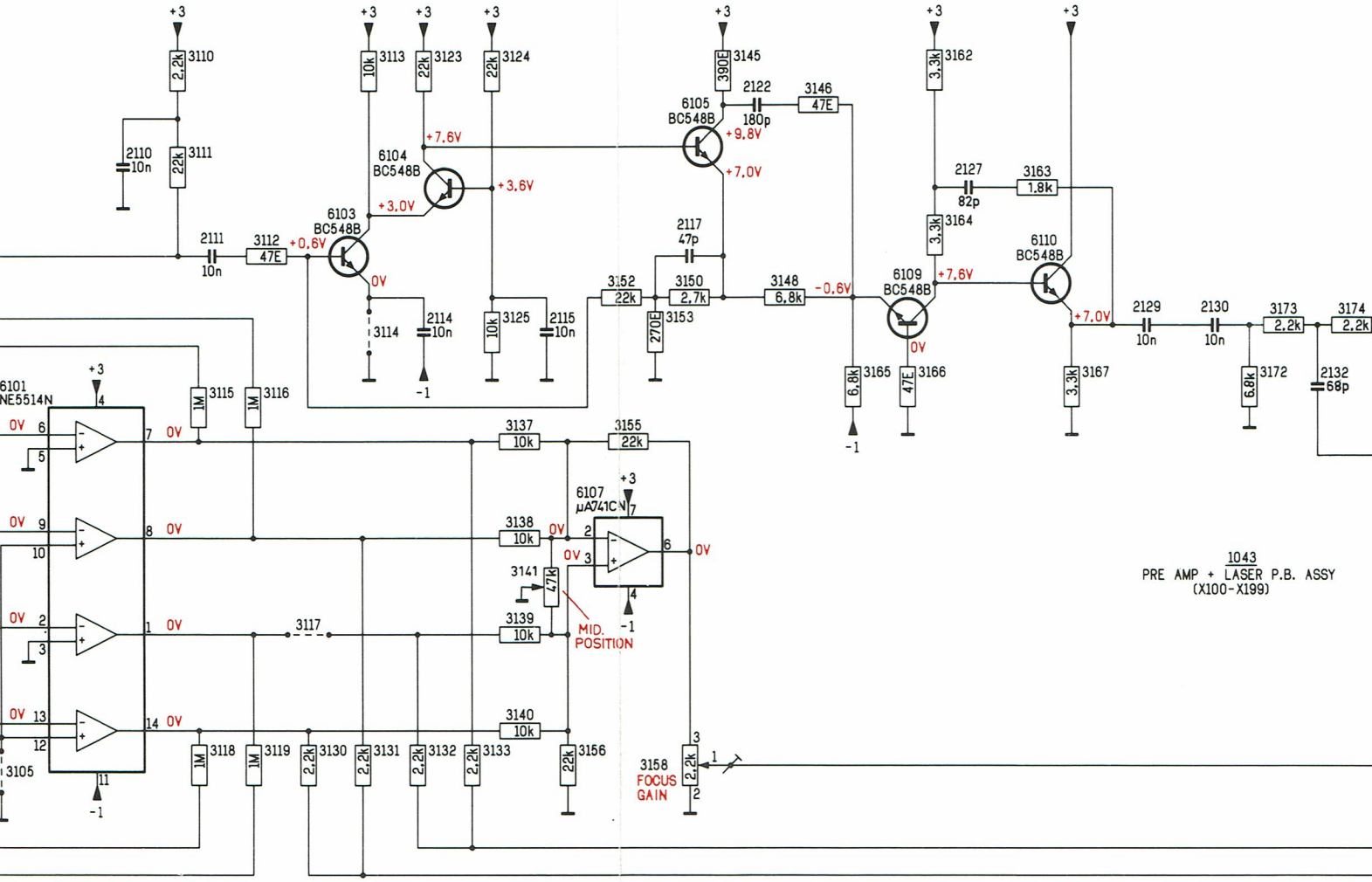


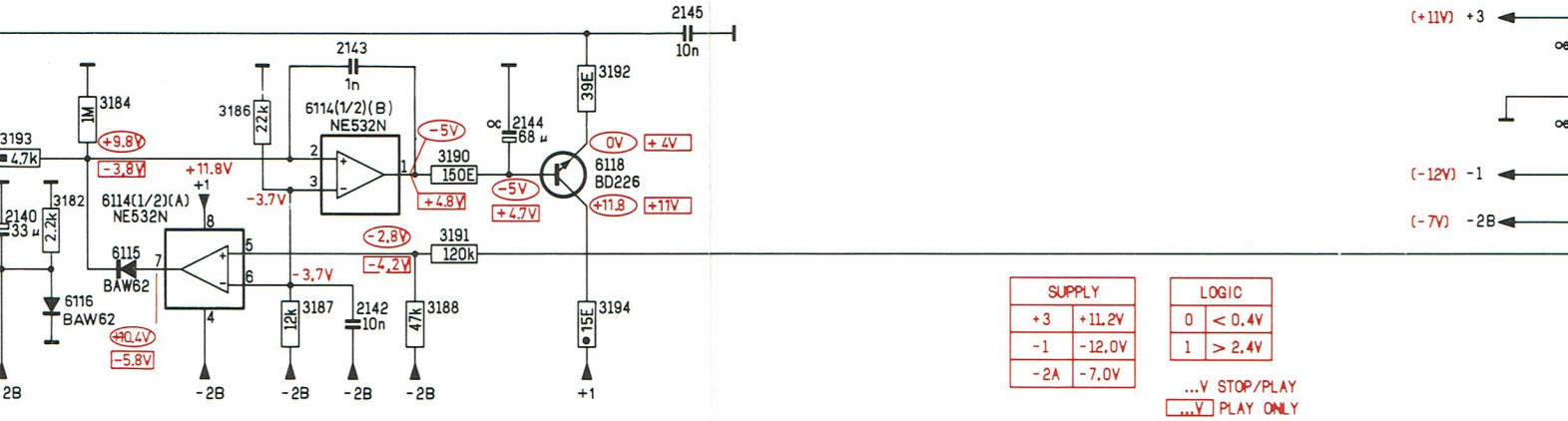
SUPPLY	
+3	+11.2V
-1	-12.0V
-2A	-7.0V

LOGIC	
0	< 0.4V
1	> 2.4V

...V STOP/PLAY
...V PLAY ONLY
...V STOP ONLY

3103	E 3	3112	B 6	3117	E 6	3125	C 8	3137	D 8	3146	K 1	3155	D 9	3164	B11	3172	C13	3177	D15	3187	I 6	3193	H 4	6104	B 7	6111	C14
3104	F 3	3113	A 7	3118	F 5	3130	F 6	3138	D 8	3148	K 1	3156	F 8	3165	C10	3173	C13	3180	I 3	3188	I 7	3194	I 8	6105	A 9	6114	H 6
3105	F 4	3114	C 7	3119	F 6	3131	F 7	3139	E 8	3150	K 1	3158	F 9	3166	C11	3174	C14	3181	I 3	3190	H 7	3195	H14	6107	D 8	6114	H 5
3110	A 5	3115	C 5	3123	A 7	3132	F 7	3140	F 8	3152	K 1	3162	A11	3167	C12	3175	A15	3184	H 5	3191	I 7	3197	G15	6109	C11	6115	I 5
3111	B 5	3116	C 6	3124	A 8	3133	F 8	3141	E 8	3153	C 9	3163	B12			3176	C15	3186	H 6	3192	H 8	6101	C 4	6110	B12	6116	H 6
								3145	A 9													6103	B 6			6118	H 8





