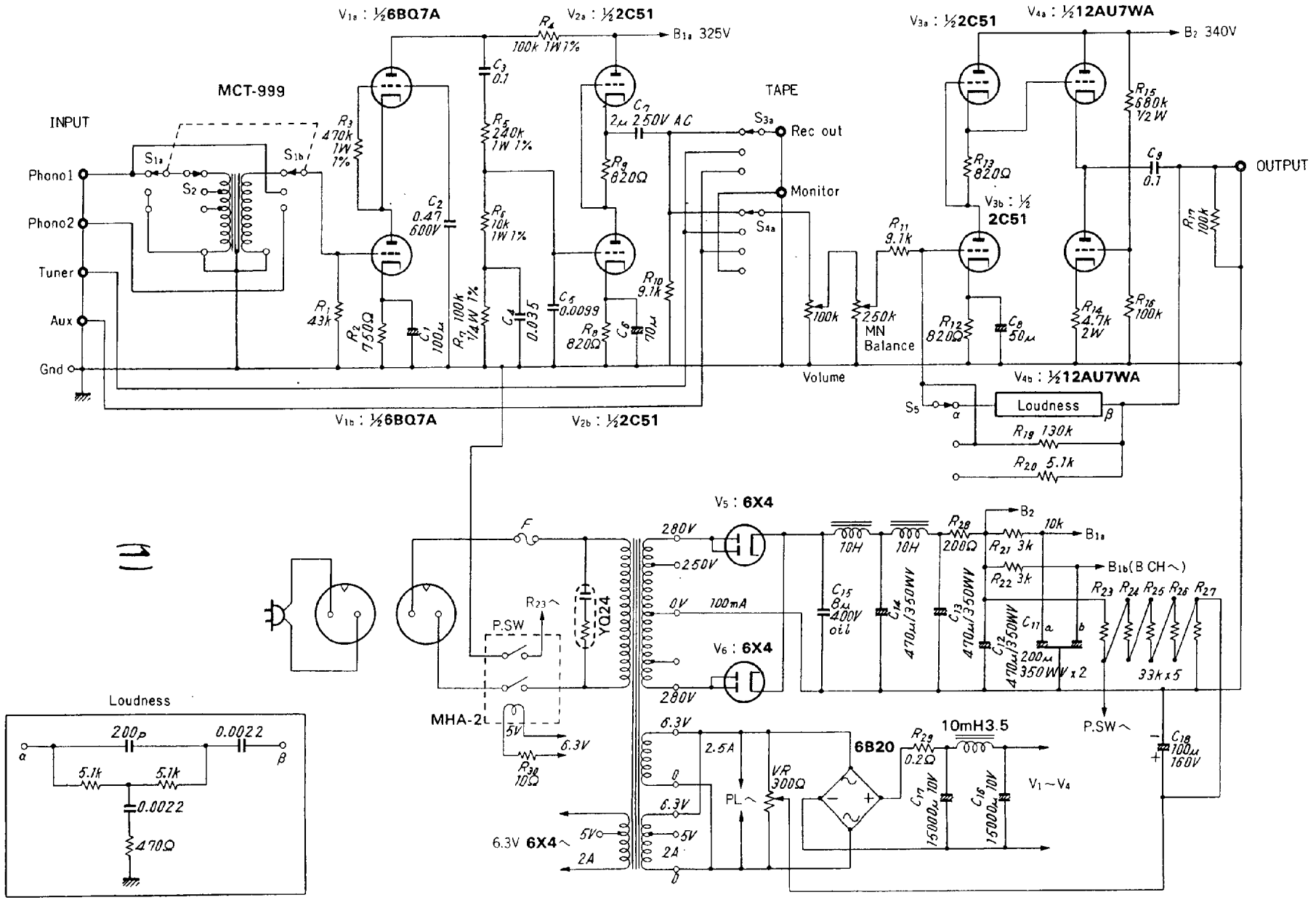
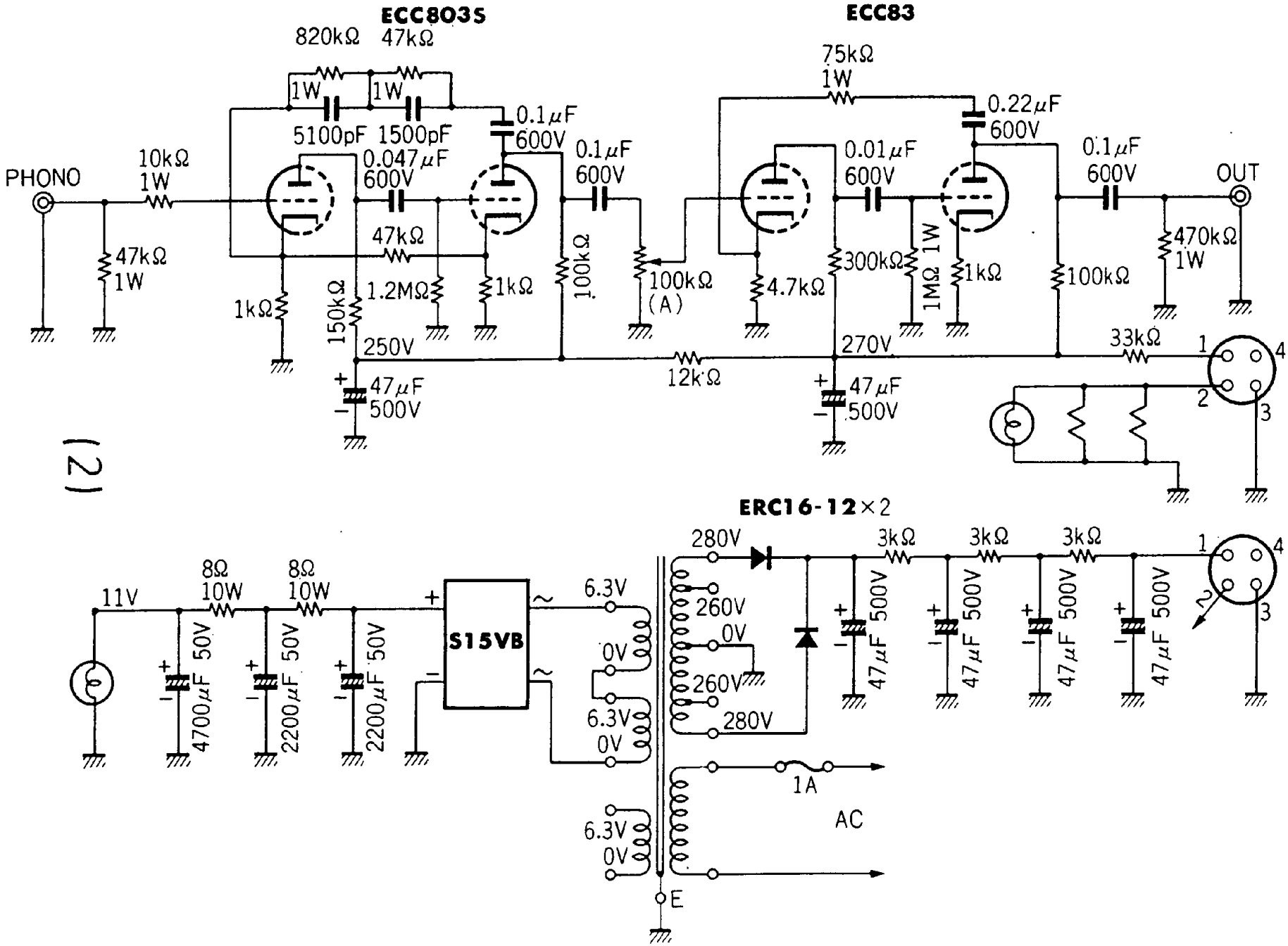
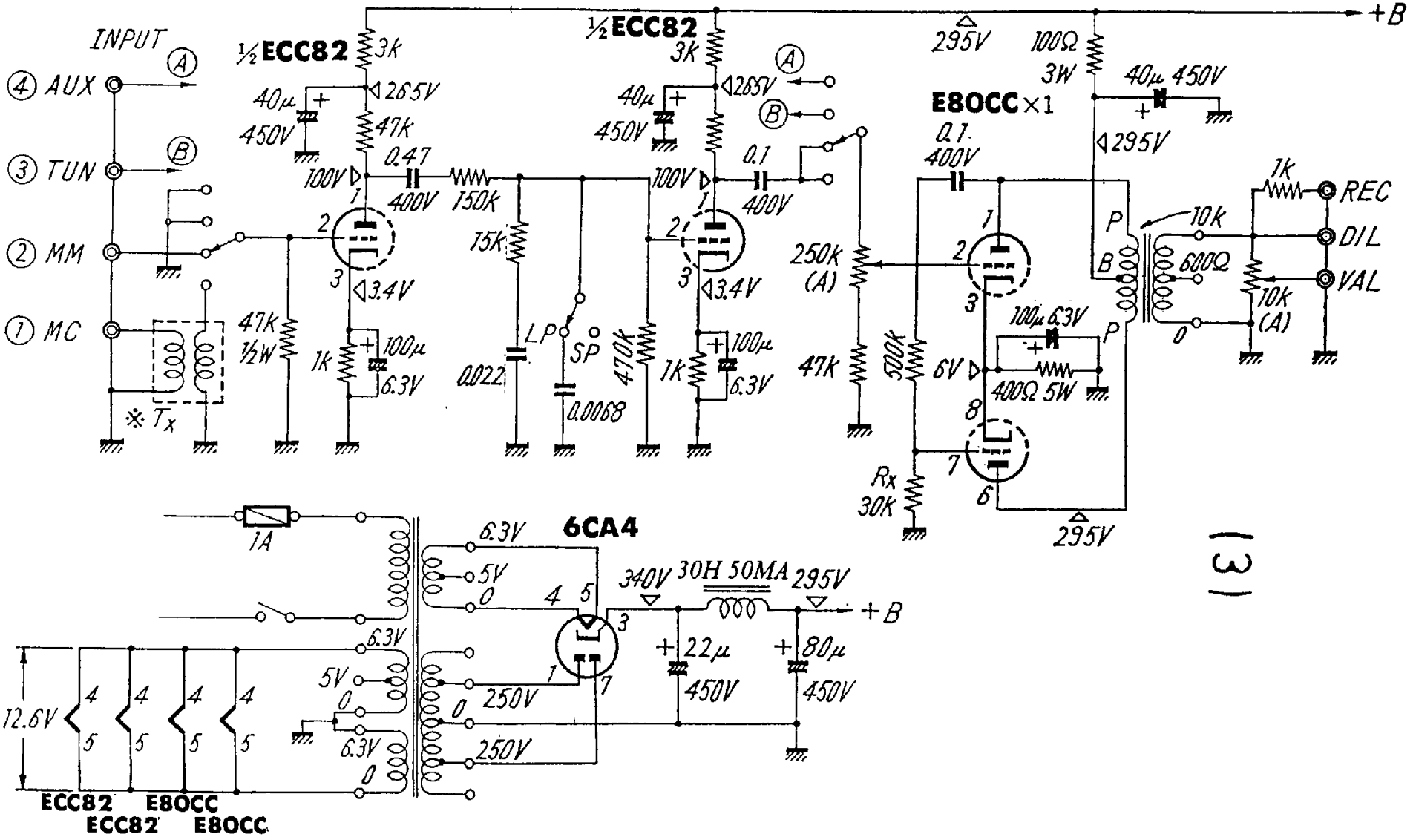
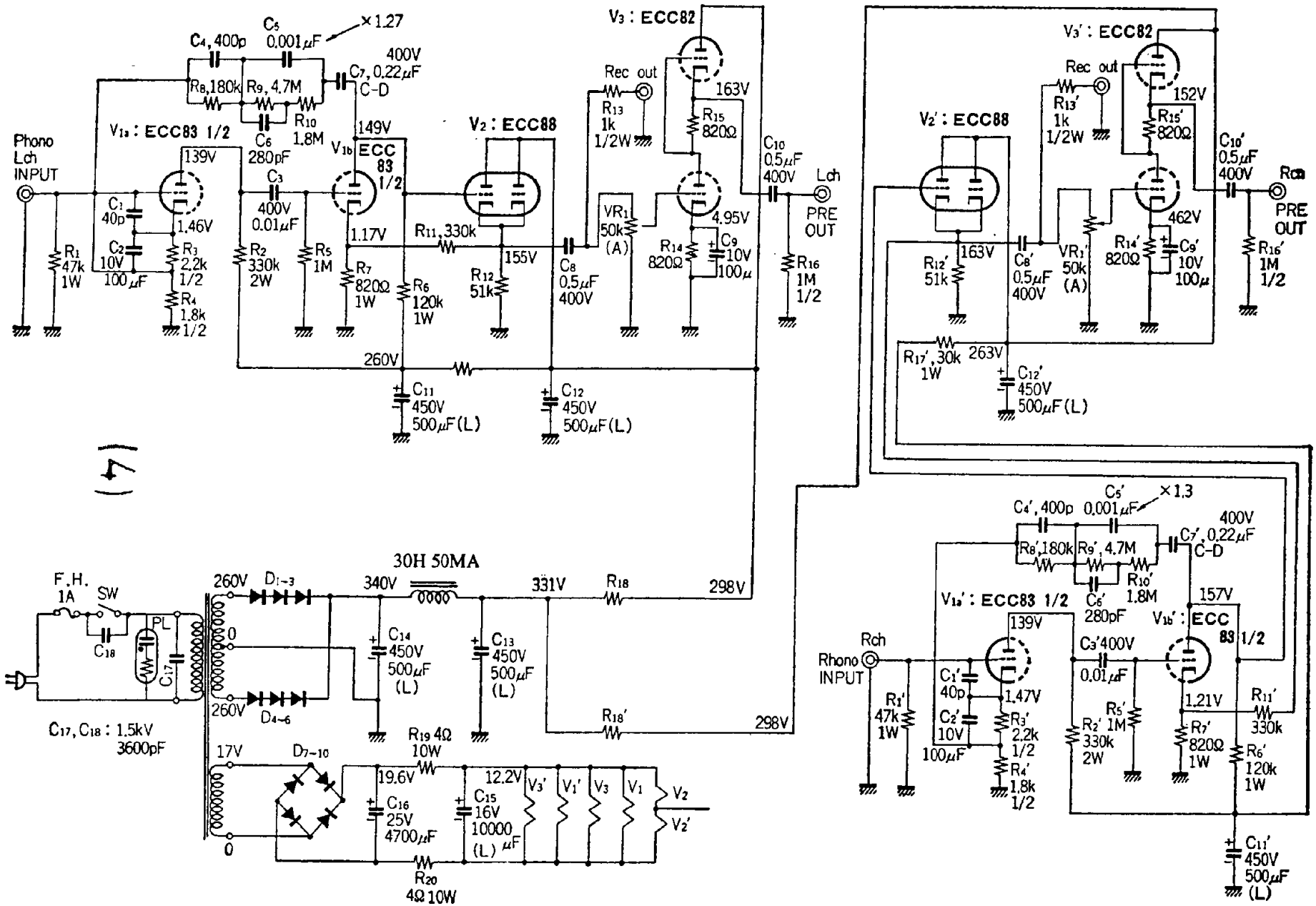
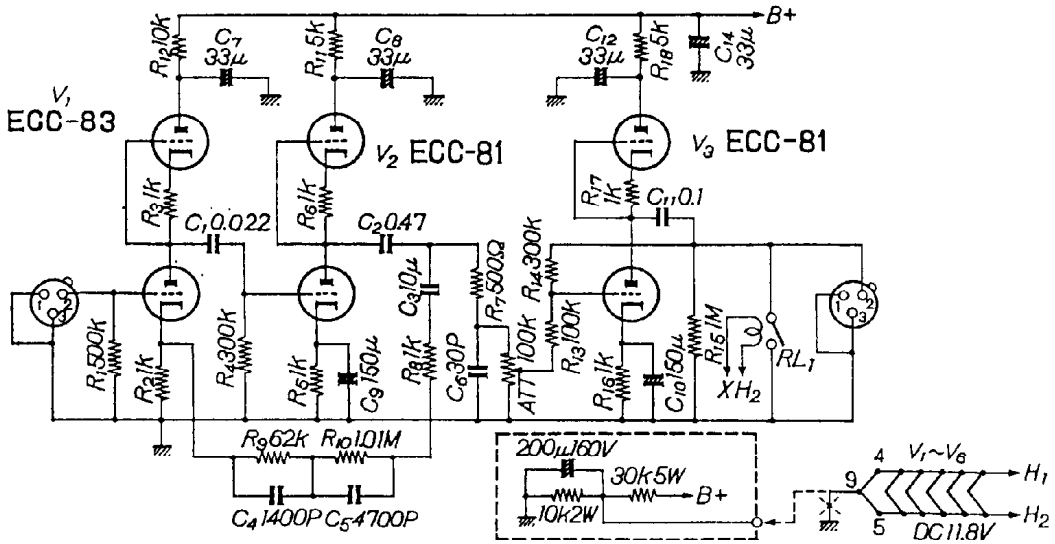
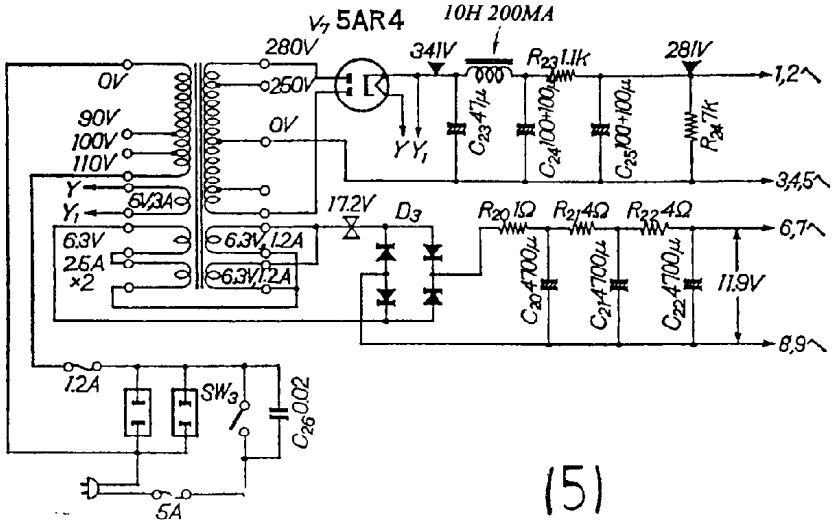

MCT-999
INPUT
Phono1
Phono2
Tuner
Aux
Gnd
TAPE
Rec out
Monitor
Volume
OUTPUT
V1a : ½6BQ7A
V2a : ½2C51
V3a : ½2C51
V4a : ½12AU7WA
V1b : ½6BQ7A
V2b : ½2C51
V3b : ½ 2C51
V4b : ½12AU7WA
B1a 325V
B2 340V
250k MN Balance
Loudness
V5 : 6X4
V6 : 6X4
YQ24
P.SW
MHA-2L
6B20
10mH3.5
6.3V 6X4
Loudness
200p
0.0022
5.1k
470Ω
B1b(B CH)
33k x5
V1 ~ V4

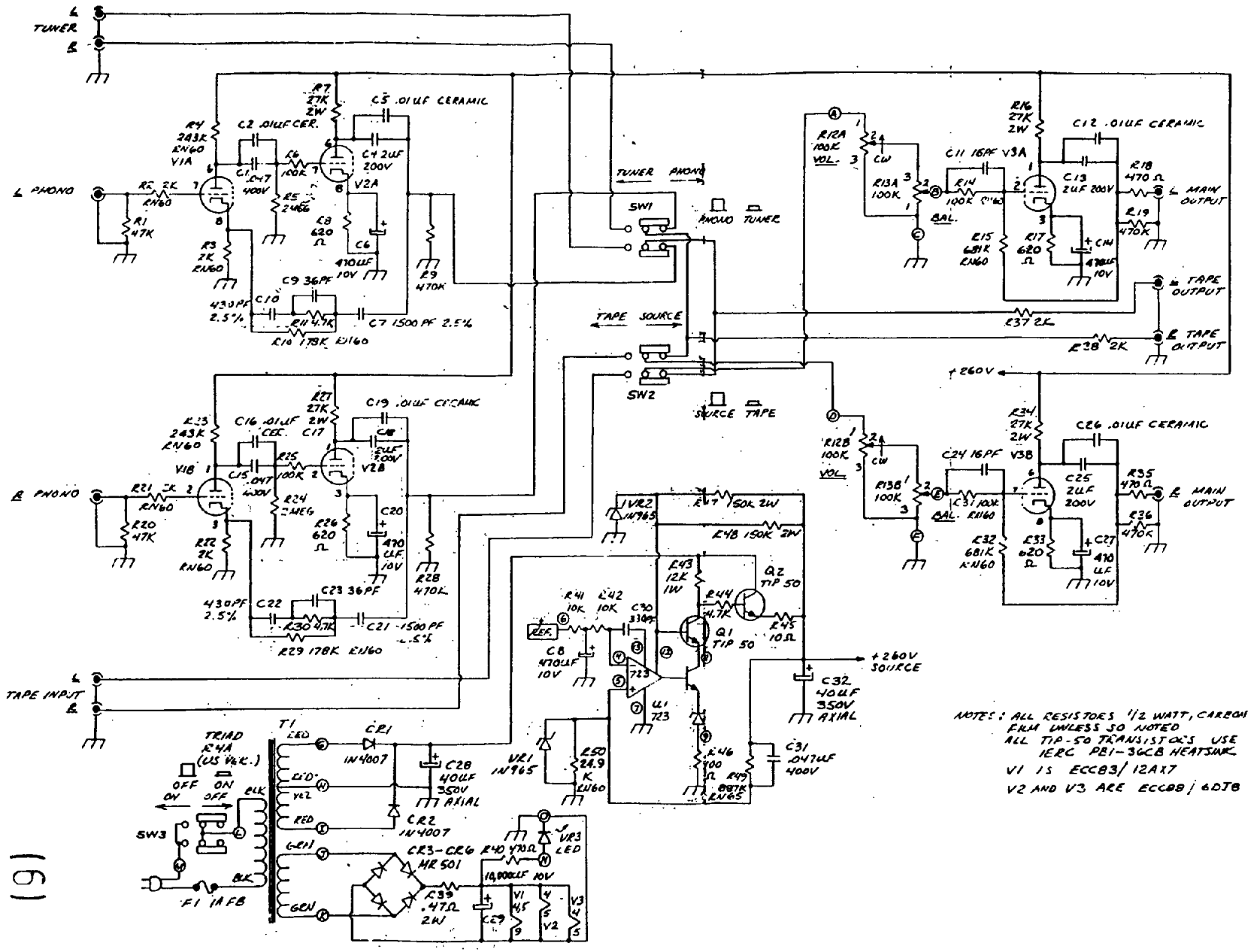

ECC8035
820kΩ
47kΩ
1W
1W
5100pF
1500pF
0.1μF
600V
0.1μF
600V
PHONO
10kΩ
1W
0.047μF
600V
47kΩ
47kΩ
1W
1kΩ
150kΩ
1.2MΩ
1kΩ
100kΩ
100kΩ
(A)
250V
47μF
500V
12kΩ
ECC83
75kΩ
1W
0.22μF
600V
0.01μF
600V
0.1μF
600V
OUT
4.7kΩ
300kΩ
1MΩ 1W
1kΩ
100kΩ
470kΩ
1W
270V
33kΩ
47μF
500V
1
2
3
4
(2)
ERC16-12×2
280V
3kΩ
3kΩ
3kΩ
11V
8Ω
10W
8Ω
10W
S15VB
6.3V
0V
6.3V
0V
260V
0V
260V
280V
47μF 500V
47μF 500V
47μF 500V
47μF 500V
4700μF 50V
2200μF 50V
2200μF 50V
1A
AC
6.3V
0V
E

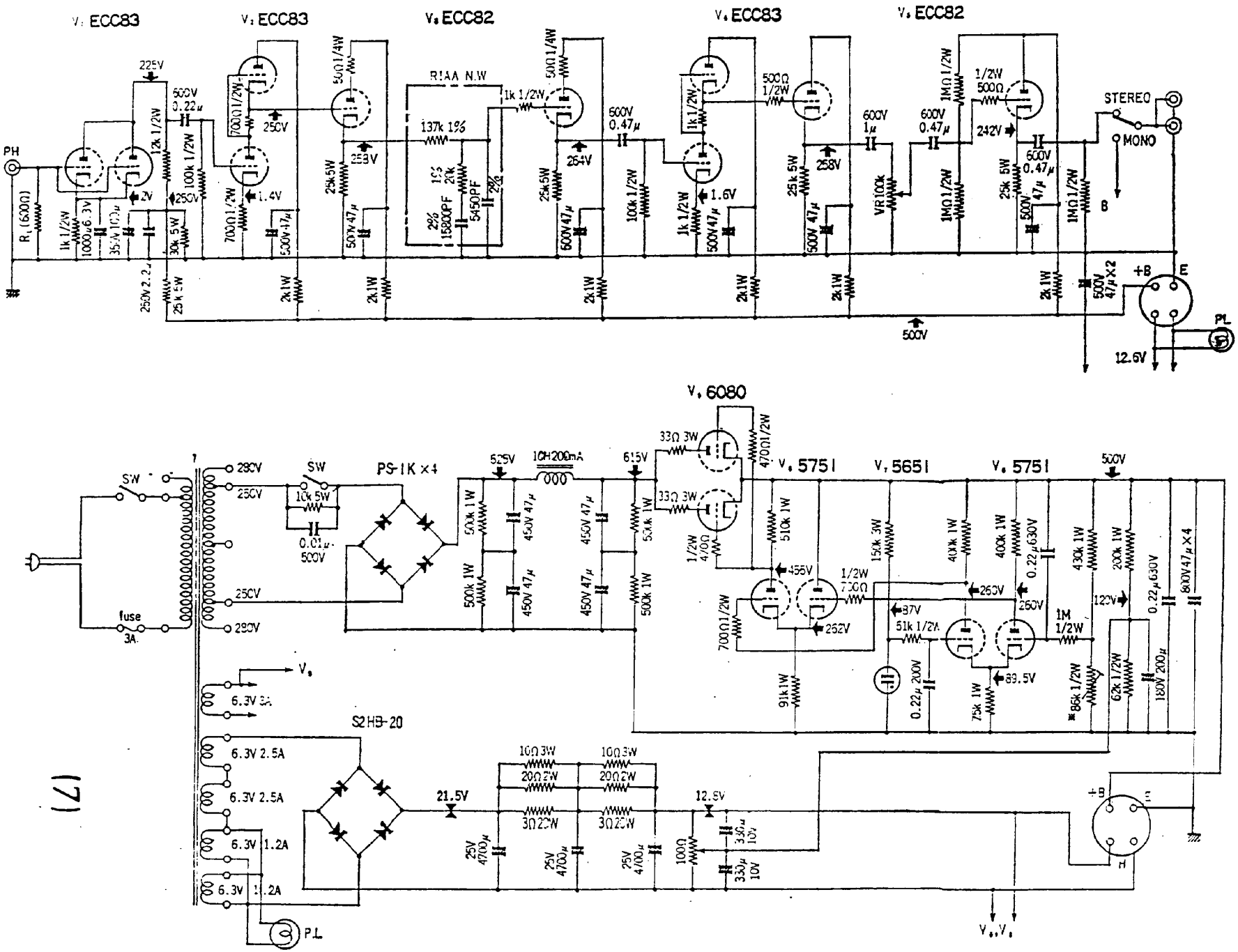

INPUT
④ AUX
③ TUN
② MM
① MC
※ Tx
½ECC82
½ECC82
E80CC×1
6CA4
+B
295V
100Ω 3W
40μ 450V
3K
265V
47K
0.47
400V
150K
15K
0.0022
LP
SP
0.0068
470K
1K
100μ 6.3V
3.4V
100V
0.1
250K (A)
47K
500K
6V
100μ 6.3V
400Ω 5W
Rx 30K
10K
600Ω
1K
REC
DIL
VAL
10K (A)
1A
6.3V
5V
340V
30H 50MA
22μ 450V
80μ 450V
250V
12.6V
ECC82 E80CC
ECC82 E80CC


Phono Lch INPUT
V1a : ECC83 1/2
V1b ECC 83 1/2
V2 : ECC88
V3 : ECC82
Rec out
Lch PRE OUT
V2' : ECC88
V3' : ECC82
Rec out
Rch PRE OUT
Rch Rhono INPUT
V1a' : ECC83 1/2
V1b' : ECC 83 1/2
C5 0.001μF ×1.27
C4, 400p
C7, 0.22μF C-D
400V
R8, 180k
R9, 4.7M
R10 1.8M
C6 280pF
R13 1k 1/2W
R15 820Ω
C10 0.5μF 400V
C1 40p
C2 10V 100μF
R1 47k 1W
R3 2.2k 1/2
R4 1.8k 1/2
C3 400V 0.01μF
R2 330k 2W
R5 1M
R7 820Ω 1W
R6 120k 1W
R11, 330k
R12 51k
C8 0.5μF 400V
VR1 50k (A)
R14 820Ω
C9 10V 100μ
R16 1M 1/2
C11 450V 500μF (L)
C12 450V 500μF (L)
R12' 51k
C8' 0.5μF 400V
VR1' 50k (A)
R14' 820Ω
C9' 10V 100μ
R16' 1M 1/2
R17', 30k 1W
C12' 450V 500μF (L)
C5' ×1.3
C4', 400p 0.001μF
C7', 0.22μF C-D
R8', 180k
R9', 4.7M
R10' 1.8M
C6' 280pF
C1' 40p
C2' 10V 100μF
R1' 47k 1W
R3' 2.2k 1/2
R4' 1.8k 1/2
C3' 400V 0.01μF
R2' 330k 2W
R5' 1M
R7' 820Ω 1W
R6' 120k 1W
R11' 330k
C11' 450V 500μF (L)
30H 50MA
F.H. 1A
SW
PL
C18
C17
C17, C18 : 1.5kV 3600pF
260V
D1~3
D4~6
340V
331V
R18
298V
R18'
C14 450V 500μF (L)
C13 450V 500μF (L)
17V
D7~10
R19 4Ω 10W
19.6V
12.2V
C16 25V 4700μF
C15 16V 10000μF (L)
R20 4Ω 10W
V3'
V1'
V3
V1
V2
V2'
0

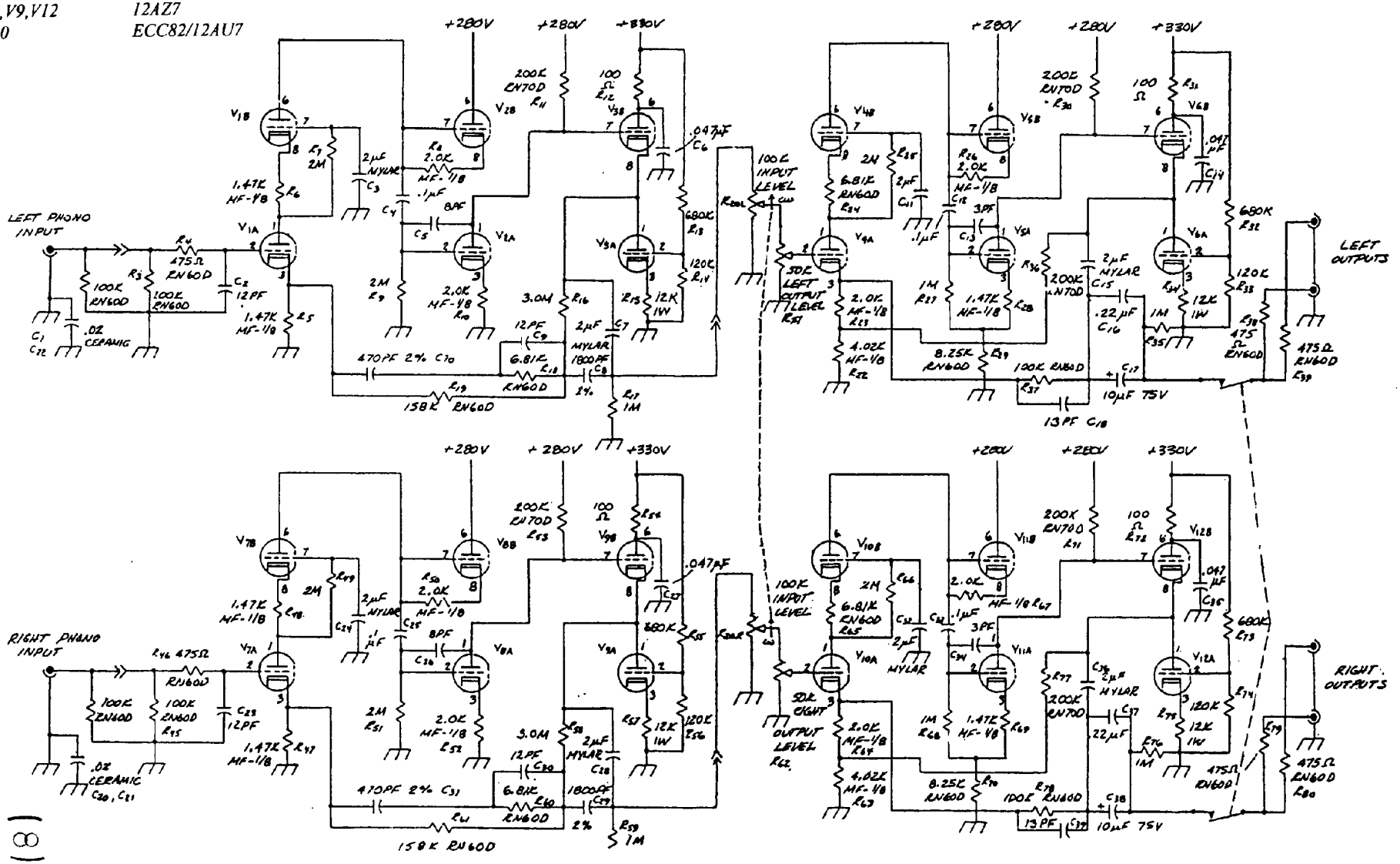

B+
V1 ECC-83
V2 ECC-81
V3 ECC-81
R2 10k
C7 33μ
R11 5k
C8 33μ
C12 33μ
R18 5k
C14 33μ
R3 1k
C1 0.022
R6 1k
C2 0.047
R7 500Ω
C3 10μ
R4 300k
R13 100k
R17 1k
C11 0.1
R1 500k
R2 1k
R4 300k
R5 1k
C9 150μ
R8 1k
C6 30P
ATT 100k
R16 1k
C10 150μ
R15 1M
XH2
RL1
R9 62k
R10 1.01M
C4 1400P
C5 4700P
200μ/160V
30k 5W
10k 2W
B+
V1~V6
H1
H2
DC 11.8V

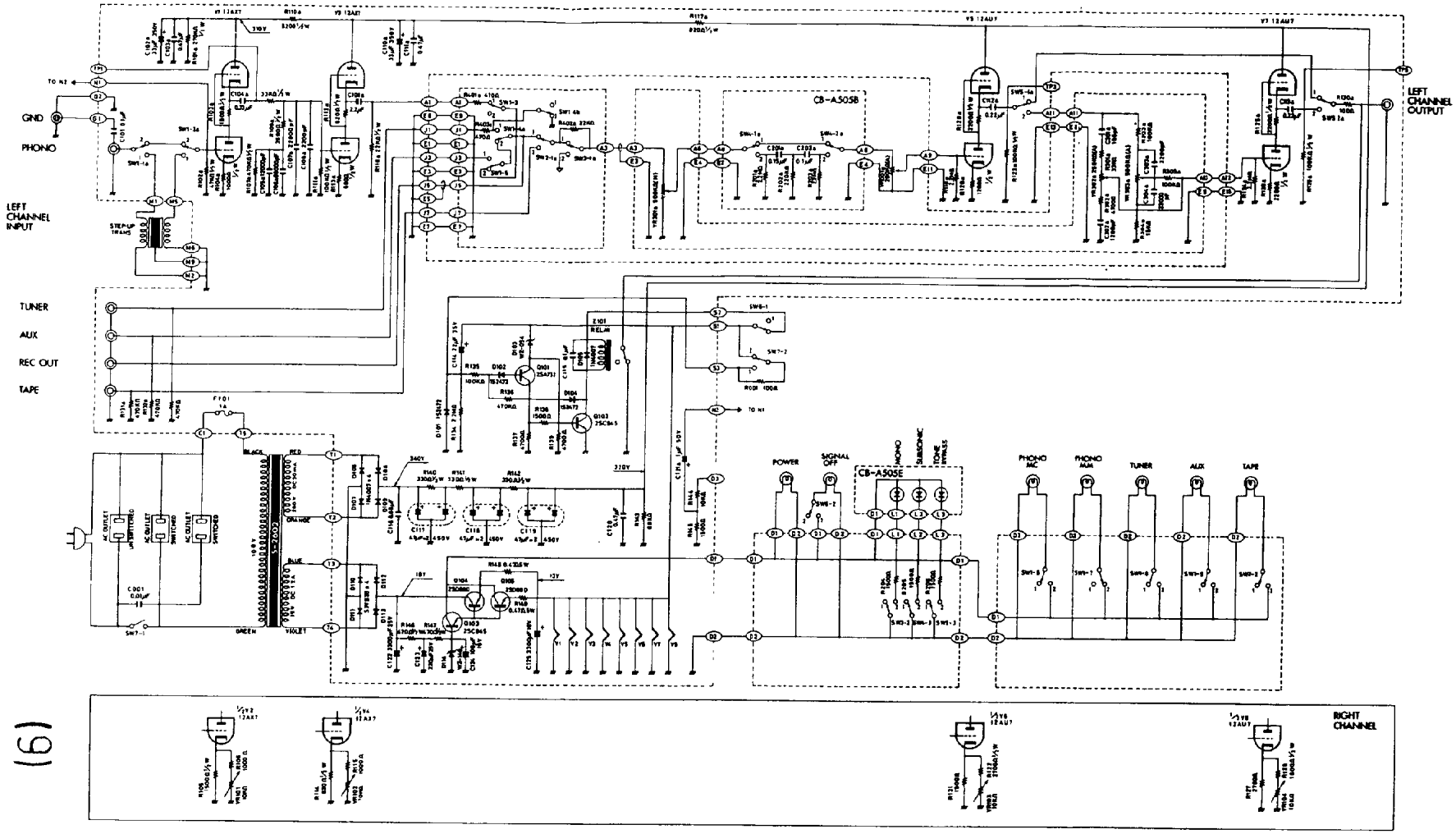

V7 5AR4
10H 200MA
280V
250V
0V
341V
281V
R23 1.1k
1,2
90V
100V
110V
Y
Y1
5V 3A
6.3V 2.5A ×2
6.3V 1.2A
6.3V 1.2A
17.2V
D3
3,4,5
R20 1Ω
R21 4Ω
R22 4Ω
6,7
11.9V
8,9
1.2A
SW3
C26 0.02
5A


L TUNER
R
L PHONO
R PHONO
L TAPE INPUT
R
TUNER PHONO
SW1
PHONO TUNER
TAPE SOURCE
SW2
SOURCE TAPE
L TAPE OUTPUT
R TAPE OUTPUT
+260V
+260V SOURCE
L MAIN OUTPUT
R MAIN OUTPUT
BAL.
VOL.
TRIAD F-4A (US VOLT.)
OFF ON
ON OFF
SW3
F1 1A FB
IN4007
MR 501
723
TIP 50
NOTES: ALL RESISTORS 1/2 WATT, CARBON FILM UNLESS SO NOTED
ALL TIP-50 TRANSISTORS USE IERC PB1-36CB HEATSINK
V1 IS ECC83/12AX7
V2 AND V3 ARE ECC88/6DJ8


V₁ ECC83
V₂ ECC83
V₃ ECC82
V₄ ECC83
V₅ ECC82
V₆ 6080
V₇ 5751
V₈ 5651
V₉ 5751
RIAA N.W
STEREO
MONO
PH
SW
fuse
3A.
PS-1K ×4
S2HB-20
PL
+B
E
B
H
12.6V
21.5V
500V
525V
615V
10H 200mA
280V
250V
6.3V 3A
6.3V 2.5A
6.3V 1.2A
6.3V 1.2A
V₀
V₀,V₀

V1, V2, V5, V7, V8, V11	ECC83/12AX7
V3, V6, V9, V12	12AZ7
V4, V10	ECC82/12AU7



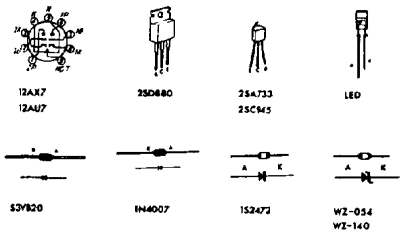


SWITCHES

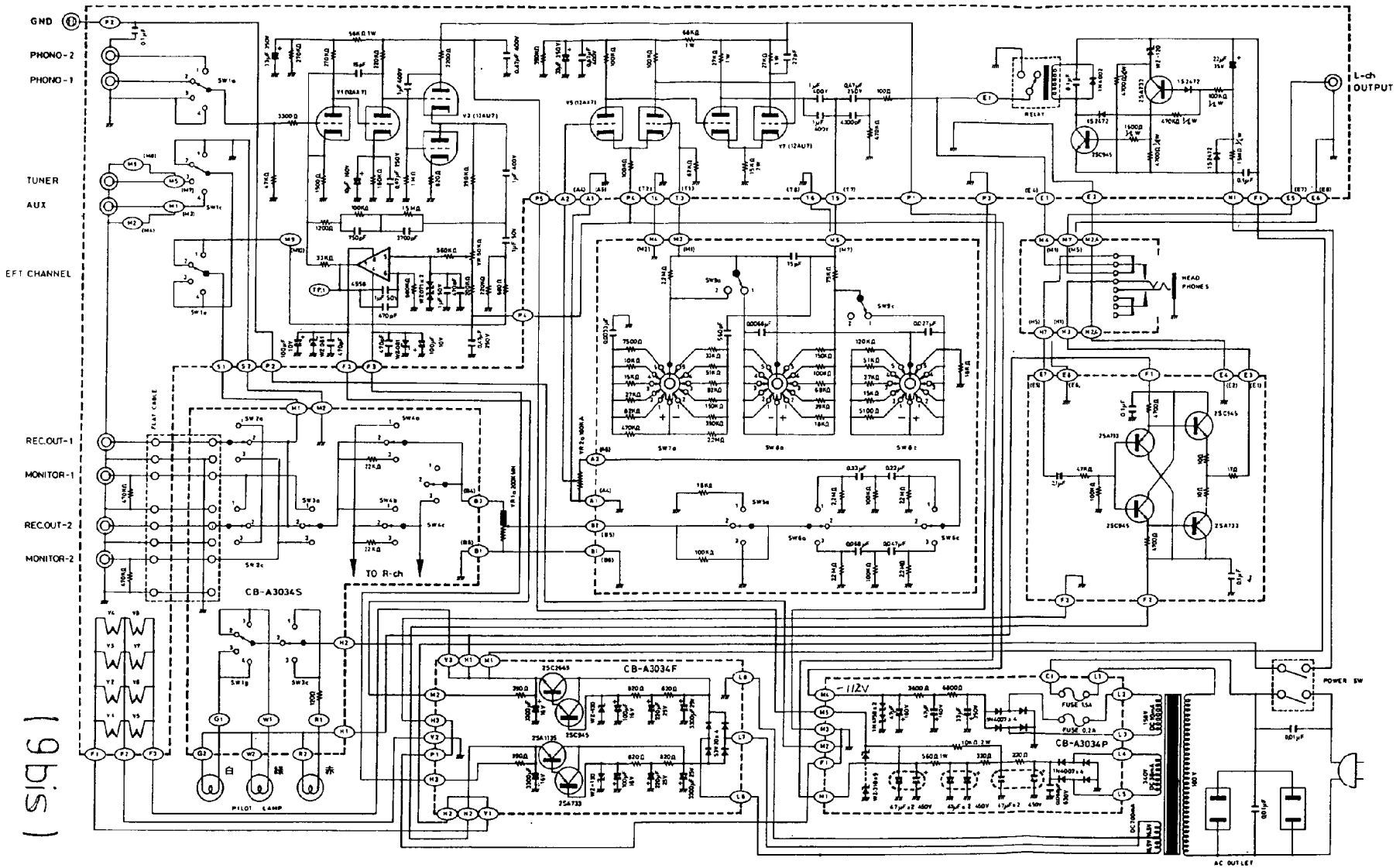
- SW1(1-9) ····· INPUT SELECTOR (1 : ON , 2 : OFF)
- SW1-1,2,3,6 ON ····· PHONO MC
- SW1-3,7 ON ····· PHONO MM
- SW1-4,8 ON ····· TUNER
- SW1-5,9 ON ····· AUX
- SW2(1-2) ····· TAPE (1 : SOURCE , 2 : MONITOR)
- SW3(1-2) ····· MONO (1 : STEREO , 2 : L+R)
- SW4(1-3) ····· SUBSONIC (1 : OFF , 2 : ON)
- SW5(1-3) ····· TONE BYPASS (1 : BYPASS , 2 : IN)
- SW6(1-2) ····· SIGNAL OFF (1 : OFF , 2 : ON)
- SW7(1-2) ····· POWER (1 : ON , 2 : OFF)

VOLUMES

- VR 301 ····· BALANCE
- VR 001 ····· VOLUME CONTROL
- VR 302 ····· TREBLE] TONE CONTROL
- VR 303 ····· BASS]
- VR 101-104 ····· GAIN ADJUST



NOTE UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHM 1/4 WATT.



SWITCHES

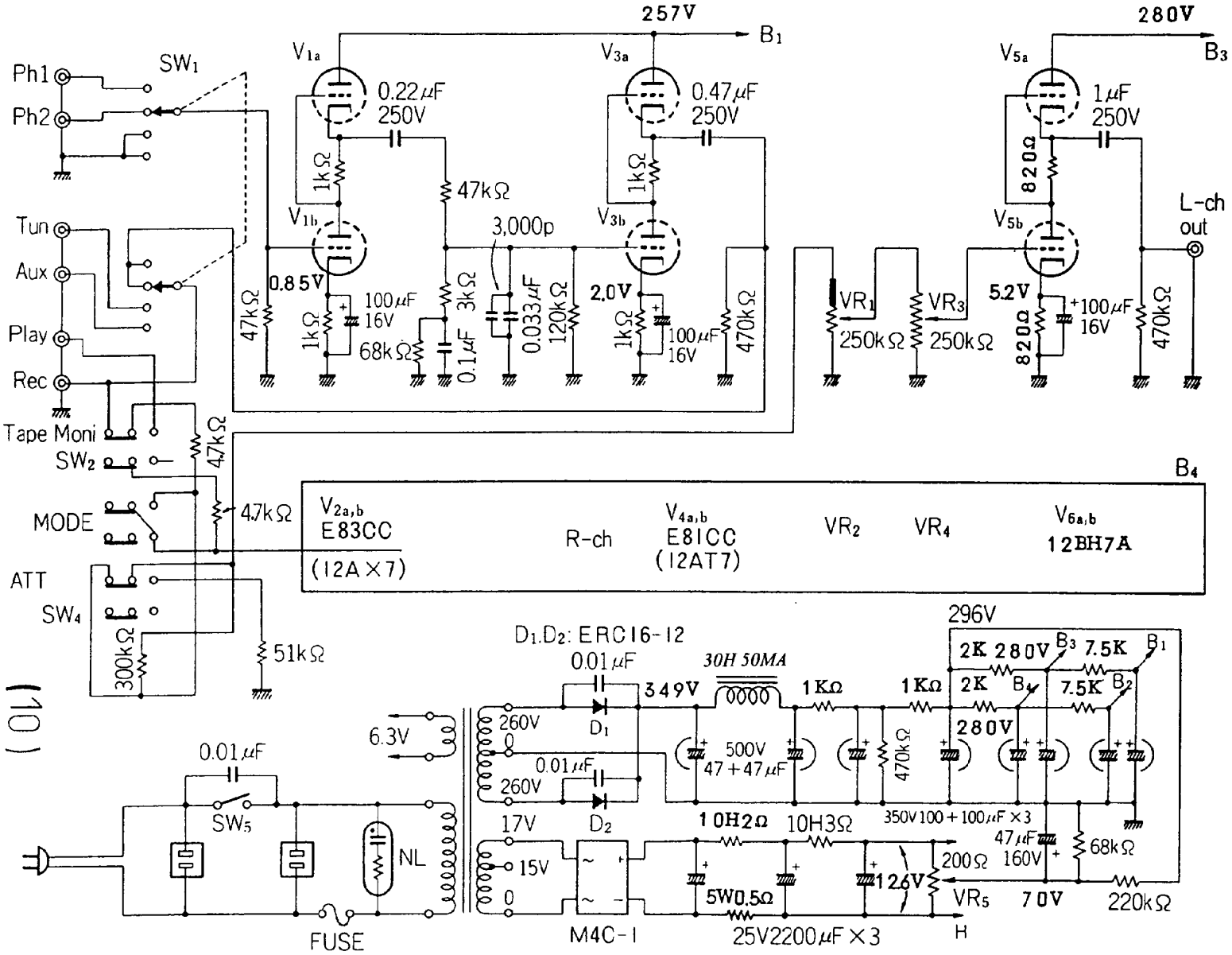
SW 1 a, b, c, d ____ INPUT (1: Phono-2 2: Phono-1
e, f, g, h SELECTOR 3: Tuner 4: Aux)
SW 2 a, b, c, d ----- DUBBING (1: 1→2 2: Source 3: 2→1)
SW 3 a, b ----- MONITOR (1: Tape-1 2: Source 3: Tape-2)
SW 4 a, b, c ----- MODE (1: Reverse 2: Stereo 3: Mono)

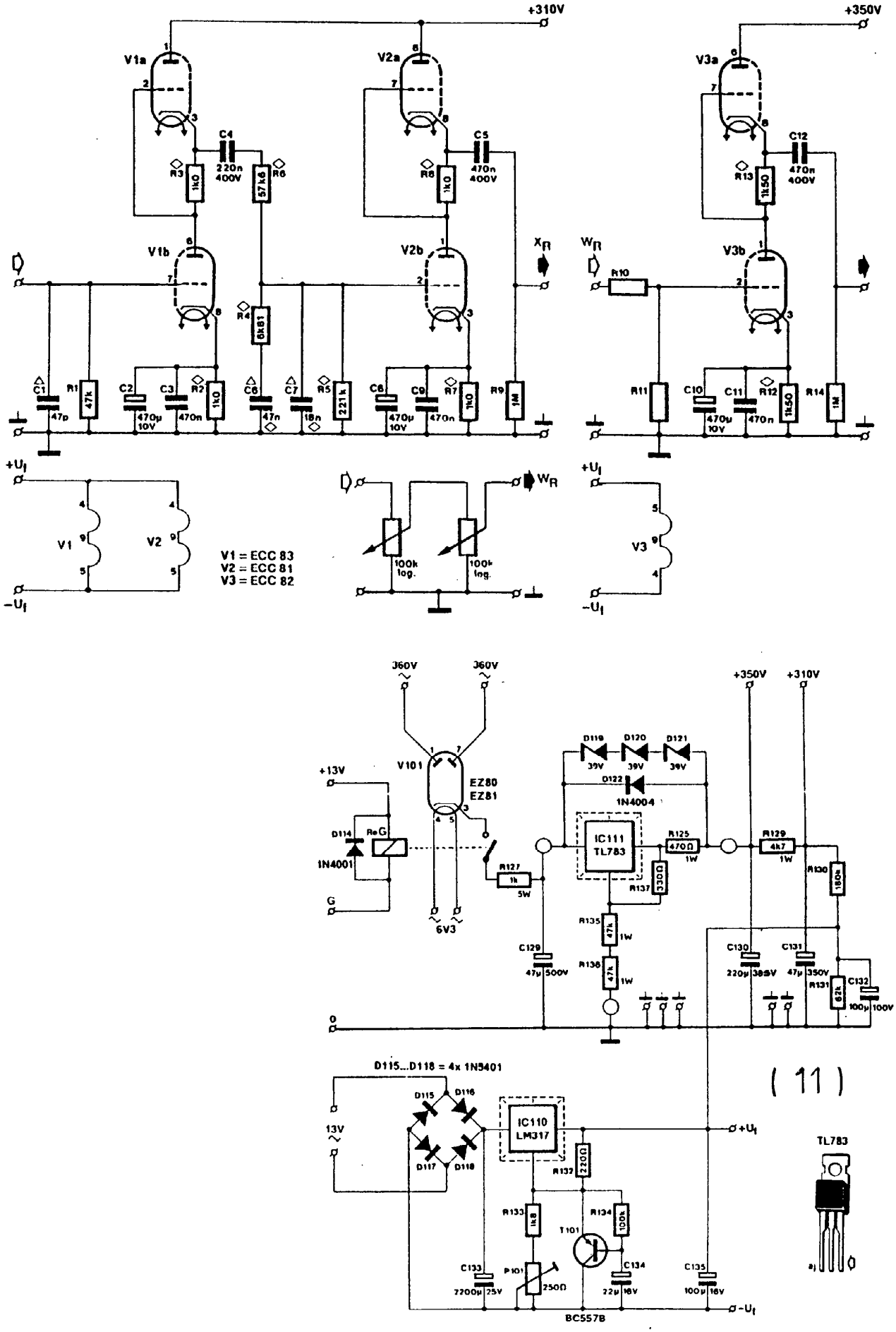
SW 5 a, b ----- ATTENUATE (1: 20dB 2: Normal 3: Signal off)
SW 6 a, b, c, d ---- FILTER (1: Subsonic 2: Defeat 3: Law cut)
SW 7 a, b ----- TREBLE CONTROL
SW 8 a, b, c, d ---- BASS CONTROL
SW 9 a, b c, d ---- TONE DEFEAT (1: Defeat 2: Tone on)