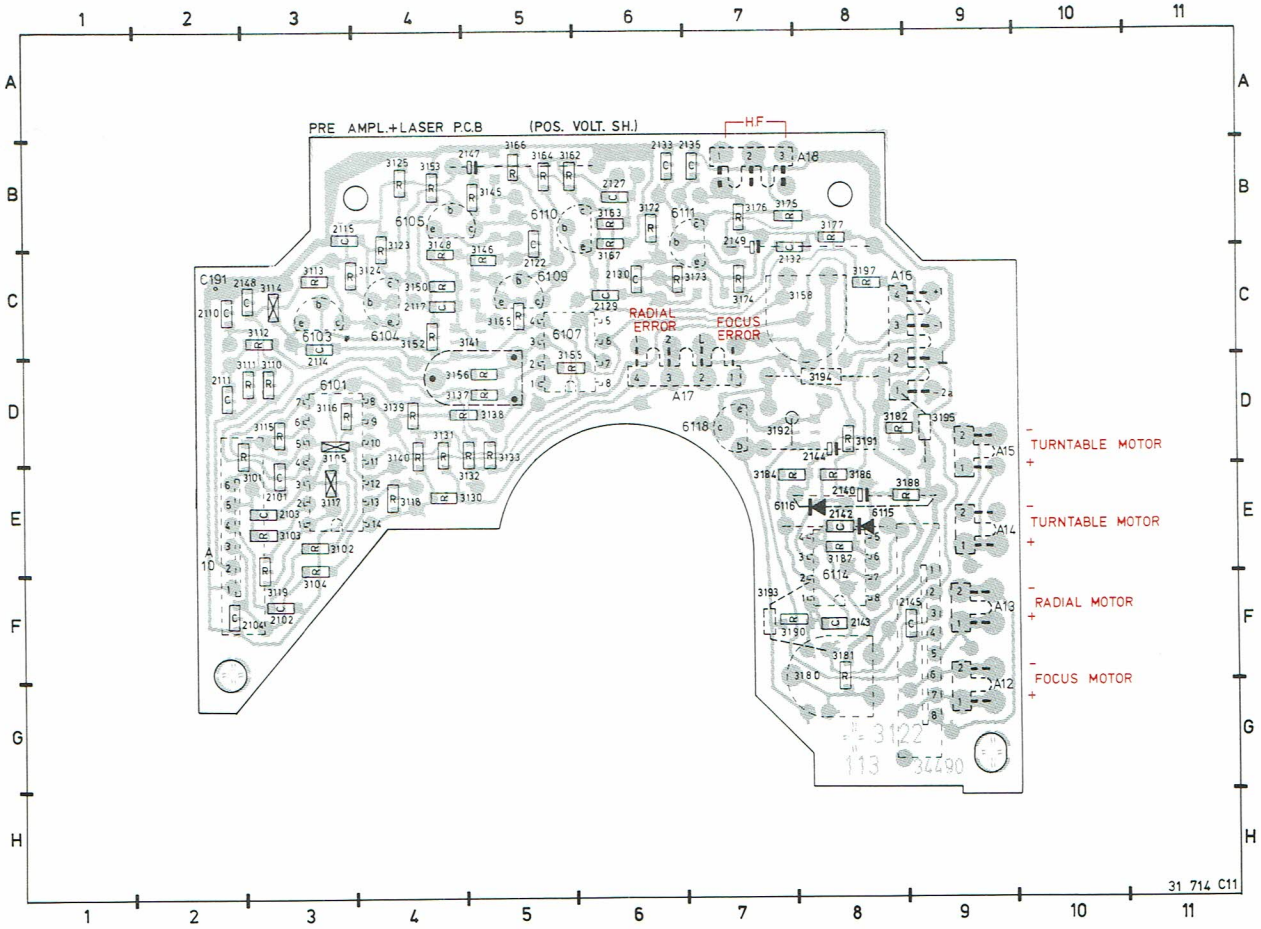
SUPPLY	
+3	+11.2V
-1	-12.0V
-2A	-7.0V

LOGIC	
0	< 0.4V
1	> 2.4V

...V STOP/PLAY
...V PLAY ONLY
...V STOP ONLY

1021
SUB CHASSIS ASSY
(X040-X059)

T 3193.3194.3195
T EL.CAP.