VOLUMES

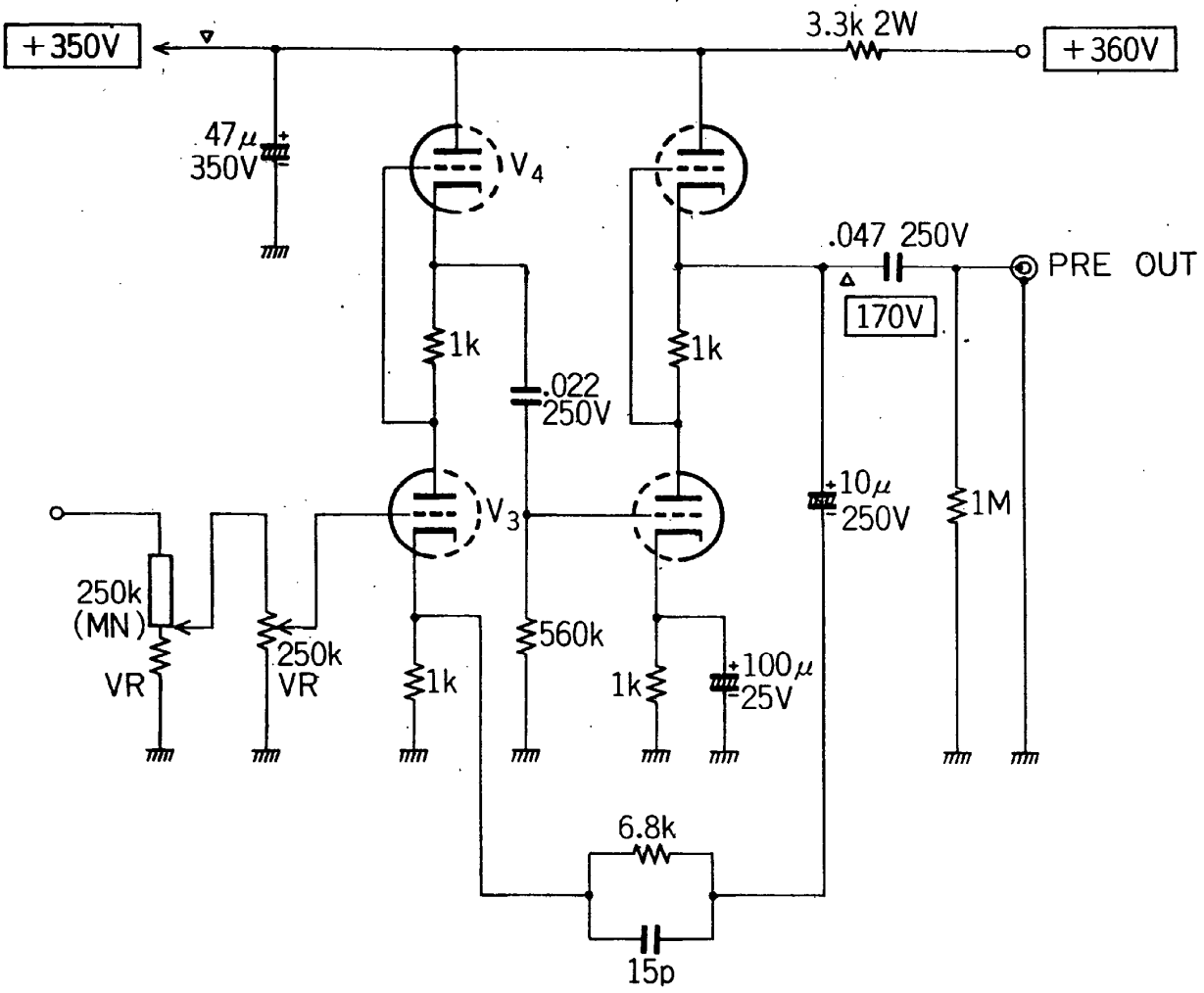
VR 1 a, b ----- BALANCE CONTROL
VR 2 a, b ----- VOLUME CONTROL

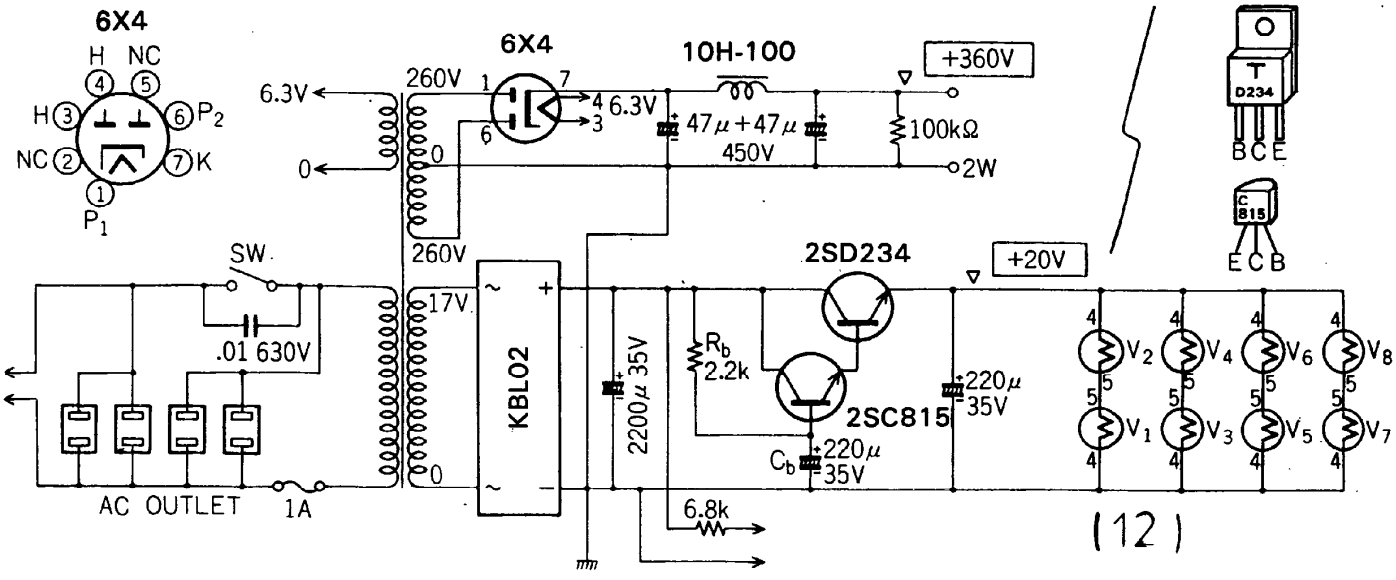
(9bis)


257V
B1
280V
B3
Ph1
Ph2
SW1
Tun
Aux
Play
Rec
Tape Moni
SW2
MODE
ATT
SW4
V1a
V1b
V3a
V3b
V5a
V5b
0.22μF 250V
0.47μF 250V
1μF 250V
1kΩ
47kΩ
3,000p
0.85V
2.0V
5.2V
100μF 16V
68kΩ
0.1μF
0.033μF
120kΩ
470kΩ
VR1
VR3
250kΩ
820Ω
L-ch out
B4
V2a,b E83CC (12AX7)
R-ch
V4a,b E81CC (12AT7)
VR2
VR4
V6a,b 12BH7A
4.7kΩ
51kΩ
300kΩ
D1.D2: ERC16-12
0.01μF
30H 50MA
349V
1KΩ
296V
2K 280V
7.5K
280V
500V 47+47μF
350V 100+100μF×3
47μF 160V
68kΩ
220kΩ
6.3V
260V
17V
15V
SW5
NL
FUSE
10H2Ω
10H3Ω
5W0.5Ω
200Ω
12.6V
VR5
70V
M4C-1
25V2200μF×3
H
(10)

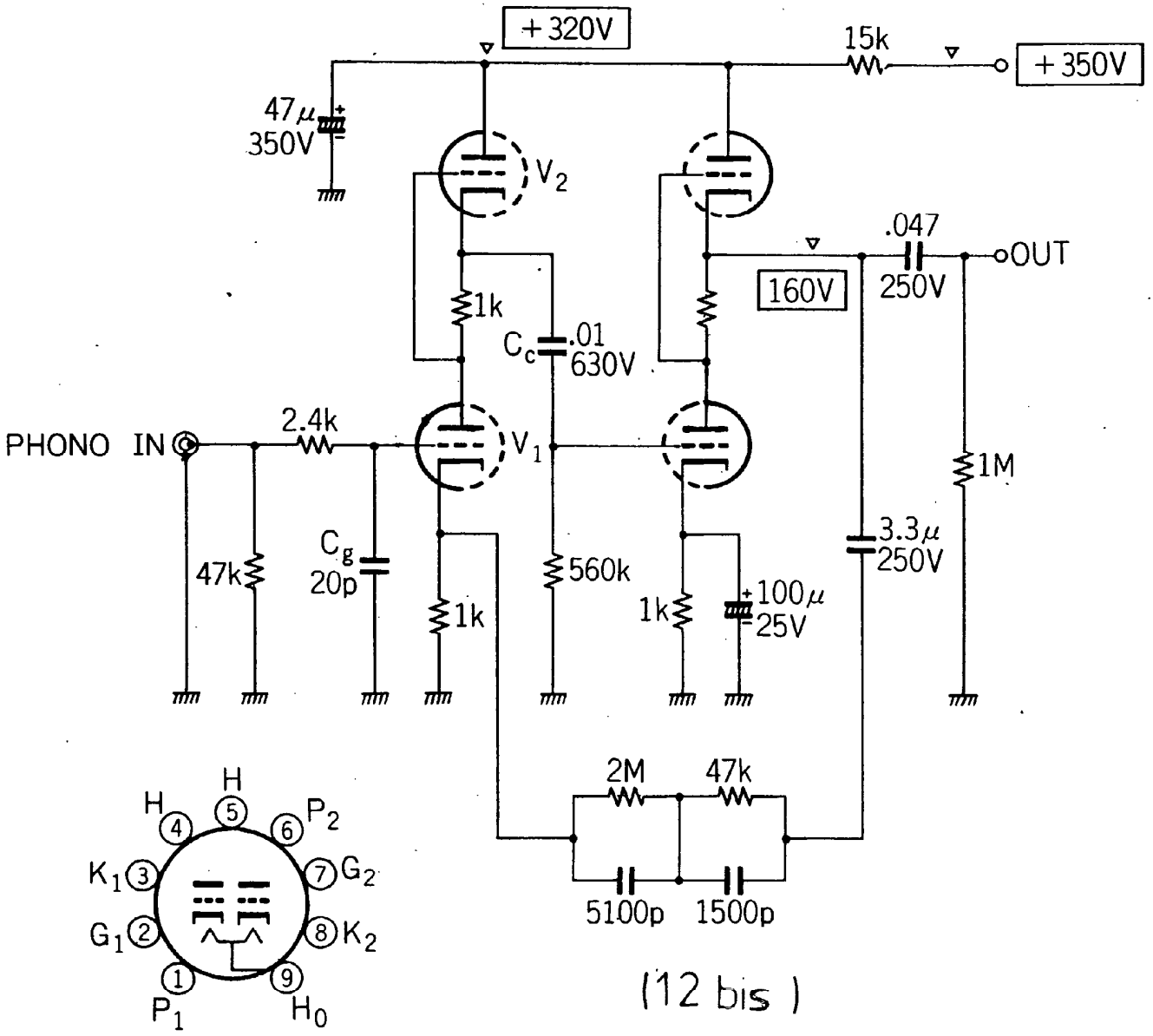

+310V
+350V
V1a
V2a
V3a
V1b
V2b
V3b
C4
C5
C12
R3
R6
R8
R13
R4
R10
R11
R14
C1
C2
C3
C6
C7
C8
C9
C10
C11
R1
R2
R5
R7
R9
R12
X_R
W_R
+U_I
-U_I
V1
V2
V3
V1 = ECC 83
V2 = ECC 81
V3 = ECC 82
100k log.
100k log.
360V
360V
+13V
V101
EZ80
EZ81
6V3
D114
1N4001
ReG
G
0
D119
D120
D121
D122
1N4004
IC111
TL783
R125
R127
R129
R130
R135
R136
R137
C129
C130
C131
C132
D115...D118 = 4x 1N5401
13V
D115
D116
D117
D118
IC110
LM317
R132
R133
R134
T101
P101
C133
C134
C135
BC557B
TL783
(11)

ECC83×2

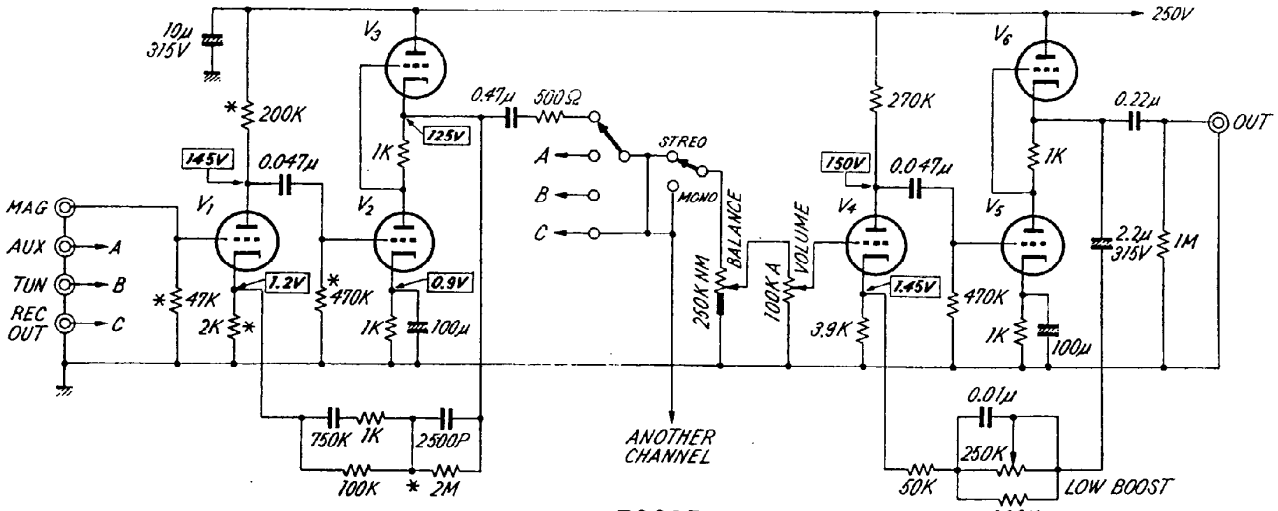

+350V
3.3k 2W
+360V
47μ 350V
V4
.047 250V
PRE OUT
170V
1k
1k
.022 250V
V3
10μ 250V
1M
250k (MN) VR
250k VR
1k
560k
1k
100μ 25V
6.8k
15p

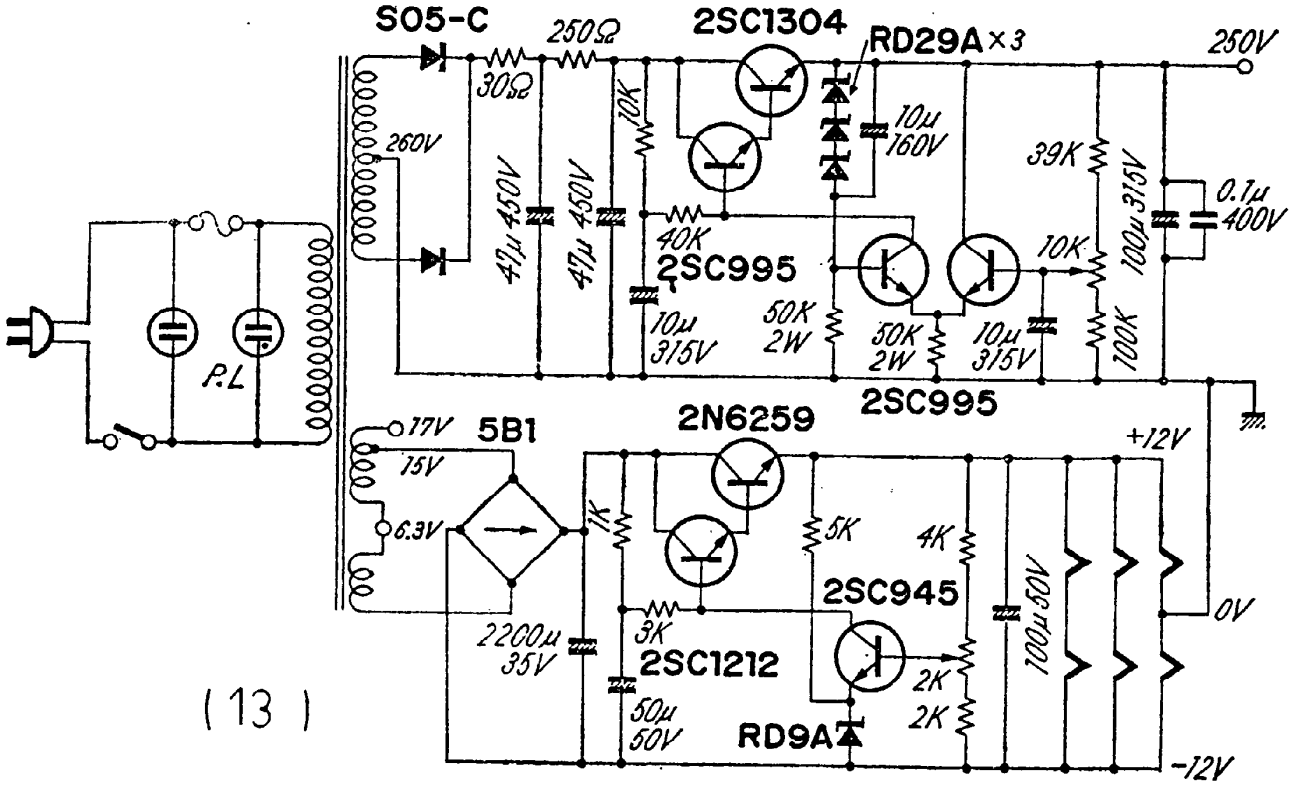

6X4
H NC
H
NC
P2
K
P1
6X4
10H-100
+360V
6.3V
260V
6.3V
47μ+47μ 450V
100kΩ
2W
0
260V
SW
.01 630V
17V
KBL02
2200μ 35V
Rb 2.2k
2SD234
2SC815
Cb 220μ 35V
220μ 35V
+20V
AC OUTLET
1A
6.8k
V1
V2
V3
V4
V5
V6
V7
V8
D234
B C E
C 815
E C B

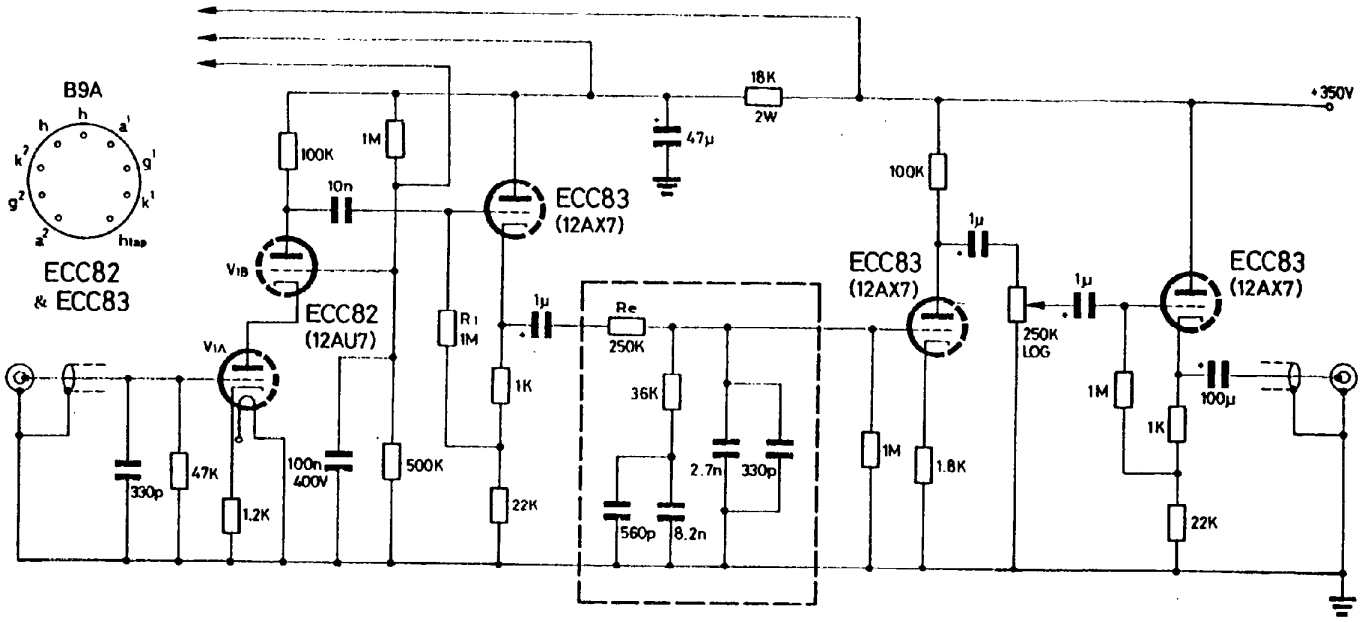
ECC83×2

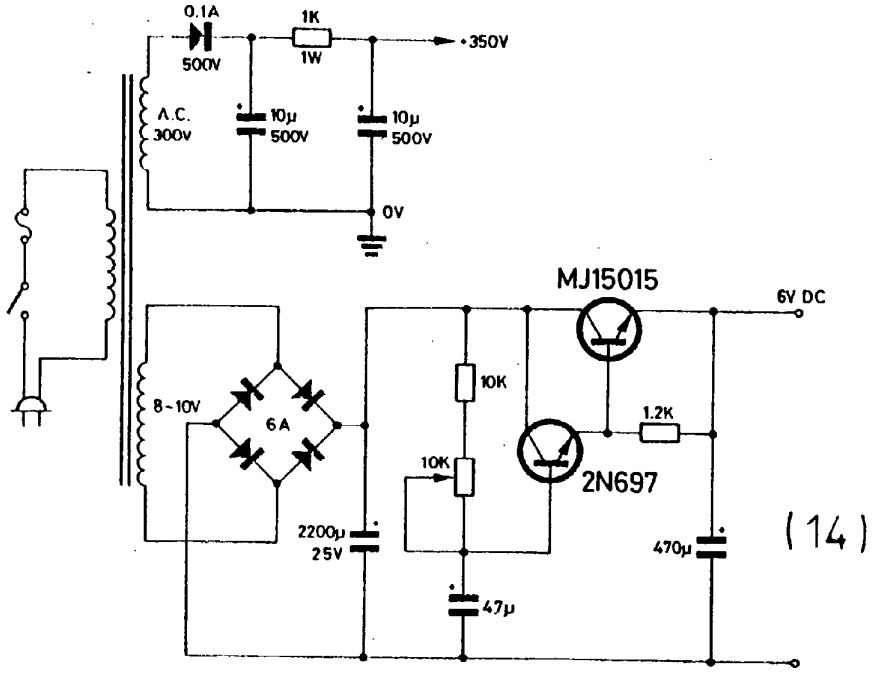


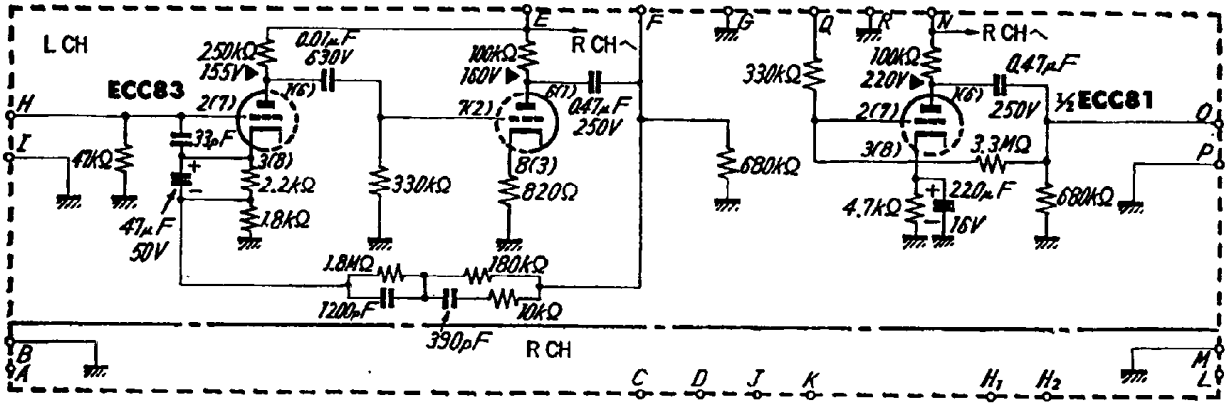
(12 bis)


250V
10μ 315V
V3
V6
0.47μ
500Ω
270K
0.22μ
OUT
200K
STREO
MONO
A
B
C
145V
0.047μ
1K
125V
150V
0.047μ
1K
MAG
AUX
TUN
REC OUT
V1
V2
V4
V5
1.2V
0.9V
1.45V
47K
2K
470K
1K
100μ
250K MM
BALANCE
100K A
VOLUME
3.9K
470K
1K
100μ
2.2μ 315V
1M
0.01μ
750K
1K
2500P
100K
2M
ANOTHER CHANNEL
250K
50K
LOW BOOST
200K
V1~V6 ECC83 (PHILIPS)

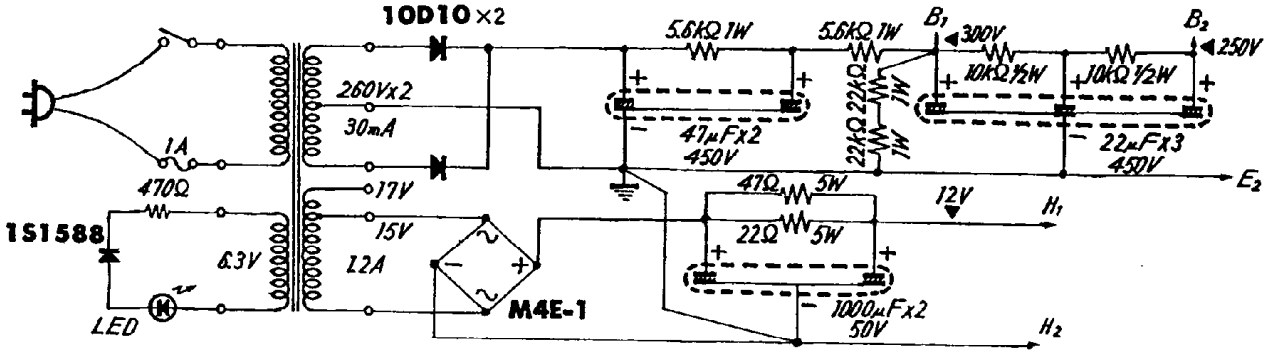

S05-C
250Ω
2SC1304
RD29A×3
250V
30Ω
260V
10K
10μ 160V
39K
0.1μ 400V
47μ 450V
47μ 450V
40K
2SC995
10K
100μ 315V
10μ 315V
50K 2W
50K 2W
10μ 315V
100K
2SC995
P.L
17V
5B1
2N6259
+12V
15V
6.3V
1K
5K
4K
2SC945
0V
2200μ 35V
3K
2SC1212
2K
2K
100μ 50V
50μ 50V
RD9A
-12V


B9A
ECC82
& ECC83
ECC82
(12AU7)
ECC83
(12AX7)
ECC83
(12AX7)
ECC83
(12AX7)
+350V
18K
2W
47µ
100K
1M
10n
R1
1M
1µ
Re
250K
1K
36K
2.7n
330p
560p
8.2n
22K
1M
1.8K
250K
LOG
1µ
1M
1K
100µ
22K
330p
47K
1.2K
100n
400V
500K


0.1A
500V
1K
1W
+350V
A.C.
300V
10µ
500V
10µ
500V
0V
MJ15015
6V DC
8-10V
6A
10K
1.2K
10K
2N697
2200µ
25V
470µ
47µ

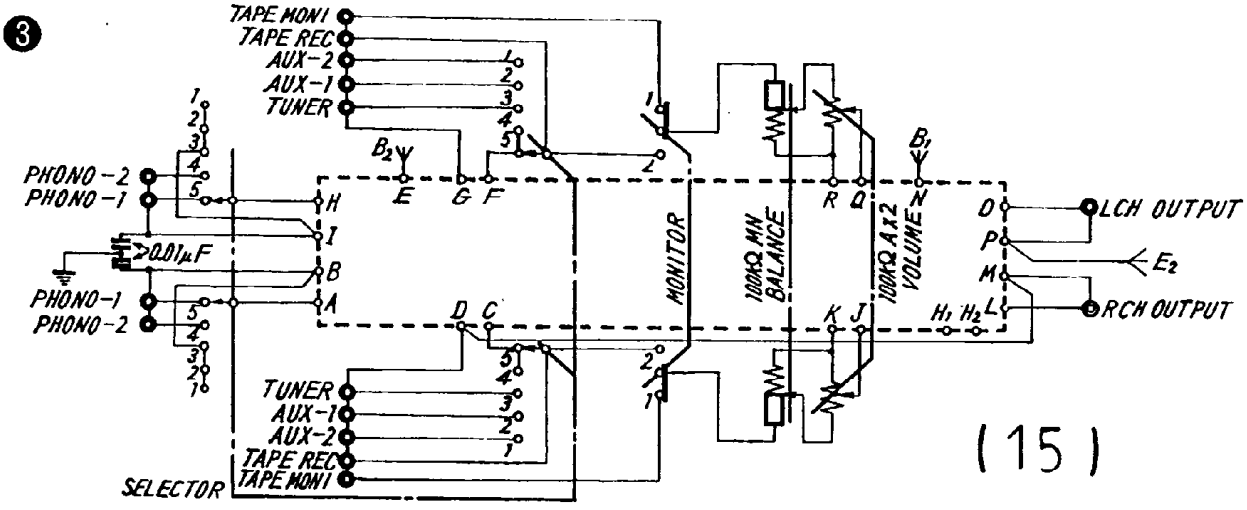

L CH
R CH
ECC83
½ECC81
250kΩ 155V
0.01μF 630V
100kΩ 160V
0.47μF 250V
330kΩ
100kΩ 220V
0.47μF 250V
33pF
47kΩ
47μF 50V
2.2kΩ
1.8kΩ
330kΩ
820Ω
680kΩ
3.3MΩ
220μF 16V
4.7kΩ
680kΩ
1.8MΩ
180kΩ
1200pF
10kΩ
390pF
R CH
A B C D E F G H I J K L M N P Q R

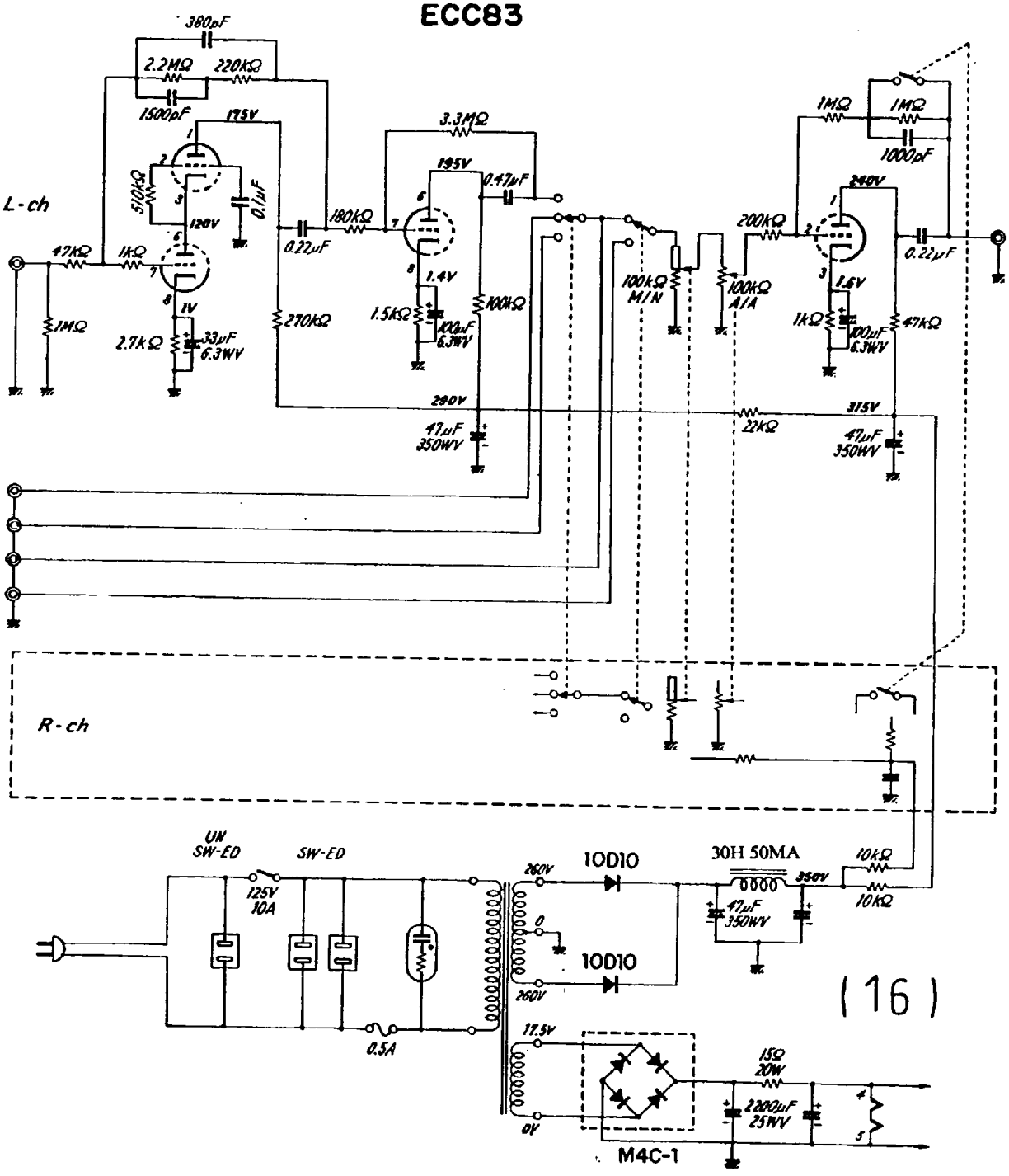
❶

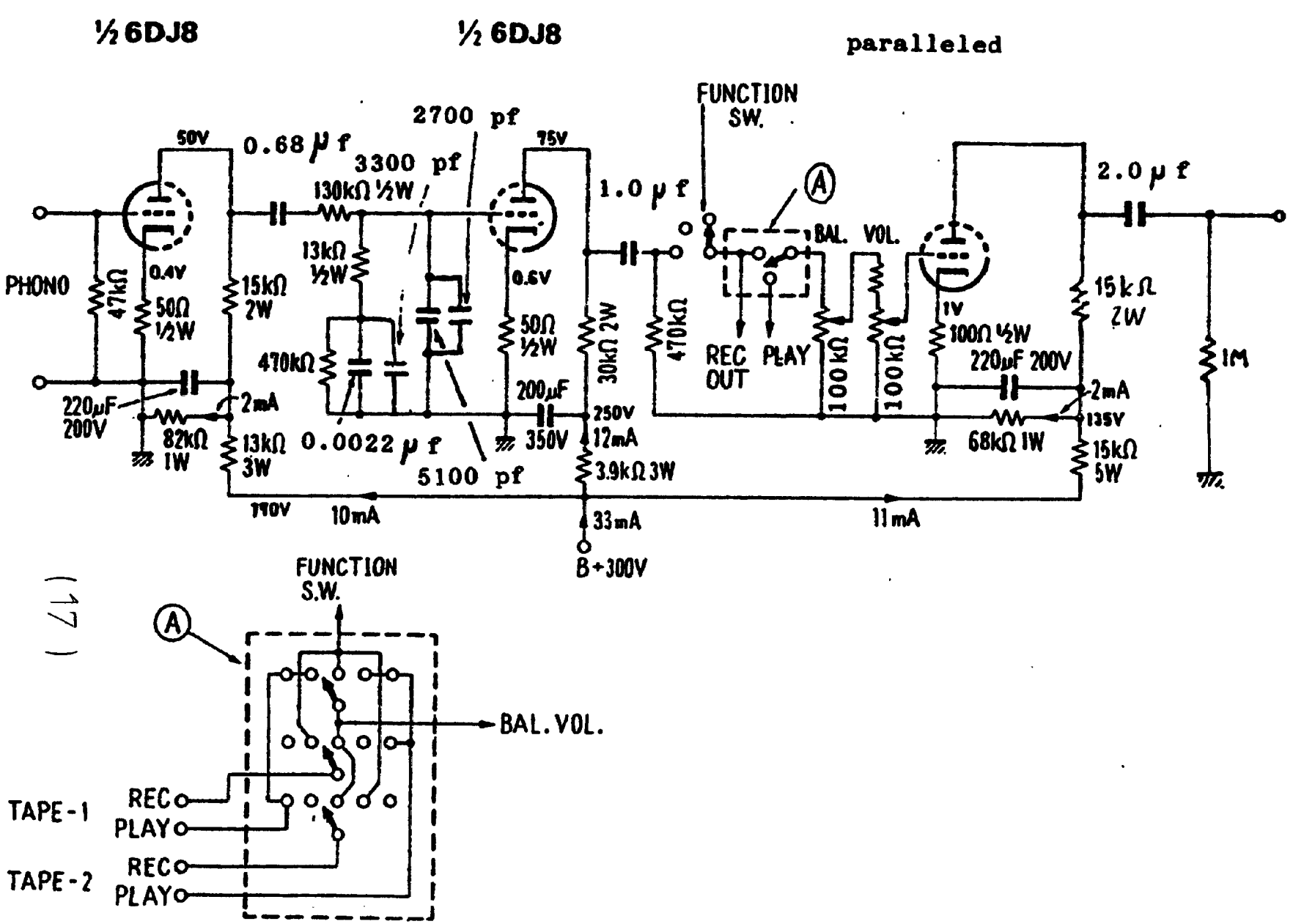

10D10 ×2
260V×2
30mA
1A
470Ω
1S1588
6.3V
17V
15V
1.2A
LED
M4E-1
5.6kΩ 1W
5.6kΩ 1W
47μF×2 450V
22kΩ 22kΩ
1W
1W
B1 300V
B2 250V
10kΩ ½W
10kΩ ½W
22μF×3 450V
47Ω 5W
22Ω 5W
12V
1000μF×2 50V
E2
H1
H2

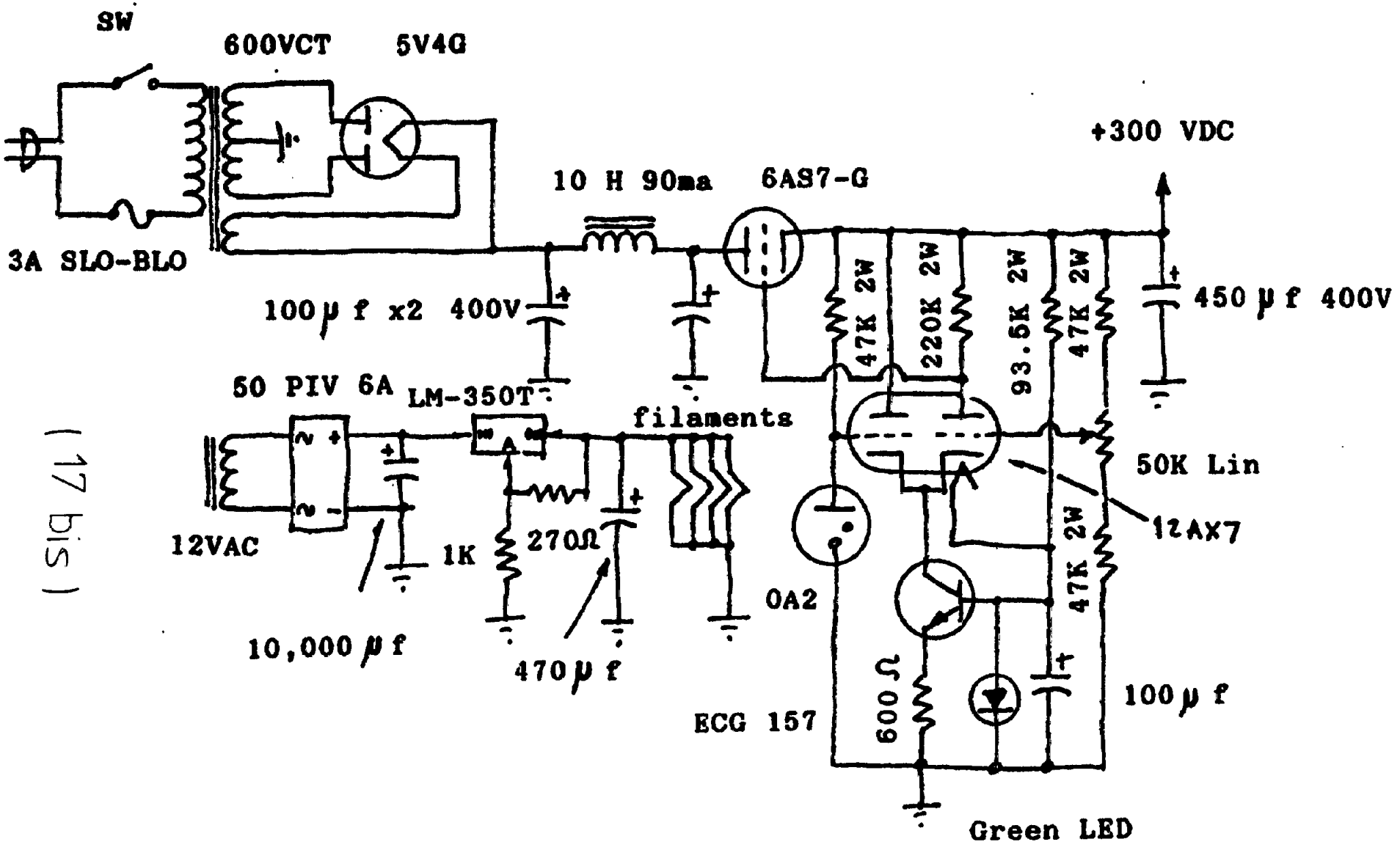
❷

❸

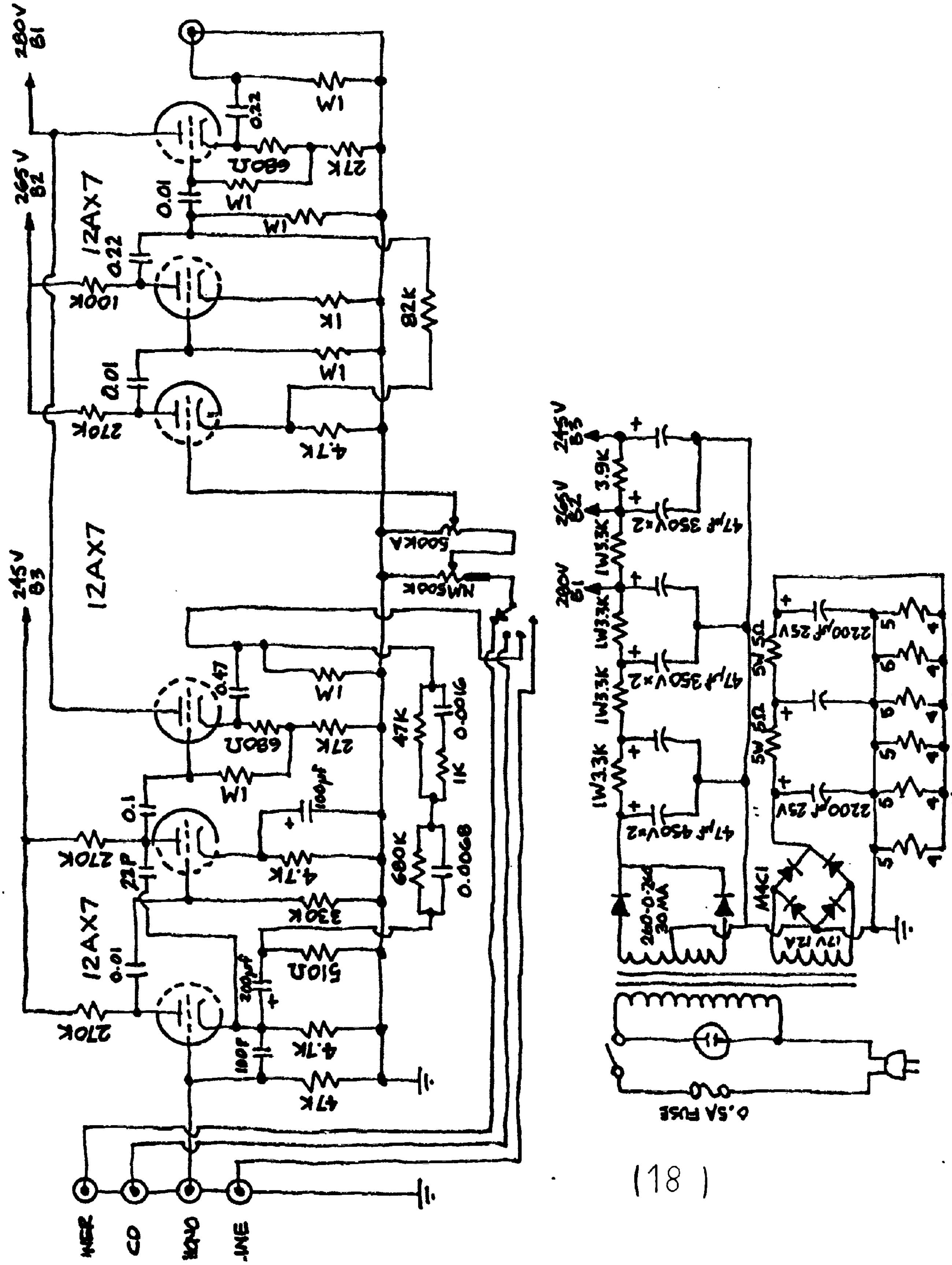

TAPE MONI
TAPE REC
AUX-2
AUX-1
TUNER
PHONO-2
PHONO-1
0.01μF
PHONO-1
PHONO-2
SELECTOR
B2
B1
MONITOR
100kΩ MN BALANCE
100kΩ A×2 VOLUME
LCH OUTPUT
RCH OUTPUT
E2
H1 H2
A B C D E F G H I J K L M N P Q R


ECC83
L-ch
R-ch
380pF
2.2MΩ
220kΩ
1500pF
175V
510kΩ
0.1μF
120V
47kΩ
1kΩ
1MΩ
1V
2.7kΩ
33μF 6.3WV
0.22μF
180kΩ
270kΩ
3.3MΩ
195V
0.47μF
1.4V
1.5kΩ
100μF 6.3WV
100kΩ
290V
47μF 350WV
100kΩ M/N
100kΩ A/A
1MΩ
1MΩ
1000pF
240V
200kΩ
1.6V
1kΩ
100μF 6.3WV
47kΩ
0.22μF
315V
22kΩ
47μF 350WV
UN SW-ED
SW-ED
125V 10A
0.5A
260V
0
260V
10D10
10D10
30H 50MA
350V
47μF 350WV
10kΩ
10kΩ
17.5V
0V
M4C-1
15Ω 20W
2200μF 25WV
4
5

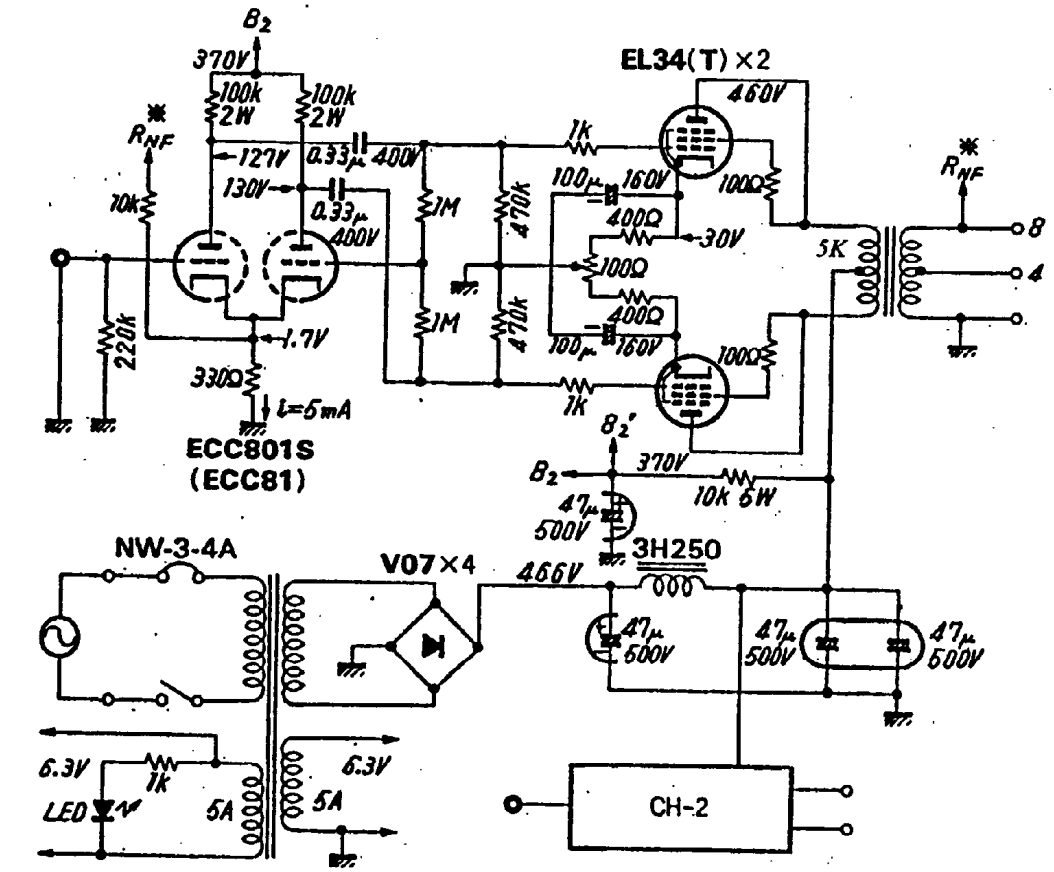

½ 6DJ8
½ 6DJ8
6DJ8
paralleled
FUNCTION SW.
2700 pf
3300 pf
0.68 μf
1.0 μf
2.0 μf
50V
75V
PHONO
47kΩ
0.4V
50Ω ½W
15kΩ 2W
130kΩ ½W
13kΩ ½W
470kΩ
0.6V
50Ω ½W
30kΩ 2W
470kΩ
BAL. VOL.
REC OUT
PLAY
100kΩ
100kΩ
1V
100Ω ½W
220μF 200V
2mA
135V
68kΩ 1W
15kΩ 2W
1M
220μF 200V
2mA
82kΩ 1W
13kΩ 3W
0.0022 μf
5100 pf
200μF
350V
250V
12mA
3.9kΩ 3W
190V
10mA
33mA
11mA
B+300V
FUNCTION S.W.
A
BAL. VOL.
TAPE-1
REC
PLAY
TAPE-2
REC
PLAY

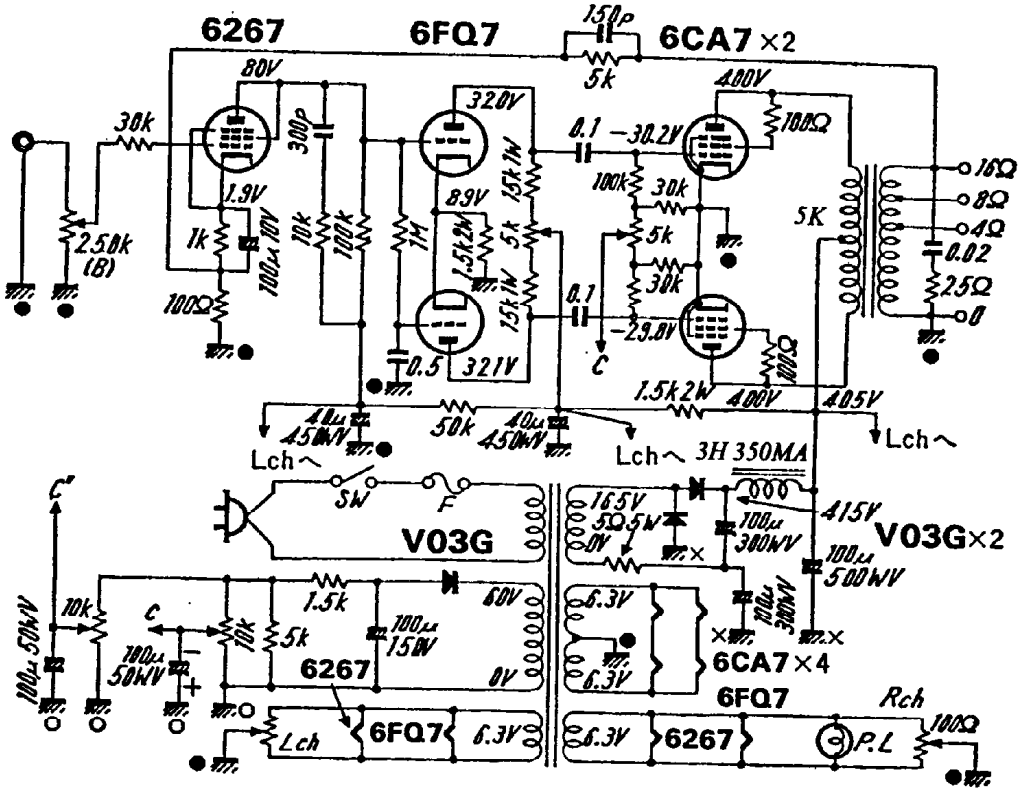

SW
600VCT
5V4G
3A SLO-BLO
10 H 90ma
6AS7-G
+300 VDC
100 µ f x2 400V
450 µ f 400V
47K 2W
220K 2W
93.6K 2W
47K 2W
50 PIV 6A
LM-350T
filaments
50K Lin
12AX7
12VAC
1K
270Ω
0A2
47K 2W
10,000 µ f
470 µ f
600 Ω
100 µ f
ECG 157
Green LED