ITEM	PCB
2101	E03
2102	F03
2103	E03
2104	F03
2110	C02
2111	D02
2114	D03
2115	B03
2117	C04
2122	C05
2127	B06
2129	C06
2130	C06
2132	C07
2133	B06
2140	E08
2142	E08
2143	F08
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3115	D03
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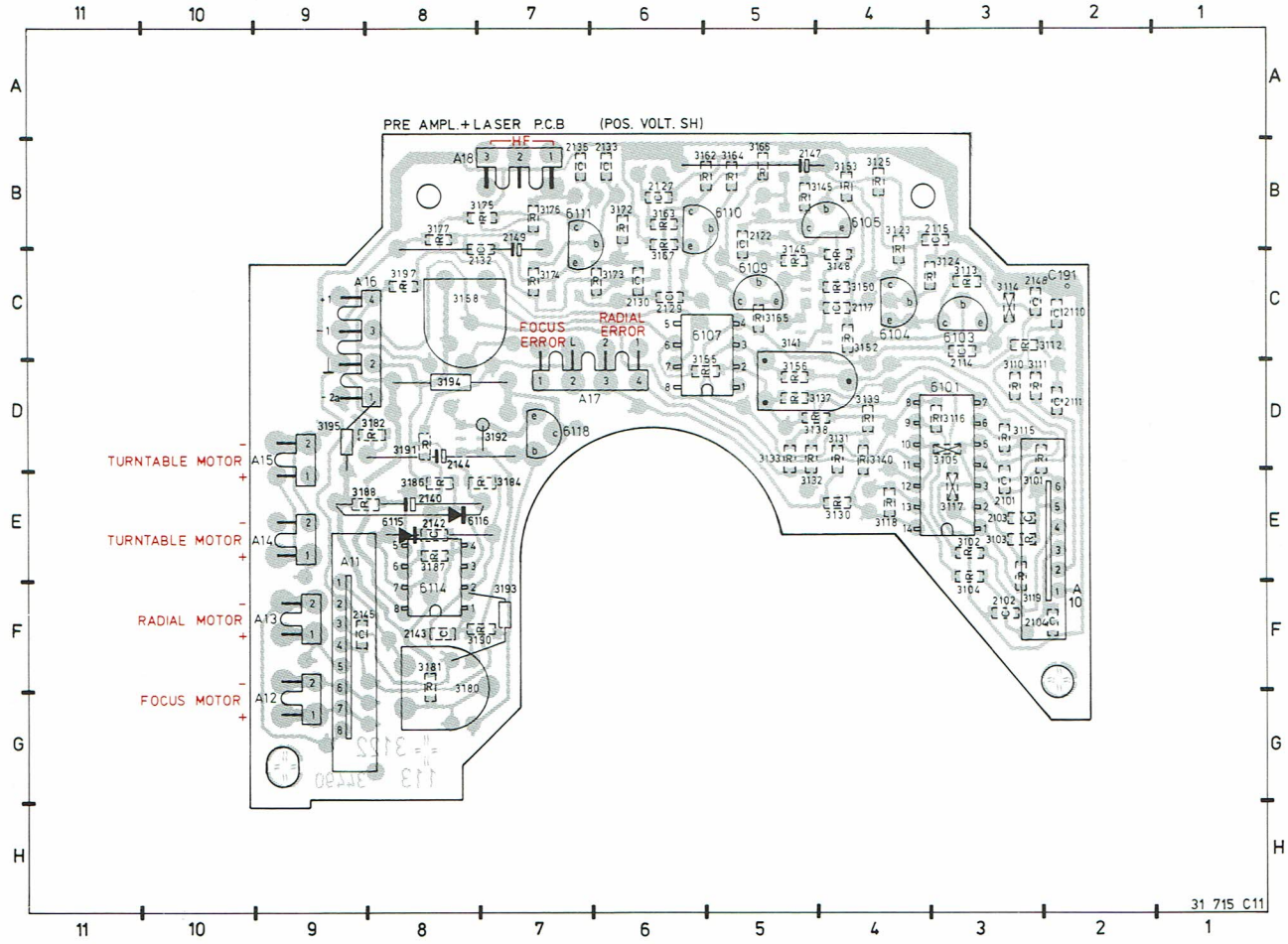
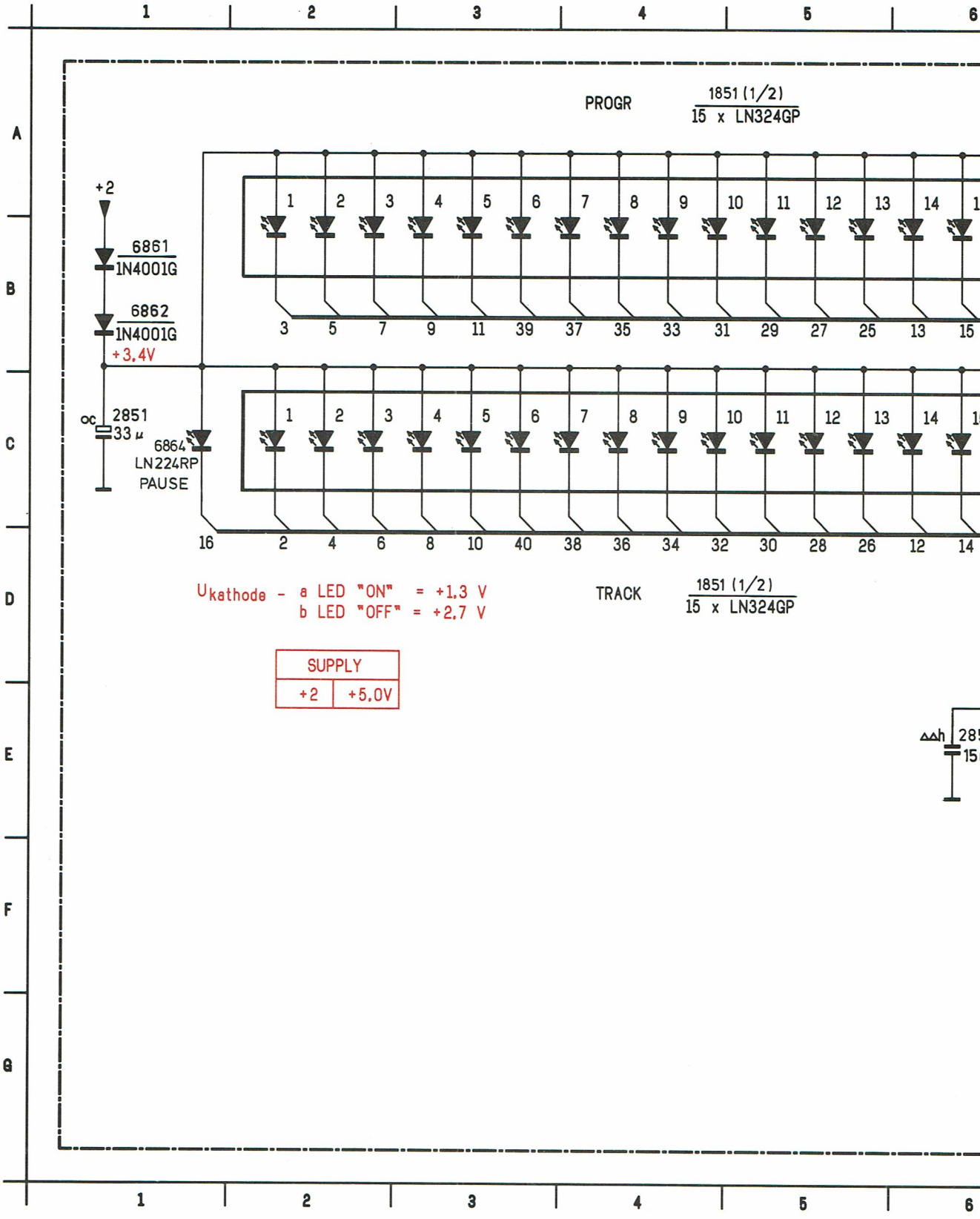
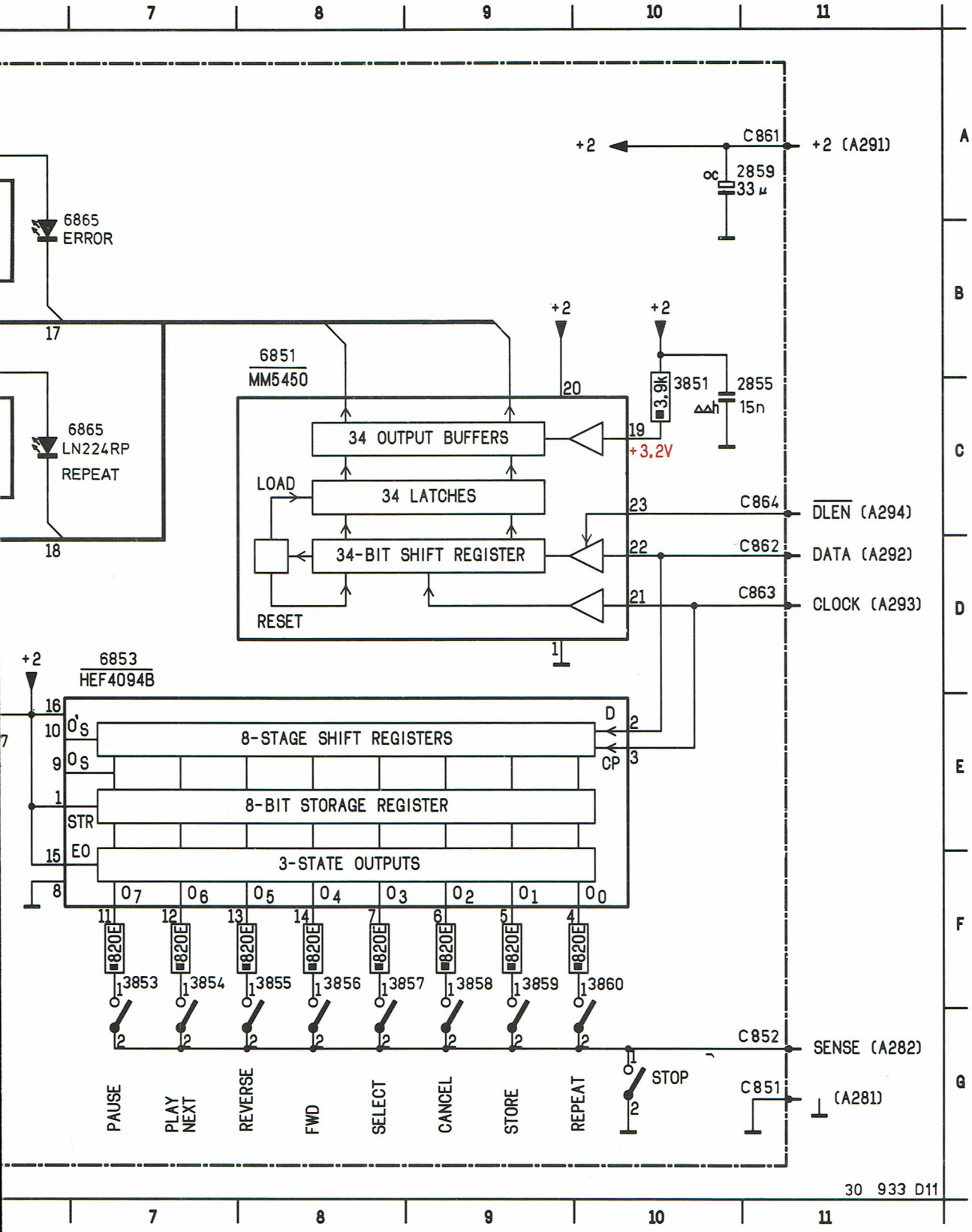
3140	D04
3141	C05
3145	B05
3146	B05
3148	B04
3150	C04
3152	C04
3153	B04
3155	C05
3156	D04
3158	C08
3162	B05
3163	B06
3164	B05
3165	C05
3166	B05
3167	C06
3172	B06
3173	C07
3174	C07
3175	B07
3176	B07
3177	B08
3180	F08
3181	F08
3182	D08
3184	E07
3186	E08
3187	E08
3188	E09
3190	F07
3191	D08
3192	D08
3193	F07
3194	D08
3195	D09
3197	C08
6101	D03
6103	C03
6104	C04
6105	B04
6107	C05
6109	C05
6110	B05
6111	B07
6114	F08
6115	E08
6116	E08
6118	D07