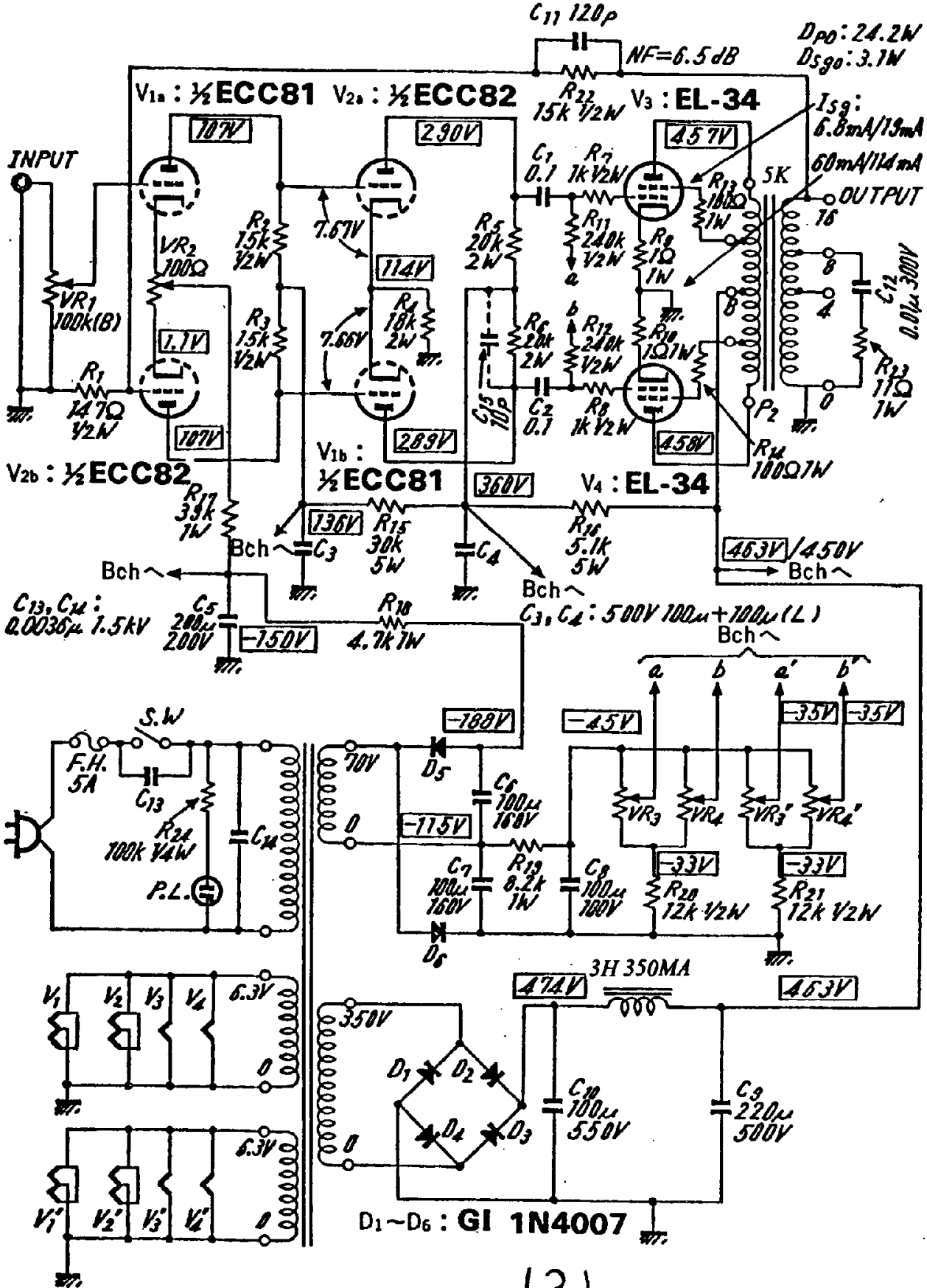
(17 bis)

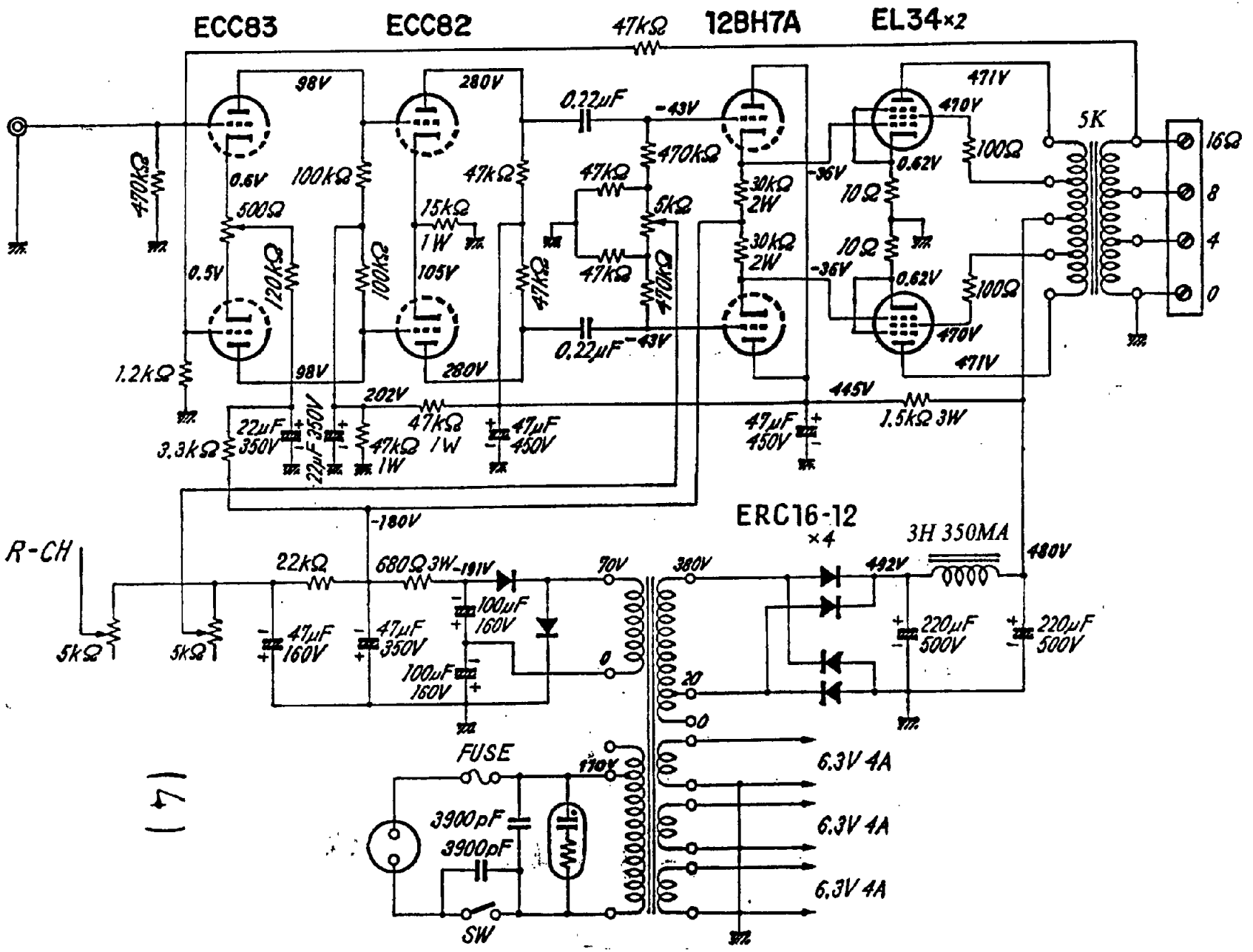


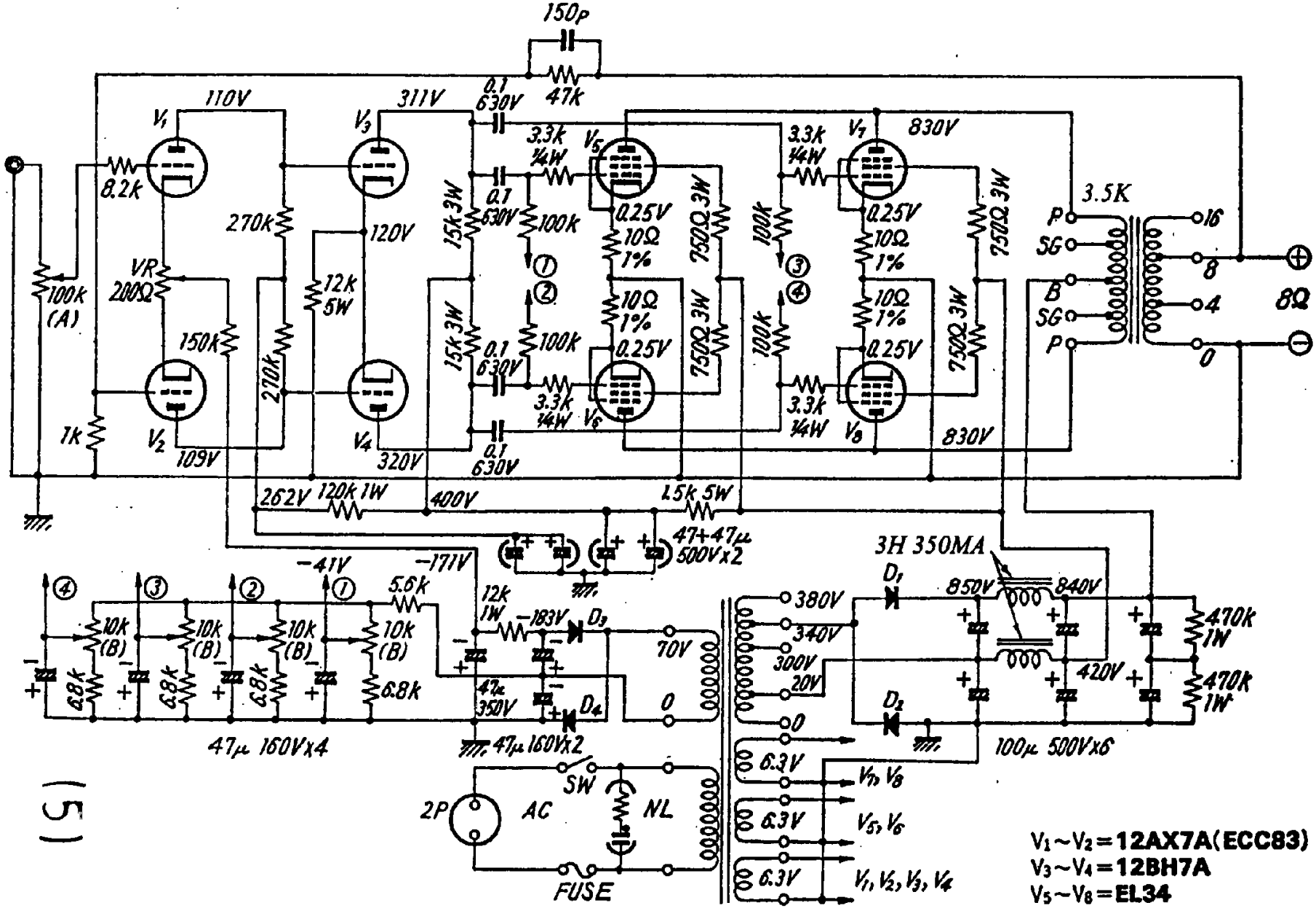
280V B1
265V B2
245V B3
12AX7
12AX7
12AX7
0.5A FUSE


B2
370V
100k 2W
100k 2W
RNF
127V
130V
0.33μ 400V
0.33μ 400V
10k
220k
1.7V
330Ω
I=5mA
ECC801S
(ECC81)
1M
1M
470k
470k
EL34(T)×2
460V
1k
100μ 160V
400Ω
-30V
100Ω
400Ω
100μ 160V
100Ω
1k
RNF
5K
8
4
B2'
370V
B2
10k 6W
47μ 500V
3H250
NW-3-4A
V07×4
466V
47μ 600V
47μ 500V
47μ 600V
6.3V
1k
LED
5A
6.3V
5A
CH-2

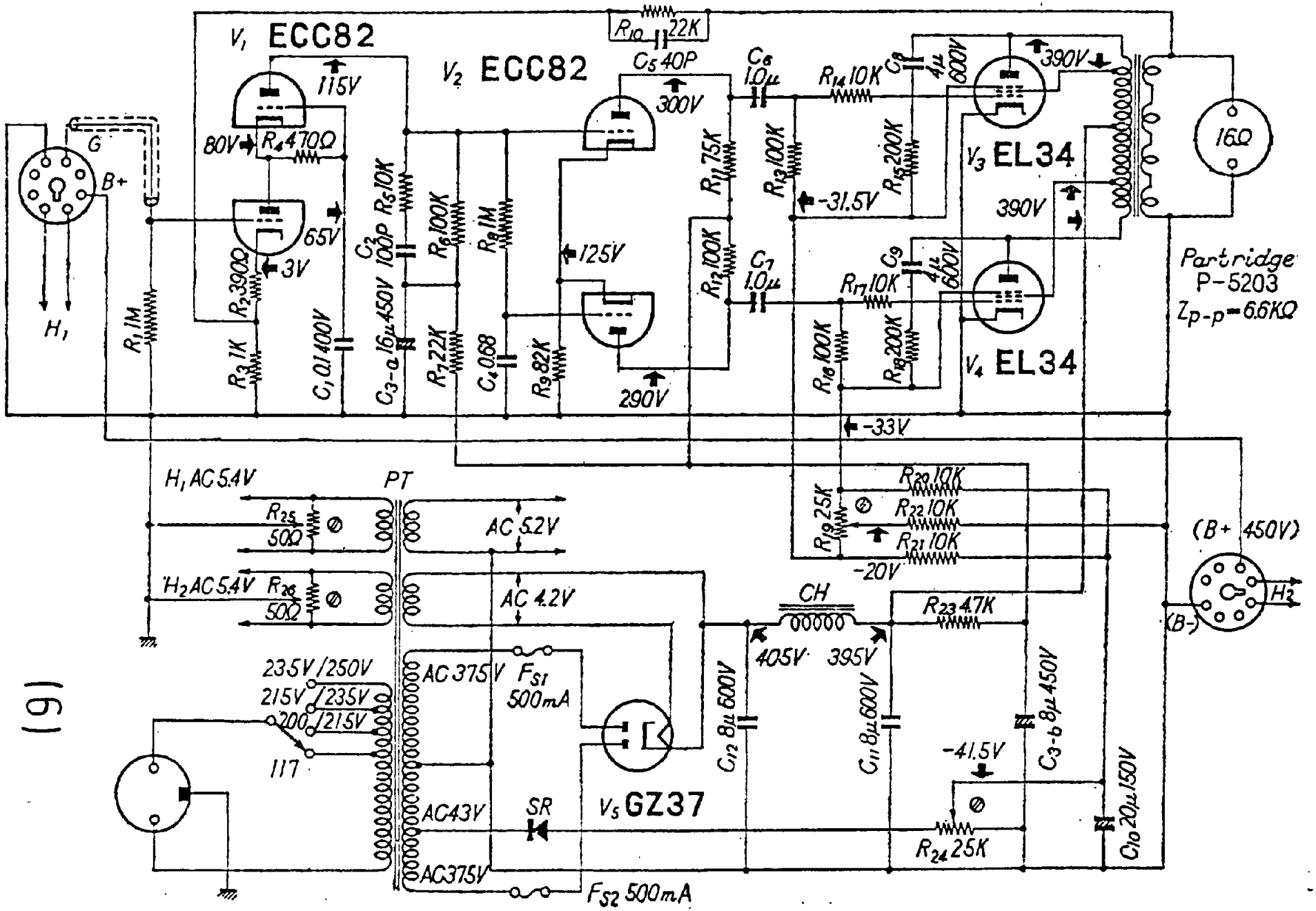

6267
6FQ7
150p
6CA7×2
5k
80V
320V
400V
30k
300p
0.1
-30.2V
100Ω
100k
30k
1.9V
1k
100μ 10V
10k
100k
1M
8.9V
15k 1W
1.5k 2W
5k
5K
16Ω
8Ω
4Ω
0.02
2.5Ω
0
2.5Ok (B)
100Ω
0.1
0.5
321V
-29.8V
100Ω
1.5k 2W
400V
405V
40μ 450WV
50k
40μ 450WV
Lch へ
Lch へ
3H 350MA
Lch へ
C'
SW
F
V03G
165V
50Ω 5W
100μ 380WV
415V
V03G×2
100μ 500WV
100μ 50WV
10k
C
10k
1.5k
5k
100μ 150V
60V
0V
6267
6.3V
6.3V
6CA7×4
100μ 50WV
Lch
6FQ7
6.3V
6.3V
6267
6FQ7
Rch
P.L
100Ω


C11 120p
NF=6.5dB
R22 15k 1/2W
Dpo: 24.2W
Dsgo: 3.1W
Isg: 6.8mA/13mA 60mA/114mA
V1a : ½ECC81
V2a : ½ECC82
V3 : EL-34
INPUT
107V
290V
457V
C1 0.1
R7 1k 1/2W
R13 180Ω 1W
5K
OUTPUT
16
R2 15k 1/2W
7.67V
114V
R5 20k 2W
R11 240k 1/2W
R9 1Ω 1W
VR2 100Ω
VR1 100k(B)
1.1V
R3 15k 1/2W
7.66V
R4 18k 2W
R6 20k 2W
R12 240k 1/2W
R10 1Ω 1W
C12 0.01μ 300V
R23 1Ω 1W
C15 10p
C2 0.1
R8 1k 1/2W
458V
R14 100Ω 1W
R1 1470Ω 1/2W
107V
289V
V2b : ½ECC82
V1b : ½ECC81
360V
V4 : EL-34
R17 39k 1W
136V
R15 30k 5W
R16 5.1k 5W
463V/450V
Bch
C3
C4
C13, C14 : 0.0036μ 1.5kV
C5 200μ 200V
-150V
R18 4.7k 1W
C3, C4 : 500V 100μ+100μ(L)
S.W
F.H. 5A
C13
R24 100k 1/4W
C14
P.L.
-188V
-45V
-35V
-35V
70V
D5
C6 100μ 160V
-115V
VR3
VR4
VR3'
VR4'
C7 100μ 160V
R19 6.2k 1W
C8 100μ 160V
-33V
-33V
R20 12k 1/2W
R21 12k 1/2W
D6
3H 350MA
474V
463V
350V
D1
D2
D4
D3
C10 100μ 550V
C9 220μ 500V
V1 V2 V3 V4 6.3V
V1' V2' V3' V4' 6.3V
D1~D6 : GI 1N4007

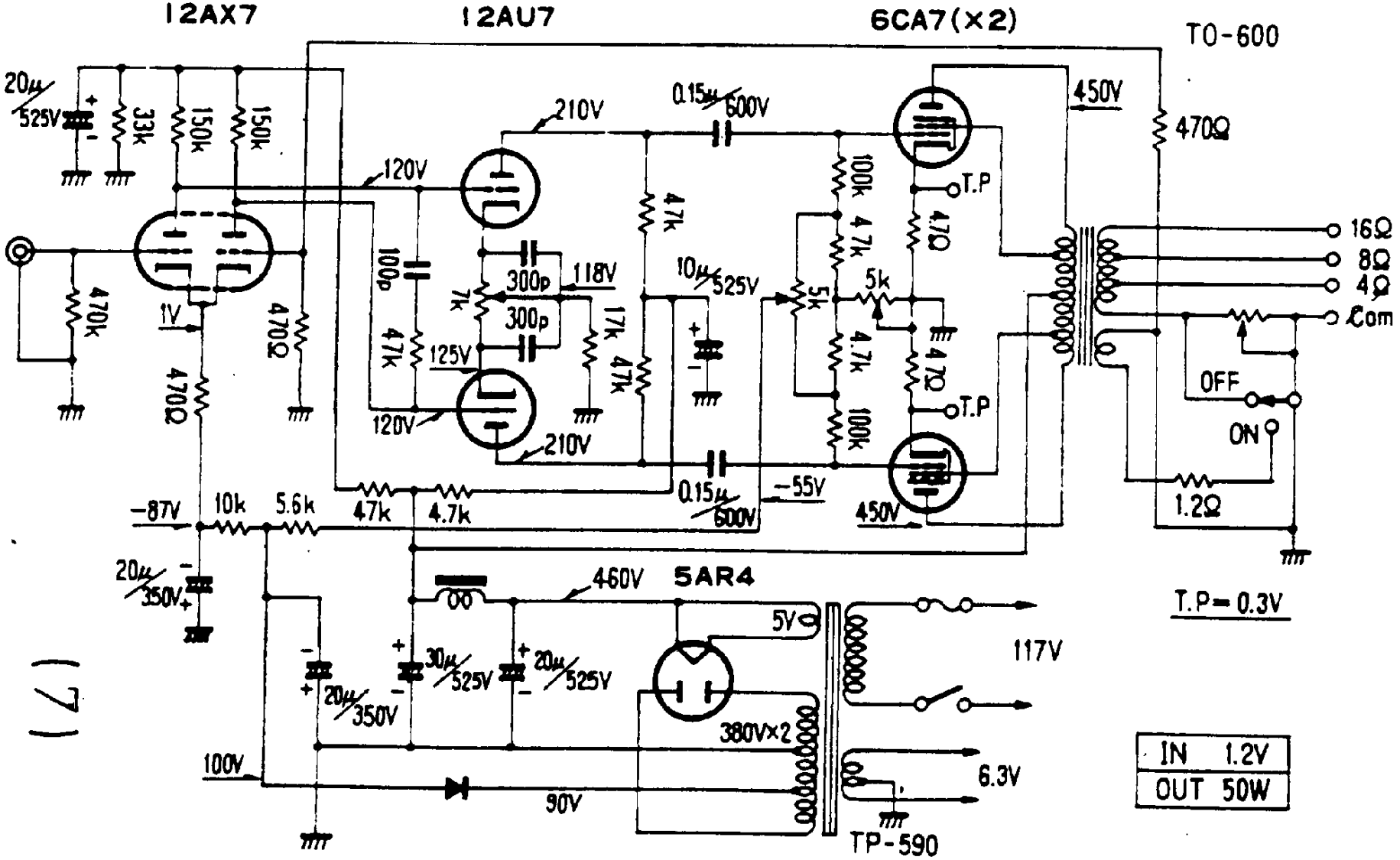

ECC83
ECC82
47kΩ
12BH7A
EL34×2
98V
280V
0.22μF
-43V
471V
470V
5K
16Ω
8
4
0
0.6V
100kΩ
47kΩ
470kΩ
100Ω
0.62V
500Ω
15kΩ 1W
5kΩ
30kΩ 2W
-36V
10Ω
0.5V
120kΩ
100kΩ
105V
47kΩ
1.2kΩ
202V
445V
22μF 350V
47kΩ 1W
47μF 450V
3.3kΩ
1.5kΩ 3W
-180V
ERC16-12
×4
3H 350MA
480V
R-CH
22kΩ
680Ω 3W
-191V
70V
380V
492V
100μF 160V
47μF 160V
47μF 350V
220μF 500V
5kΩ
FUSE
110V
3900pF
6.3V 4A
SW

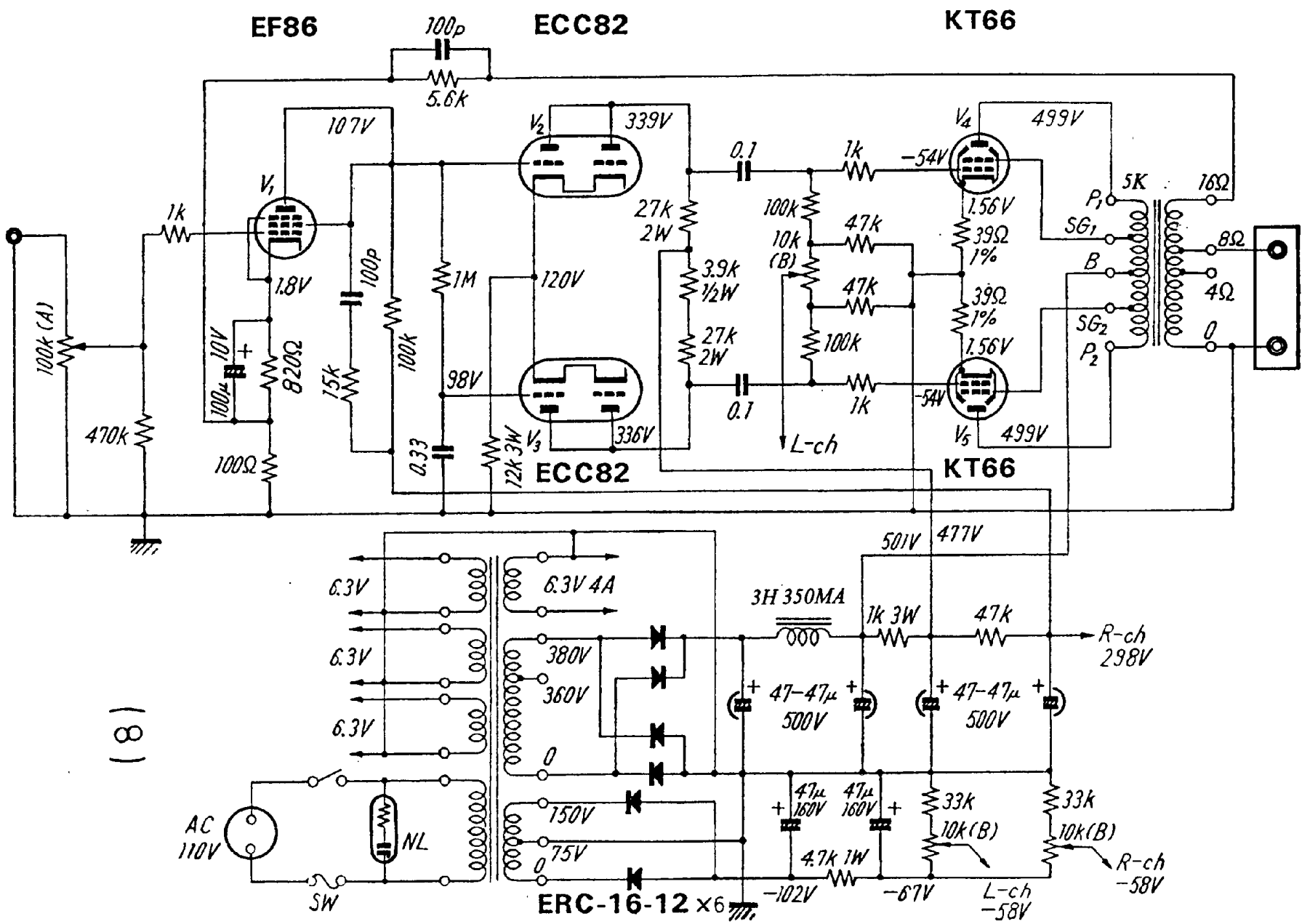


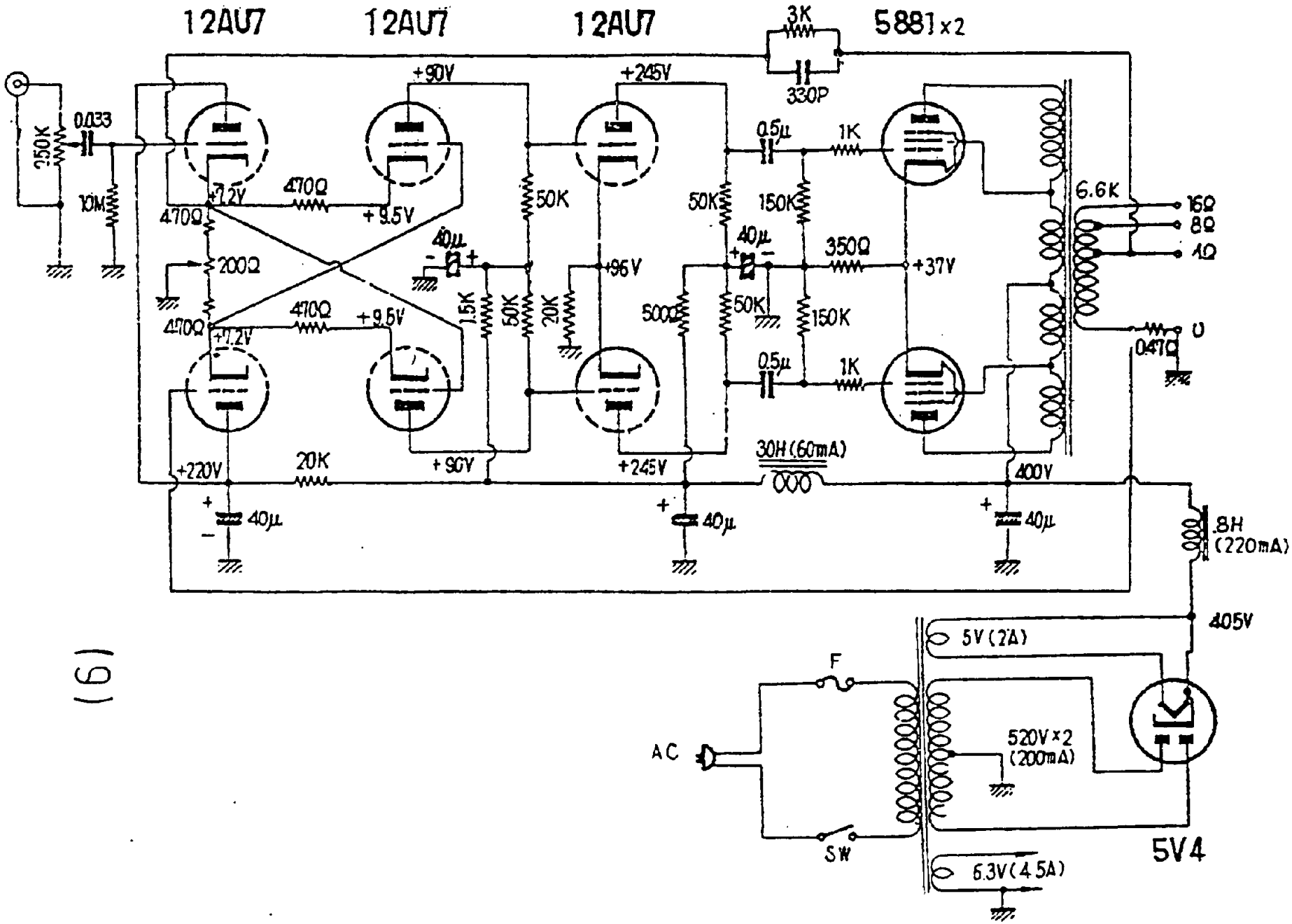
$V_1 \sim V_2$ = **12AX7A(ECC83)**
$V_3 \sim V_4$ = **12BH7A**
$V_5 \sim V_8$ = **EL34**


V1 ECC82
V2 ECC82
V3 EL34
V4 EL34
V5 GZ37
R10 22K
C5 40P
C6 1.0μ
R14 10K
C8 4μ 600V
390V
16Ω
Partridge
P-5203
Zp-p=6.6KΩ
115V
80V
R4 470Ω
300V
125V
290V
-31.5V
-33V
-20V
65V
3V
G
B+
H1
R1 1M
R2 390Ω
R3 1K
C1 0.1 400V
C3 100P
C3-a 16μ 450V
R5 10K
R6 100K
R7 22K
R8 1M
C4 0.68
R9 82K
R11 75K
R12 100K
R13 100K
R15 200K
C7 1.0μ
R17 10K
R16 100K
R18 200K
C9 4μ 600V
R19 25K
R20 10K
R22 10K
R21 10K
H1 AC 5.4V
PT
R25 50Ω
R26 50Ω
H2 AC 5.4V
AC 5.2V
AC 4.2V
CH
R23 4.7K
405V
395V
(B+ 450V)
H2
(B-)
235V/250V
215V/235V
200/215V
117
AC 375V
FS1 500mA
AC43V
SR
AC375V
FS2 500mA
C12 8μ 600V
C11 8μ 600V
C3-b 8μ 450V
C10 20μ 150V
-41.5V
R24 25K

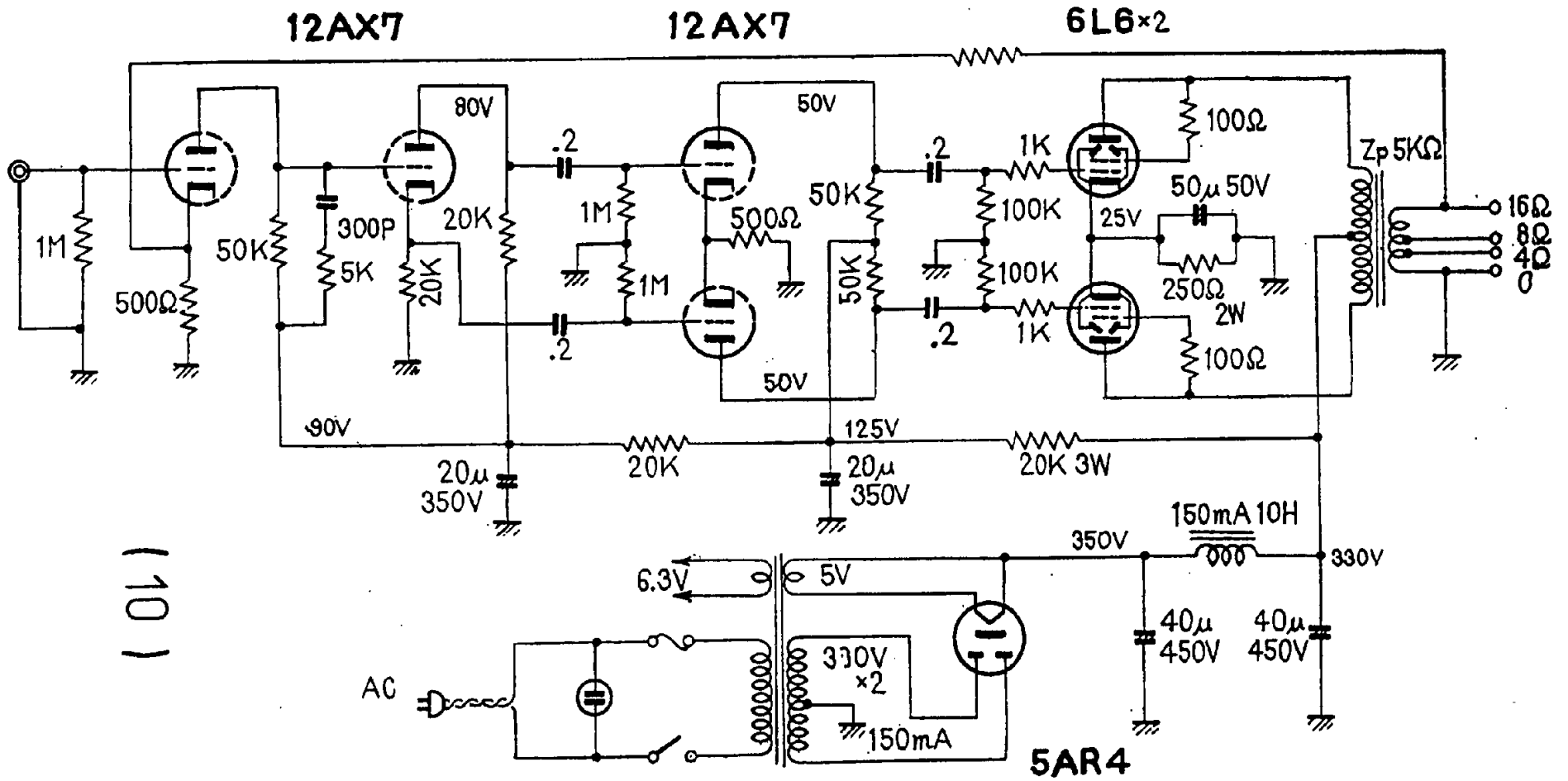
(9)

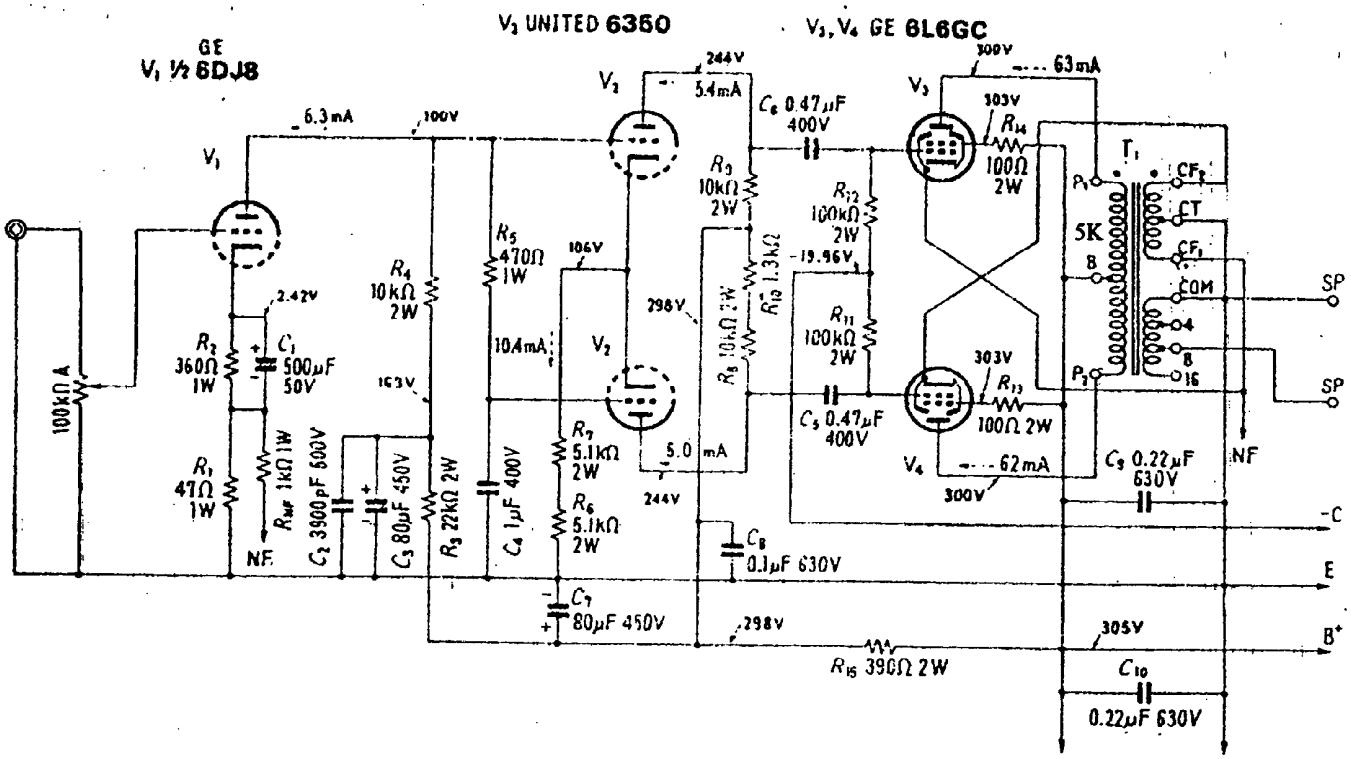

12AX7
12AU7
6CA7(X2)
TO-600
20μ 525V
33k
150k
150k
210V
0.15μ 600V
450V
470Ω
120V
100k
4.7k
T.P
47Ω
16Ω
8Ω
4Ω
Com
470k
1V
470Ω
100p
300p
118V
7k
300p
17k
47k
10μ 525V
5k
5k
4.7k
47Ω
OFF
ON
125V
120V
210V
100k
T.P
1.2Ω
-87V
10k
5.6k
4.7k
4.7k
0.15μ 600V
-55V
450V
20μ 350V
460V
5AR4
5V
117V
T.P=0.3V
20μ 350V
30μ 525V
20μ 525V
380V×2
6.3V
100V
90V
TP-590
IN 1.2V
OUT 50W

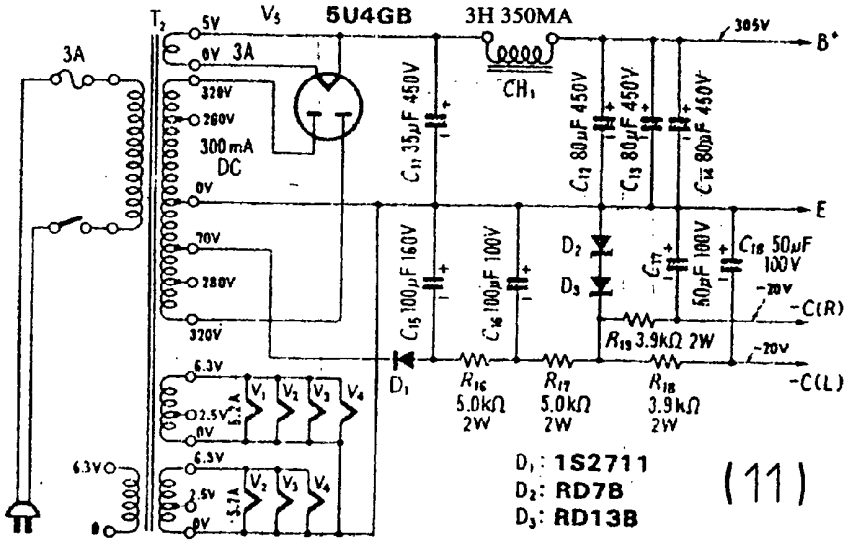

EF86
ECC82
KT66
100p
5.6k
107V
339V
499V
1k
100k (A)
470k
100Ω
1.8V
10V
100μ
820Ω
100p
15k
100k
1M
120V
98V
0.33
12k 3W
336V
27k 2W
3.9k ½W
27k 2W
0.1
100k
10k (B)
47k
47k
100k
1k
-54V
1.56V
39Ω 1%
39Ω 1%
1.56V
-54V
499V
L-ch
5K
16Ω
8Ω
4Ω
0
P1
SG1
B
SG2
P2
ECC82
KT66
6.3V
6.3V
6.3V
6.3V 4A
380V
360V
0
150V
75V
0
3H 350MA
501V
477V
1k 3W
47k
R-ch 298V
47-47μ 500V
47-47μ 500V
47μ 160V
47μ 160V
4.7k 1W
33k
10k(B)
33k
10k(B)
R-ch -58V
L-ch -58V
-102V
-67V
AC 110V
NL
SW
ERC-16-12 ×6
(8)

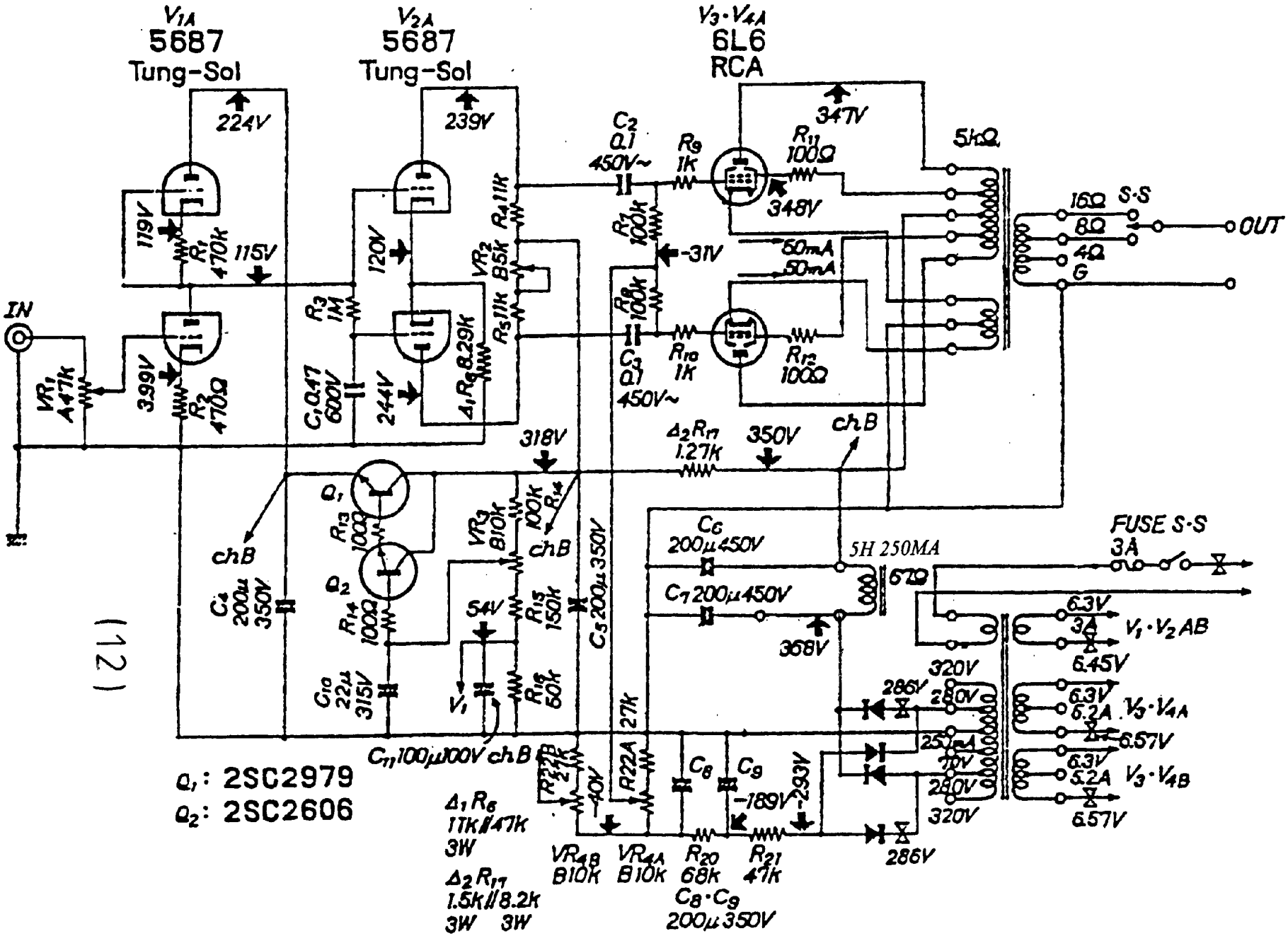

12AU7
12AU7
12AU7
3K
5881×2
330P
+90V
+245V
0.033
250K
10M
0.5μ
1K
6.6K
16Ω
8Ω
1Ω
0
0.47Ω
+7.2V
470Ω
+9.5V
50K
40μ
200Ω
+96V
150K
350Ω
+37V
1.5K
20K
500Ω
+220V
20K
+90V
+245V
30H(60mA)
400V
40μ
.8H
(220mA)
405V
5V(2A)
F
AC
SW
520V×2
(200mA)
6.3V(4.5A)
5V4

(6)

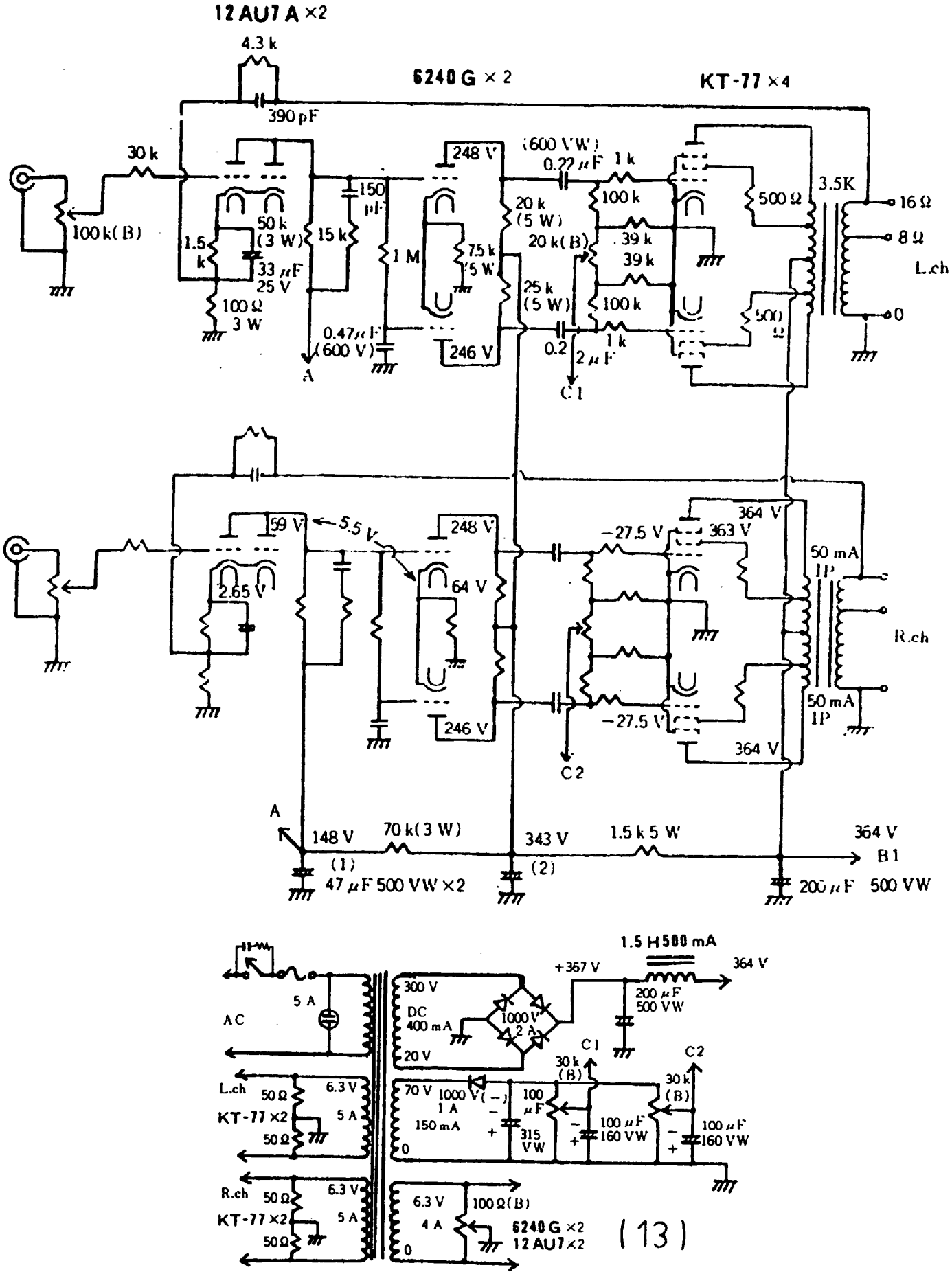

12AX7
12AX7
6L6×2
1M
500Ω
50K
300P
5K
20K
80V
.2
1M
1M
500Ω
50K
50V
50V
50K
.2
.2
1K
100K
100K
1K
100Ω
50μ 50V
25V
250Ω
2W
100Ω
Zp 5KΩ
16Ω
8Ω
4Ω
0
90V
125V
20μ
350V
20K
20μ
350V
20K 3W
150mA 10H
350V
330V
6.3V
5V
AC
330V
×2
150mA
40μ
450V
40μ
450V
5AR4

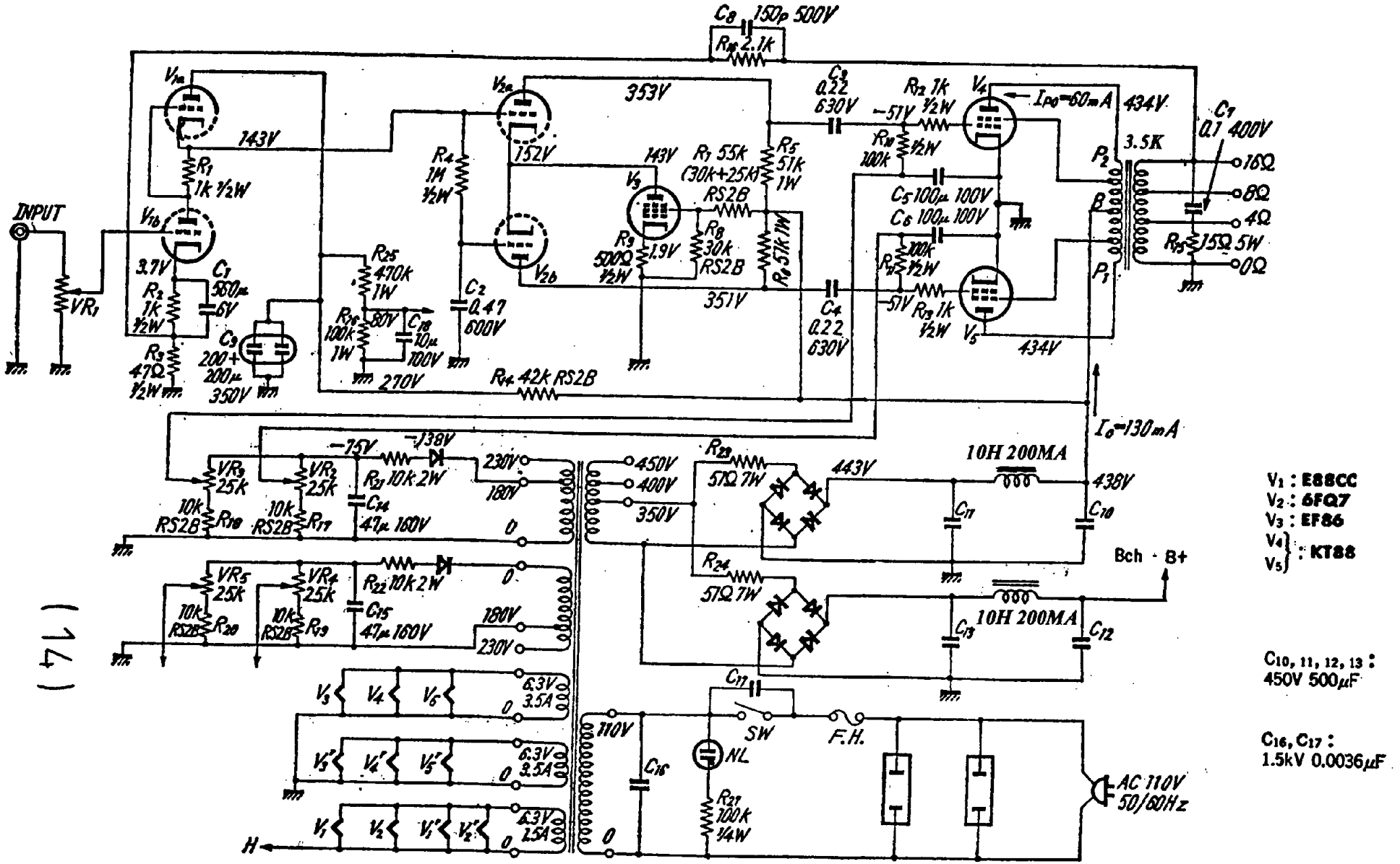

V₂ UNITED 6350
V₃, V₄ GE 6L6GC
GE
V₁ ½ 6DJ8
100kΩ A
R₁ 47Ω 1W
R₂ 360Ω 1W
C₁ 500μF 50V
R_NF 1kΩ 1W
C₂ 3900pF 600V
C₃ 80μF 450V
R₃ 22kΩ 2W
R₄ 10kΩ 2W
R₅ 470Ω 1W
C₄ 1μF 400V
R₆ 5.1kΩ 2W
R₇ 5.1kΩ 2W
C₇ 80μF 450V
C₈ 0.1μF 630V
R₈ 10kΩ 2W
R₉ 10kΩ 2W
R₁₀ 1.3kΩ
C₆ 0.47μF 400V
R₁₁ 100kΩ 2W
R₁₂ 100kΩ 2W
C₅ 0.47μF 400V
R₁₃ 100Ω 2W
R₁₄ 100Ω 2W
R₁₅ 390Ω 2W
C₉ 0.22μF 630V
C₁₀ 0.22μF 630V
T₁
5K
SP
SP
NF
-C
E
B⁺
244V
5.4mA
100V
6.3mA
106V
298V
10.4mA
163V
2.42V
5.0 mA
244V
300V
63mA
303V
303V
62mA
300V
305V
298V
-19.96V