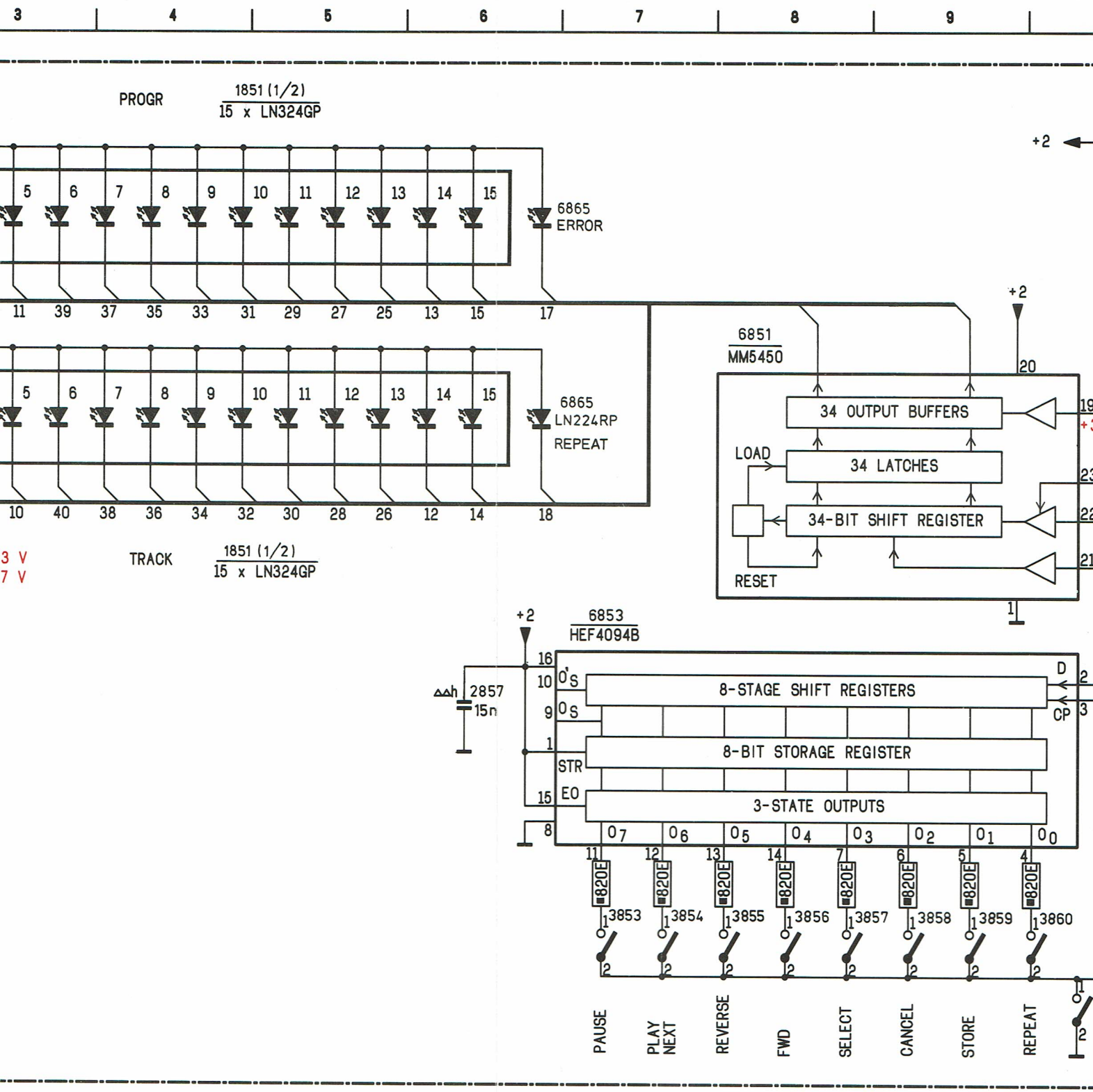


Pre-amplifier + laser print 4822 214 50325

BC548B		4822 130 40937
BD227		5322 130 44661
NE5514N		4822 209 81451
NE532N		4822 209 80818
μA741CN		4822 209 80617
BAW62		4822 130 30613
39E	PR37	5322 116 55063
3141	47k	4822 100 10079
3158	2k2	4822 100 10029
3180	10k	4822 100 10035
0E		4822 111 90163
6E8		4822 111 90254
10E		4822 110 53054
47E		4822 111 90217
150E		5322 111 90098
270E		4822 111 90154
390E		5322 111 90138
1k2		5322 111 90096
1k8		4822 111 90101
2k7		4822 111 90179
3k3		4822 111 90157
6k8		5322 111 90117
10k		4822 111 90249
12k		4822 111 90253
22k		4822 111 90251
47k		5322 111 90112
120k		4822 111 90149
1M		4822 111 90252
22 pF		4822 122 31837
47 pF		4822 122 31772
68 pF		4822 111 90308
82 pF		4822 122 31839
180 pF		4822 122 31757
680 pF		4822 122 31809
1 n		5322 122 31647
10 nF		4822 122 31728
6p - A10		4822 267 50412
8p - A11		4822 267 50413


PROGR
1851 (1/2)
15 x LN324GP
+2
6861
1N4001G
6862
1N4001G
+3,4V
2851
33 µ
6864
LN224RP
PAUSE
TRACK
1851 (1/2)
15 x LN324GP
Ukathode - a LED "ON" = +1,3 V
b LED "OFF" = +2,7 V
SUPPLY
+2
+5,0V