T₂
V₅ 5U4GB
3H 350MA
CH₁
3A
5V
0V 3A
328V
260V
300mA DC
0V
70V
280V
320V
6.3V
2.5V 5.2A
0V
6.3V
2.5V 5.2A
0V
6.3V
V₁ V₂ V₃ V₄
C₁₁ 35μF 450V
C₁₂ 80μF 450V
C₁₃ 80μF 450V
C₁₄ 80μF 450V
C₁₅ 100μF 160V
C₁₆ 100μF 100V
C₁₇ 50μF 100V
C₁₈ 50μF 100V
D₁
D₂
D₃
R₁₆ 5.0kΩ 2W
R₁₇ 5.0kΩ 2W
R₁₈ 3.9kΩ 2W
R₁₉ 3.9kΩ 2W
305V
B⁺
E
-20V
-C(R)
-20V
-C(L)
D₁: 1S2711
D₂: RD7B
D₃: RD13B


V1A 5687 Tung-Sol
V2A 5687 Tung-Sol
V3·V4A 6L6 RCA
224V
239V
347V
119V
115V
120V
348V
-31V
50mA
50mA
IN
399V
244V
318V
350V
chB
54V
-189V
-293V
-40V
320V
286V
368V
OUT
FUSE S·S 3A
5H 250MA
6.3V 3A V1·V2 AB 6.45V
6.3V 6.2A V3·V4A 6.57V
6.3V 5.2A V3·V4B 6.57V
Q1: 2SC2979
Q2: 2SC2606
Δ1R6 11K//47K 3W
Δ2R17 1.5K//8.2K 3W 3W
C8·C9 200μ350V
C11 100μ100V chB
C5 200μ350V
C6 200μ450V
C7 200μ450V
C1 0.47 600V
C2 0.1 450V~
C3 0.1 450V~
C4 200μ 350V
C10 22μ 315V
R1 470K
R2 470Ω
R3 1M
R4 11K
R5 11K
R6 8.29K
R7 100K
R8 100K
R9 1K
R10 1K
R11 100Ω
R12 100Ω
R13 100Ω
R14 100Ω
R15 150K
R16 60K
R17 27K
R18 100K
R20 68K
R21 47K
R22A 27K
R22B 27K
VR1 A47K
VR2 B5K
VR3 B10K
VR4A B10K
VR4B B10K
5kΩ
16Ω
8Ω
4Ω
G
S·S

(12)

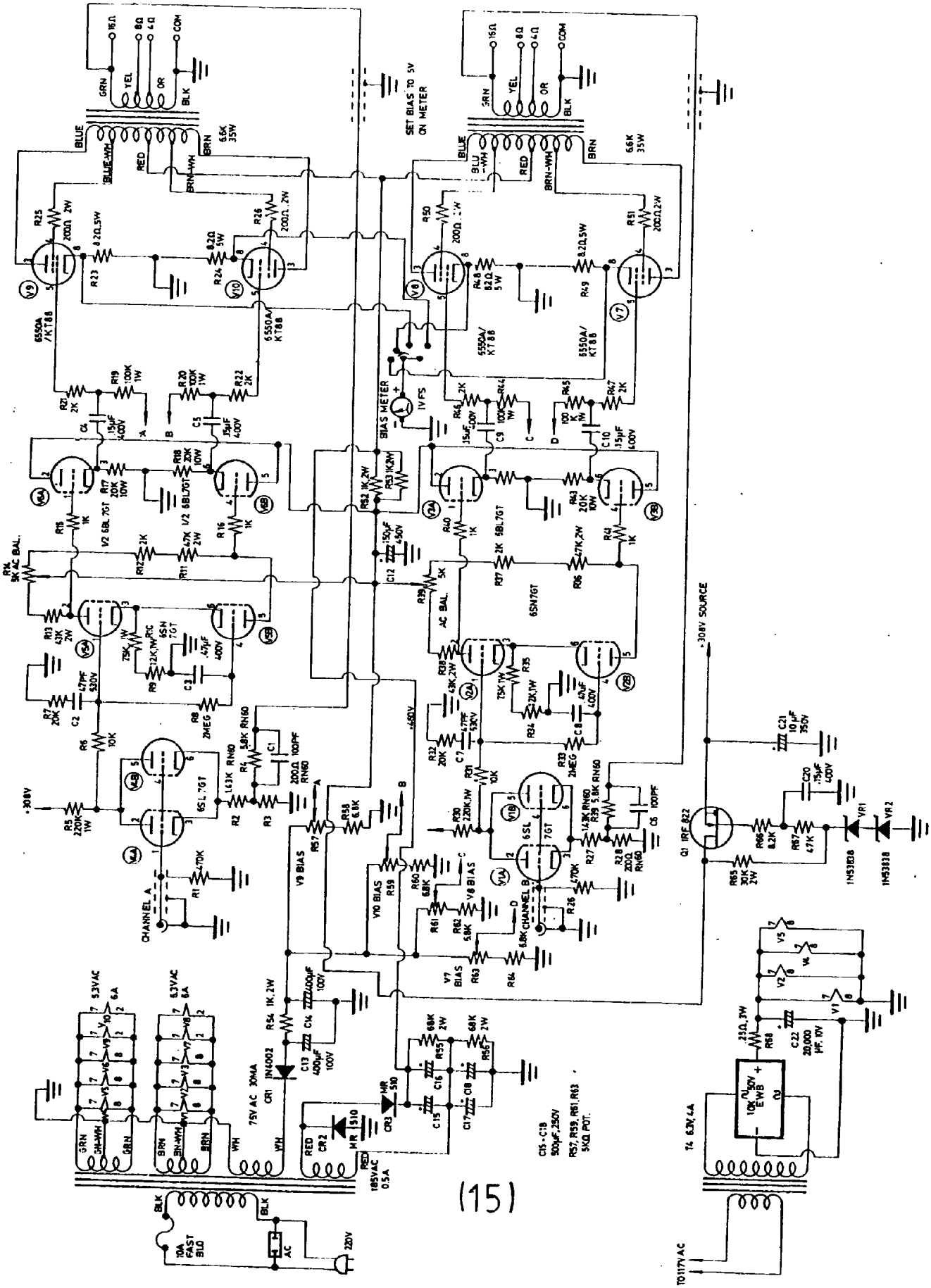

12AU7A ×2
4.3 k
6240G × 2
KT-77 ×4
390 pF
30 k
100 k(B)
1.5 k
50 k (3 W)
33 μF 25 V
100 Ω 3 W
15 k
150 pF
1 M
248 V
7.5 k 5 W
0.47μF (600 V)
246 V
A
(600 VW)
0.22 μF
1 k
20 k (5 W)
20 k(B)
25 k (5 W)
0.2 μF
C1
100 k
39 k
39 k
100 k
1 k
500 Ω
3.5K
16 Ω
8 Ω
L.ch
0
59 V
5.5 V
2.65 V
64 V
246 V
248 V
−27.5 V
364 V
363 V
50 mA IP
R.ch
C2
A
148 V
70 k(3 W)
343 V
1.5 k 5 W
364 V
B1
(1)
47 μF 500 VW ×2
(2)
200 μF 500 VW
1.5 H 500 mA
+367 V
AC
5 A
300 V
DC 400 mA
20 V
1000 V 2 A
200 μF 500 VW
C1
C2
30 k (B)
70 V
1000 V
1 A
150 mA
100 μF 315 VW
100 μF 160 VW
100 μF 160 VW
L.ch
KT-77 ×2
50 Ω
6.3 V
5 A
R.ch
KT-77 ×2
6.3 V
4 A
100 Ω(B)
6240G ×2
12AU7 ×2

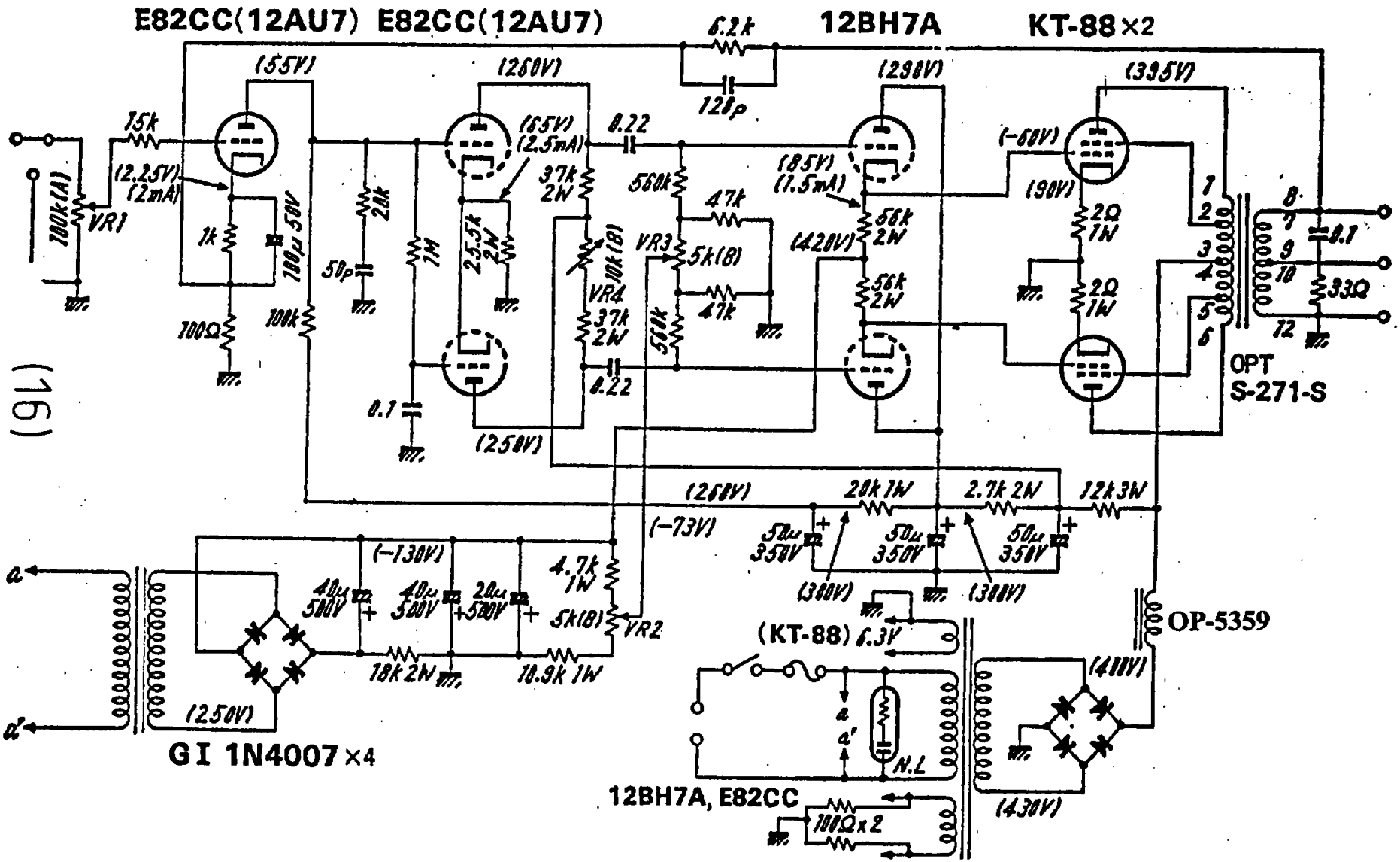


V1 : E88CC
V2 : 6FQ7
V3 : EF86
V4, V5 : KT88

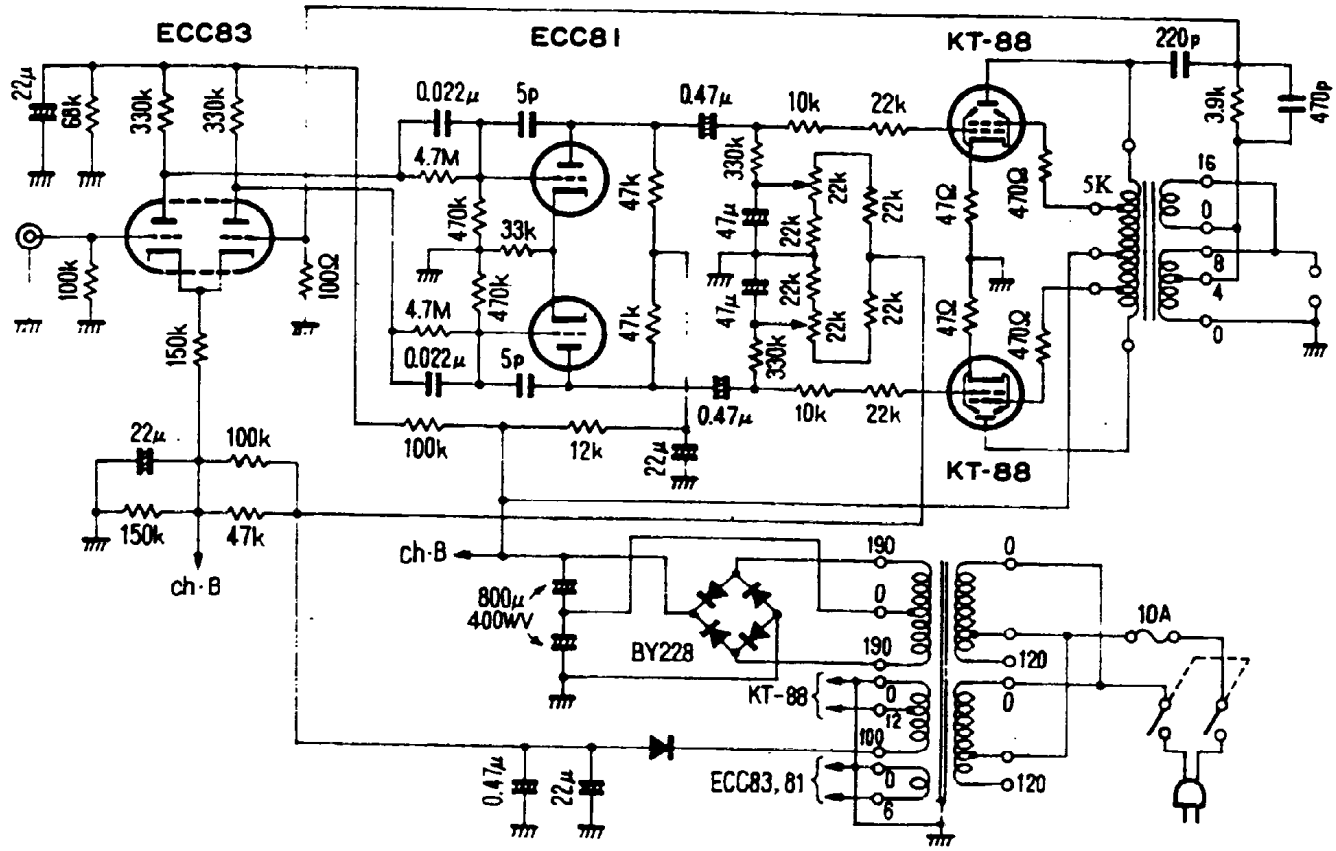
C10, 11, 12, 13 : 450V 500μF

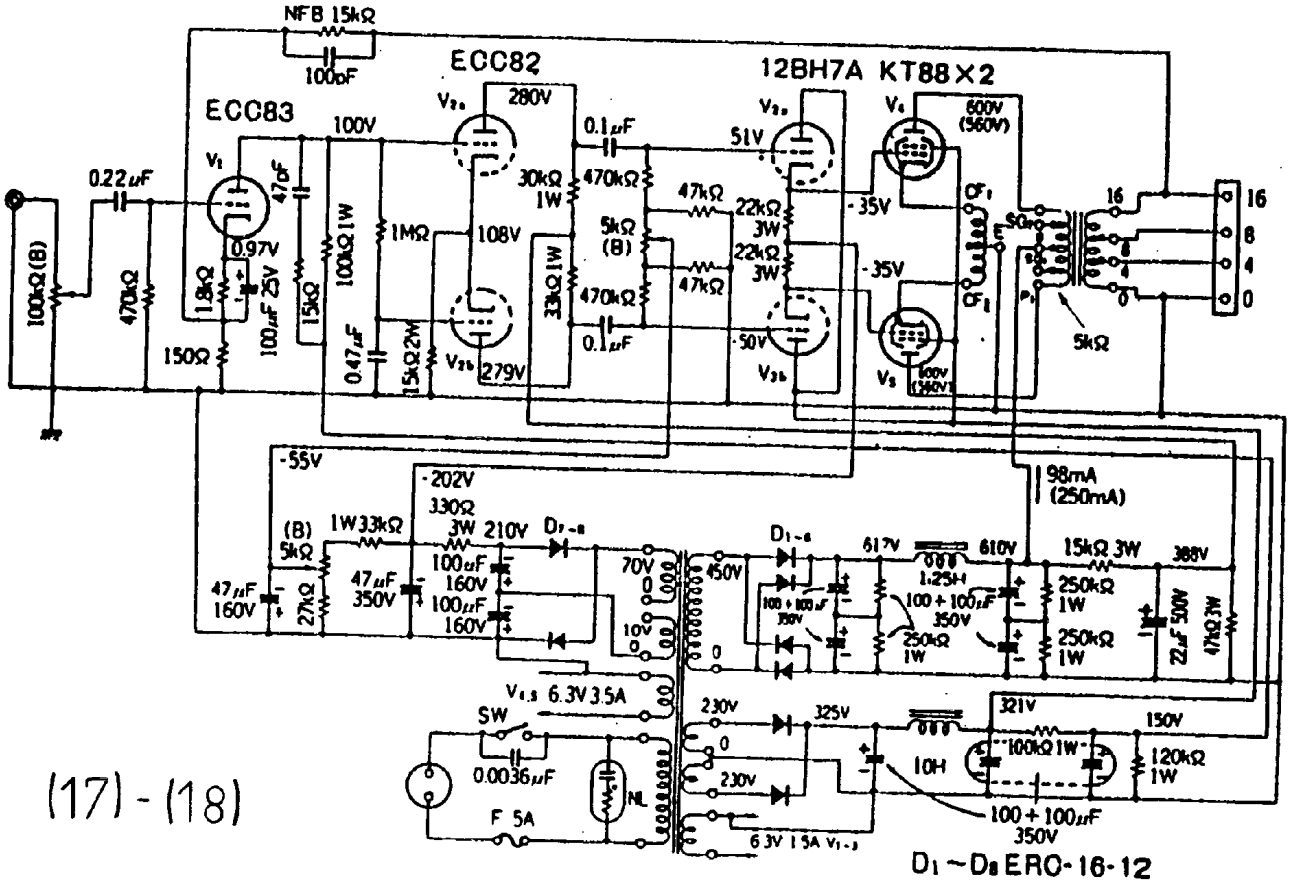
C16, C17 : 1.5kV 0.0036μF


16Ω
8Ω
4Ω
COM
GRN
YEL
OR
BLK
BLUE
BLUE-WH
RED
BRN-WH
BRN
6.6K 35W
SET BIAS TO 5V ON METER
6550A/KT88
BIAS METER
1VFS
6SL7GT
6SN7GT
AC BAL.
CHANNEL A
CHANNEL B
+308V SOURCE
Q1 IRF 822
1N5338
0.5A FAST BLO
220V
AC
TO 117V AC
(15)

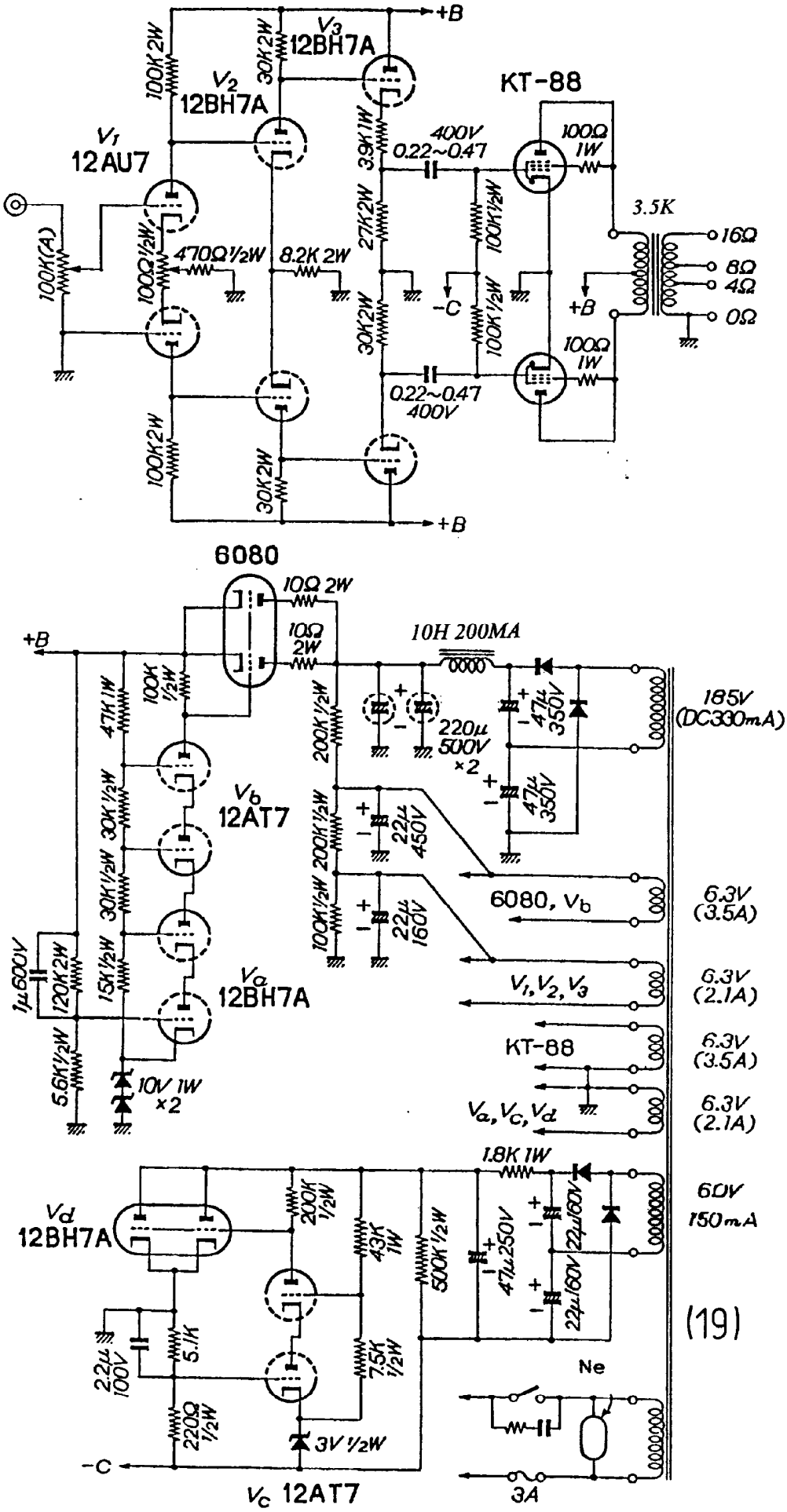

E82CC(12AU7) E82CC(12AU7)
6.2k
12BH7A
KT-88×2
(55V)
(260V)
(298V)
(395V)
15k
(65V)
(2.5mA)
0.22
120p
(85V)
(1.5mA)
(-60V)
(90V)
(2.25V)
(2mA)
100k(A)
VR1
1k
100μ 50V
100Ω
100k
20k
50p
1M
37k 2W
560k
47k
25.5k 2W
VR3
10k(B)
5k(B)
VR4
37k 2W
560k
47k
56k 2W
56k 2W
(420V)
2Ω 1W
2Ω 1W
0.1
0.22
(250V)
OPT
S-271-S
33Ω
(268V)
(-73V)
20k 1W
2.7k 2W
12k 3W
50μ 350V
50μ 350V
50μ 350V
(308V)
(308V)
(-130V)
4.7k 1W
40μ 500V
40μ 500V
20μ 500V
5k(B)
VR2
18k 2W
10.9k 1W
(250V)
GI 1N4007×4
(KT-88) 6.3V
OP-5359
(410V)
(430V)
12BH7A, E82CC
100Ω×2
N.L
a
a'

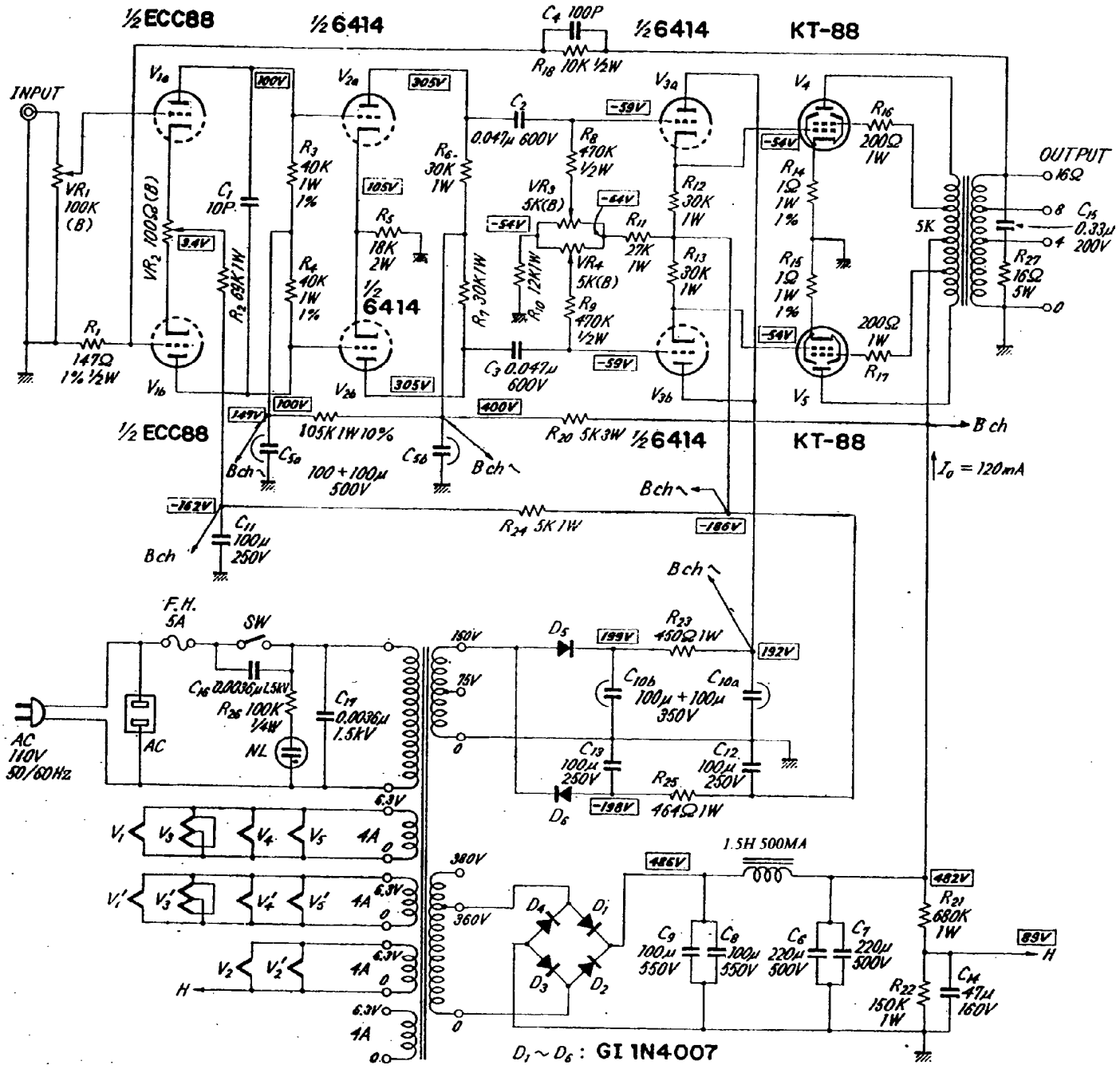
(16)