7
8
9
10
11
A
B
C
D
E
F
G
+2
C861
+2 (A291)
2859
33 µ
6865
ERROR
17
6865
LN224RP
REPEAT
18
6851
MM5450
20
+2
+2
3851
3,9k
2855
15n
34 OUTPUT BUFFERS
19
+3,2V
LOAD
34 LATCHES
23
C864
DLEN (A294)
34-BIT SHIFT REGISTER
22
C862
DATA (A292)
21
C863
CLOCK (A293)
RESET
1
+2
6853
HEF4094B
16
10
9
1
15
8
8-STAGE SHIFT REGISTERS
D
2
CP
3
8-BIT STORAGE REGISTER
STR
3-STATE OUTPUTS
EO
O7
O6
O5
O4
O3
O2
O1
O0
820E
3853
3854
3855
3856
3857
3858
3859
3860
C852
SENSE (A282)
STOP
C851
(A281)
PAUSE
PLAY NEXT
REVERSE
FWD
SELECT
CANCEL
STORE
REPEAT
30 933 D11


3 4 5 6 7 8 9
PROGR
1851 (1/2)
15 x LN324GP
+2
5 6 7 8 9 10 11 12 13 14 15
6865
ERROR
11 39 37 35 33 31 29 27 25 13 15 17
5 6 7 8 9 10 11 12 13 14 15
6865
LN224RP
REPEAT
10 40 38 36 34 32 30 28 26 12 14 18
3 V
7 V
TRACK
1851 (1/2)
15 x LN324GP
6851
MM5450
+2
20
34 OUTPUT BUFFERS
LOAD
34 LATCHES
34-BIT SHIFT REGISTER
RESET
1
+2
6853
HEF4094B
16
10
9
1
15
8
2857
15n
8-STAGE SHIFT REGISTERS
8-BIT STORAGE REGISTER
3-STATE OUTPUTS
STR
EO
D
CP
820E
3853
3854
3855
3856
3857
3858
3859
3860
PAUSE
PLAY NEXT
REVERSE
FWD
SELECT
CANCEL
STORE
REPEAT
3 4 5 6 7 8 9