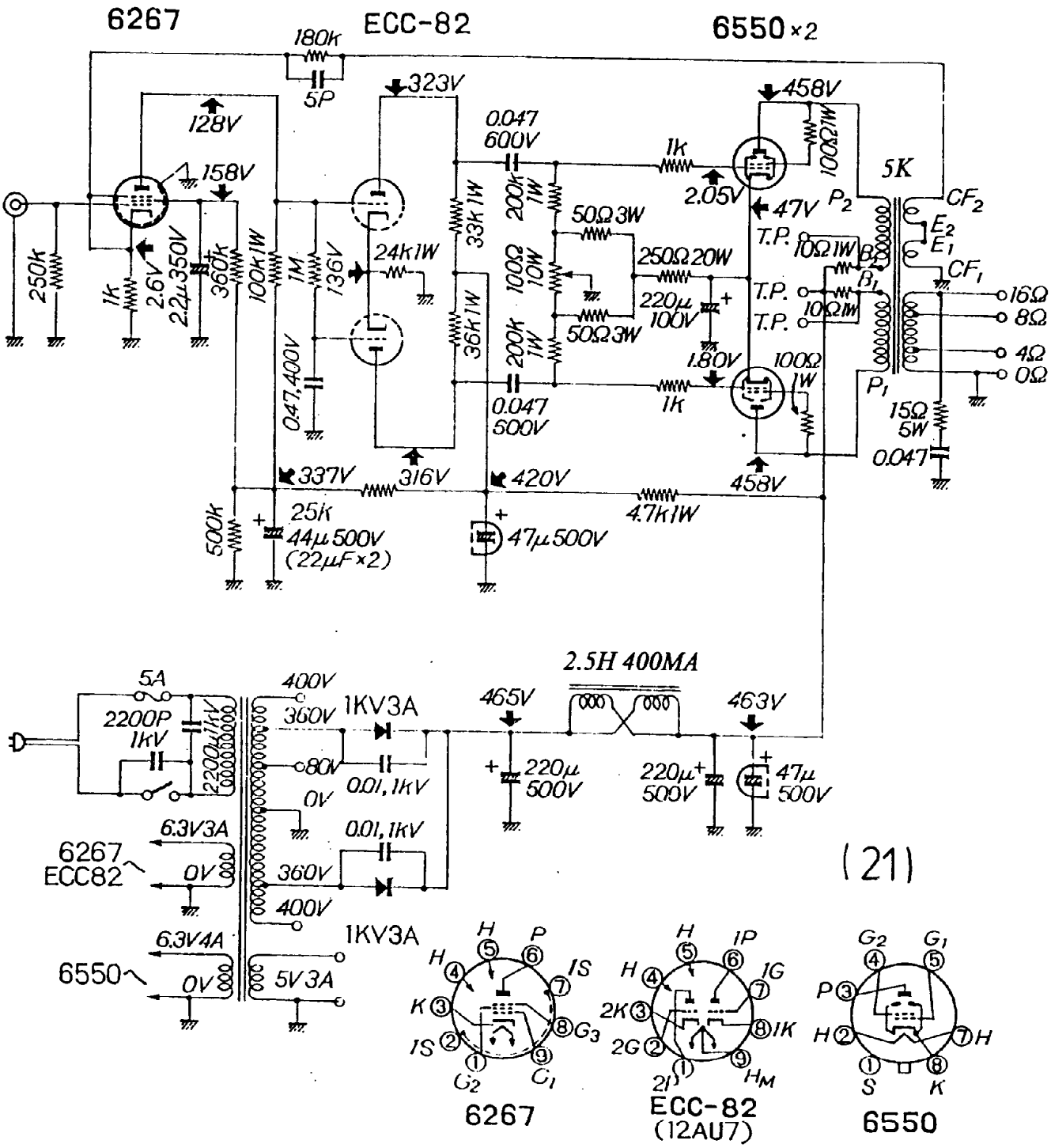

ECC83
ECC81
KT-88
KT-88
ch·B
ch·B
BY228
10A
ECC83, 81

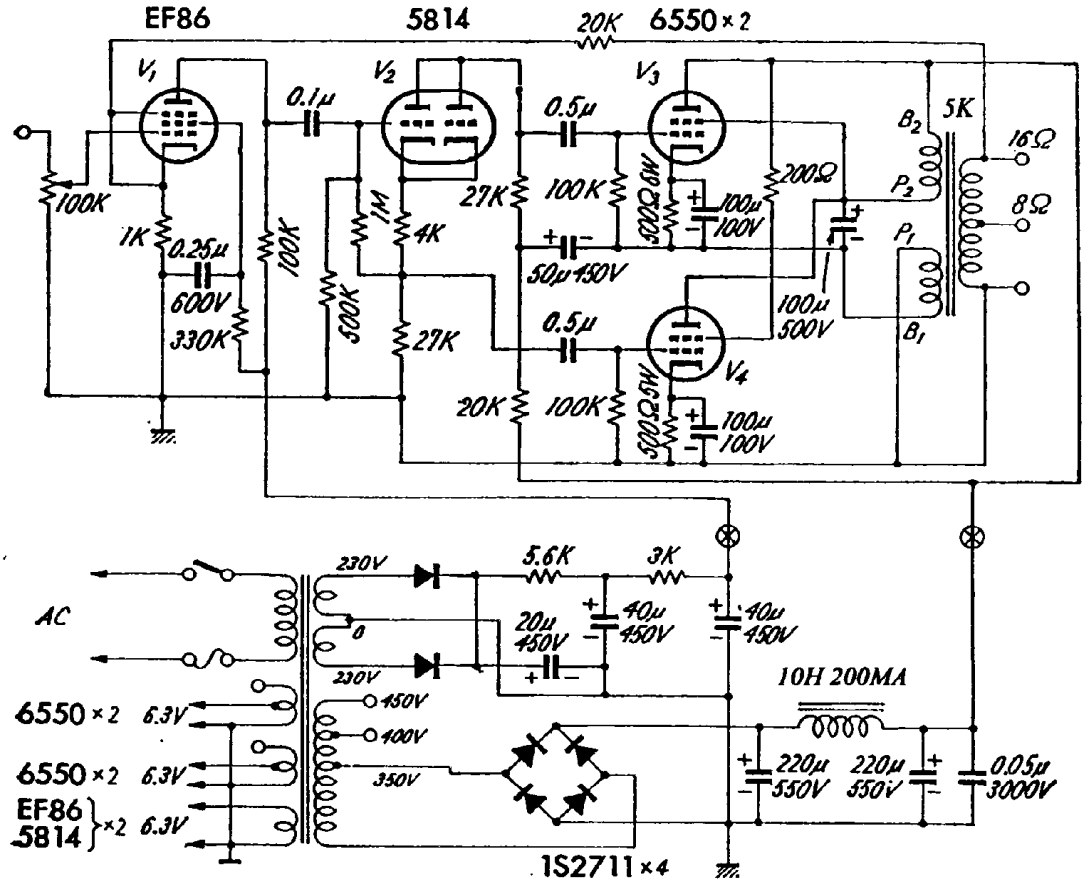

NFB 15kΩ
ECC82
12BH7A KT88×2
ECC83
98mA
(250mA)
D1~D8 ERO-16-12

(17) - (18)

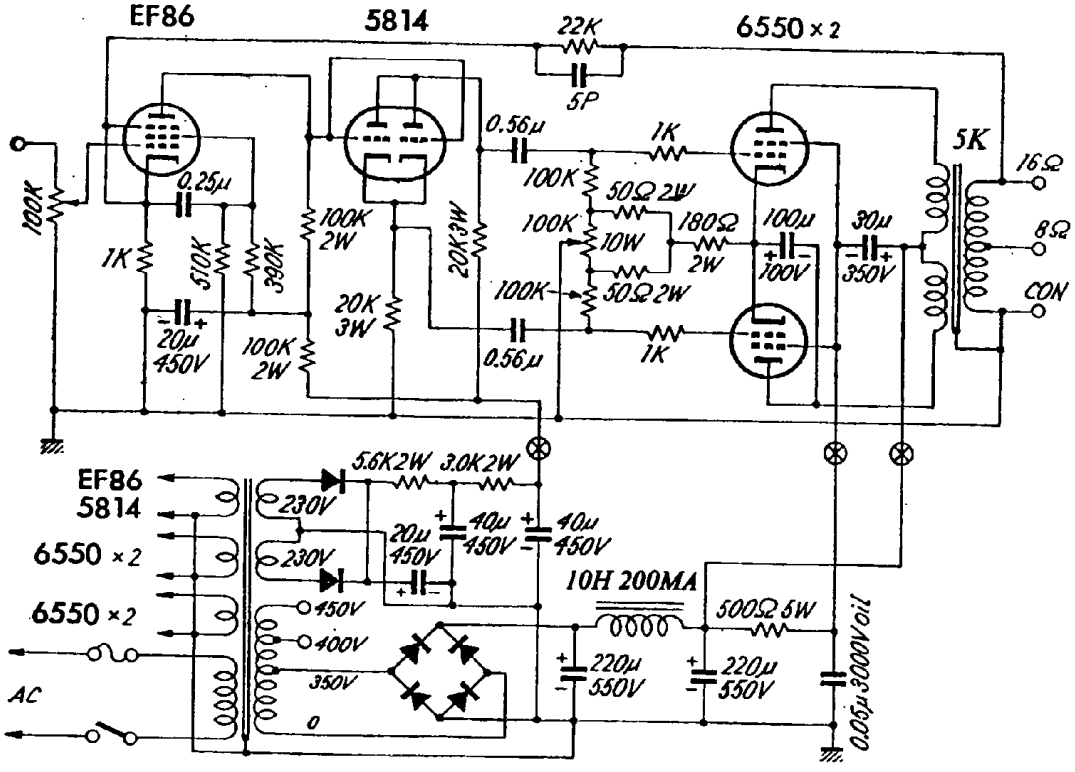

V3 12BH7A
V2 12BH7A
V1 12AU7
KT-88
+B
100K 2W
30K 2W
3.9K 1W
400V 0.22~0.47
100Ω 1W
3.5K
16Ω
8Ω
4Ω
0Ω
100K(A)
100Ω ½W
470Ω ½W
8.2K 2W
27K 2W
100K ½W
-C
+B
30K 2W
100K ½W
100Ω 1W
0.22~0.47 400V
100K 2W
30K 2W
+B
6080
10Ω 2W
10Ω 2W
10H 200MA
+B
100K ½W
47K 1W
200K ½W
220μ 500V ×2
47μ 350V
185V (DC330mA)
Vb 12AT7
30K ½W
30K ½W
22μ 450V
200K ½W
6080, Vb
6.3V (3.5A)
1μ 600V
120K 2W
15K ½W
22μ 160V
100K ½W
Va 12BH7A
V1, V2, V3
6.3V (2.1A)
KT-88
6.3V (3.5A)
5.6K ½W
10V 1W ×2
Va, Vc, Vd
6.3V (2.1A)
1.8K 1W
60V 150mA
Vd 12BH7A
200K ½W
43K 1W
500K ½W
47μ 250V
22μ 160V
22μ 160V
2.2μ 100V
5.1K
7.5K ½W
220Ω ½W
3V ½W
Ne
-C
Vc 12AT7
3A

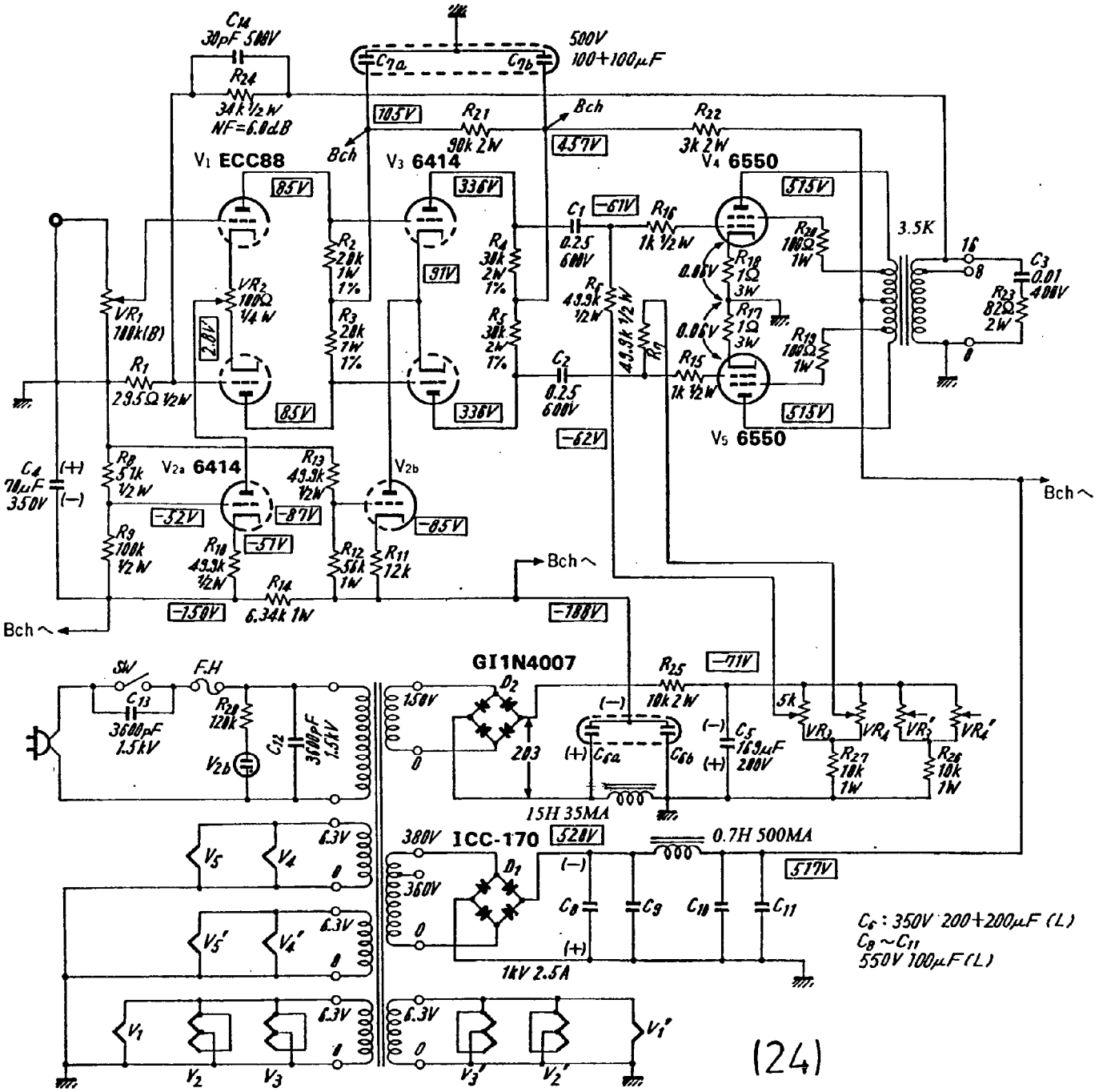

½ECC88
½6414
½6414
KT-88
½ECC88
½6414
KT-88
INPUT
OUTPUT
16Ω
8
4
0
5K
0.33μ 200V
16Ω 5W
R27
VR1 100K (B)
VR2 100Ω (B)
R1 147Ω 1% ½W
R2 65K 1W
C1 10P
R3 40K 1W 1%
R4 40K 1W 1%
R5 18K 2W
R6 30K 1W
R7 30K 1W
½ 6414
C2 0.047μ 600V
C3 0.047μ 600V
R8 470K ½W
R9 470K ½W
R10 12K 1W
VR3 5K(B)
VR4 5K(B)
R11 27K 1W
R12 30K 1W
R13 30K 1W
R14 1Ω 1W 1%
R15 1Ω 1W 1%
R16 200Ω 1W
R17 200Ω 1W
C4 100P
R18 10K ½W
105K 1W 10%
R20 5K 3W
R24 5K 1W
Bch
Io = 120mA
Ca 100+100μ 500V
Cb
C11 100μ 250V
F.H. 5A
SW
AC 110V 50/60Hz
AC
NL
C16 0.0036μ 1.5KV
R26 100K ¼W
C17 0.0036μ 1.5KV
6.3V
4A
V1 V3 V4 V5
V1' V3' V4' V5'
V2 V2'
H
D5
R23 450Ω 1W
C10b 100μ+100μ 350V
C10a
C13 100μ 250V
C12 100μ 250V
R25 464Ω 1W
D6
1.5H 500MA
D1 D2 D3 D4
C9 100μ 550V
C8 100μ 550V
C6 220μ 500V
C7 220μ 500V
R21 680K 1W
R22 150K 1W
C14 47μ 160V
D1 ~ D6 : GI 1N4007

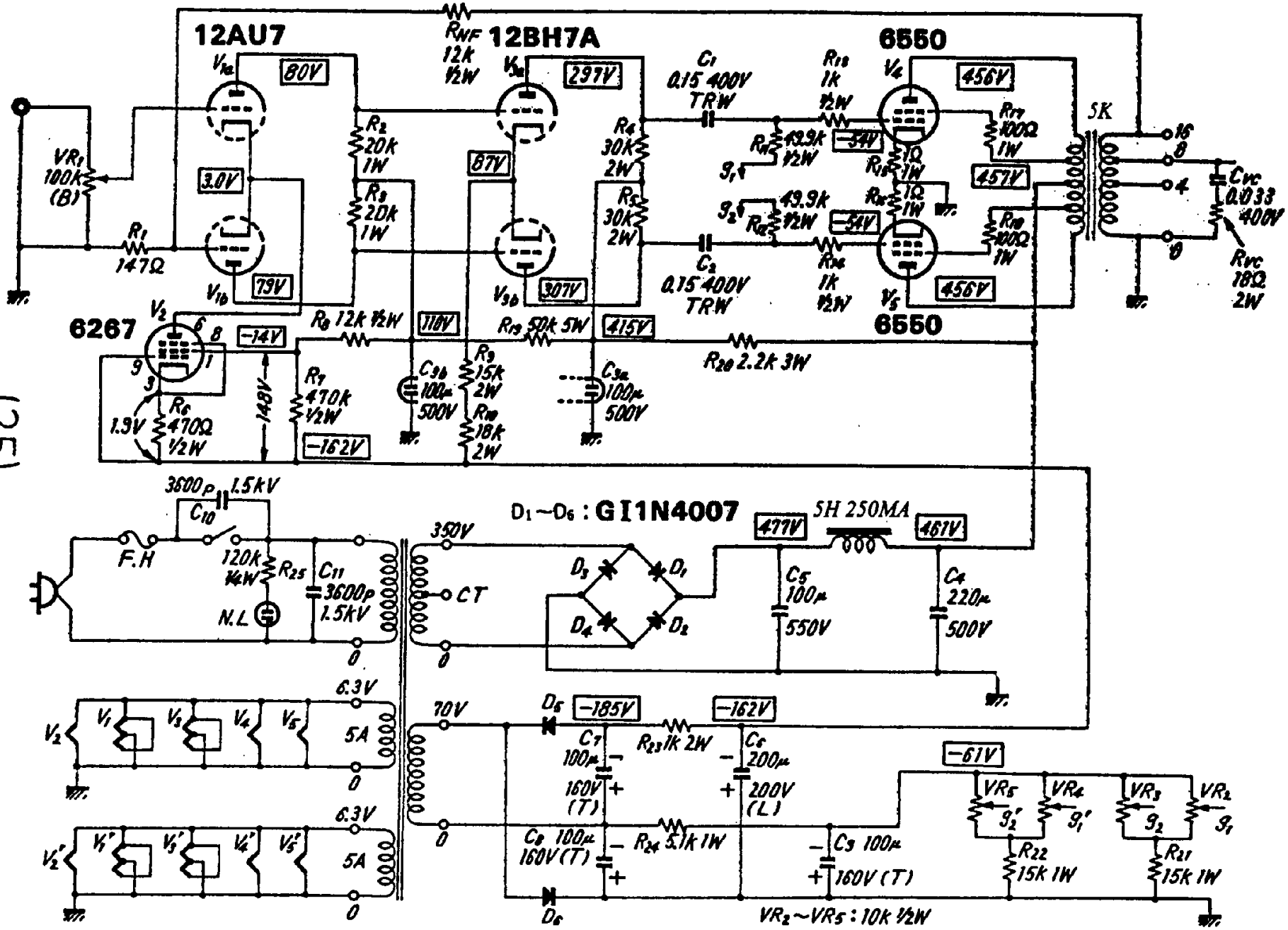

6267
ECC-82
6550×2
180k
5P
323V
128V
158V
0.047
600V
458V
1k
100Ω1W
5K
2.05V
47V
P2
CF2
E2
E1
CF1
T.P.
10Ω1W
B2
B1
16Ω
8Ω
4Ω
0Ω
P1
15Ω
5W
0.047
250k
1k
2.6V
22μ350V
360k
100k1W
1M
136V
24k1W
33k1W
200k
1W
50Ω3W
250Ω20W
100Ω
10W
220μ
100V
50Ω3W
36k1W
200k
1W
1.80V
100Ω
1W
1k
0.047
600V
0.047,400V
337V
316V
420V
458V
4.7k1W
500k
25k
44μ500V
(22μF×2)
47μ500V
2.5H 400MA
5A
2200P
1kV
2200μ1kV
400V
360V
1KV3A
465V
463V
80V
0.01, 1kV
0V
220μ
500V
220μ
500V
47μ
500V
6.3V3A
6267
ECC82
0V
0.01, 1kV
360V
400V
1KV3A
6.3V4A
6550
0V
5V3A
H
P
IS
K
G3
G2
G1
IP
IG
2K
IK
2G
2I
HM
S
(21)
6267
ECC-82
(12AU7)
6550

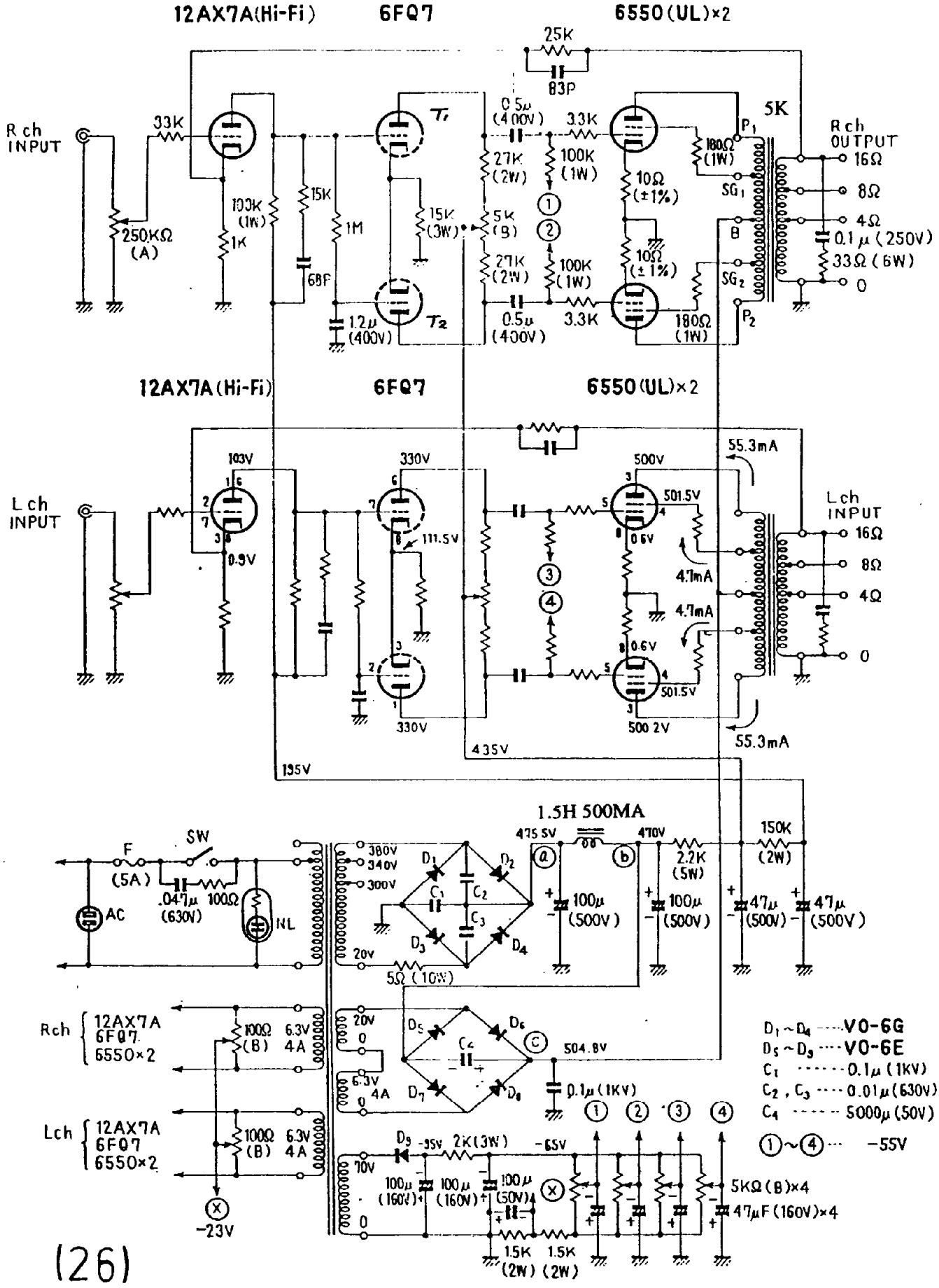

EF86
5814
20K
6550×2
V1
V2
V3
V4
0.1μ
0.5μ
100K
1K
0.25μ
600V
330K
1M
4K
27K
500K
100K
50μ 450V
100μ 100V
200Ω
100μ 500V
5K
B2
P2
P1
B1
16Ω
8Ω
AC
230V
0
5.6K
3K
20μ 450V
40μ 450V
10H 200MA
6550×2 6.3V
450V
400V
350V
220μ 550V
0.05μ 3000V
EF86 5814 ×2 6.3V
1S2711×4

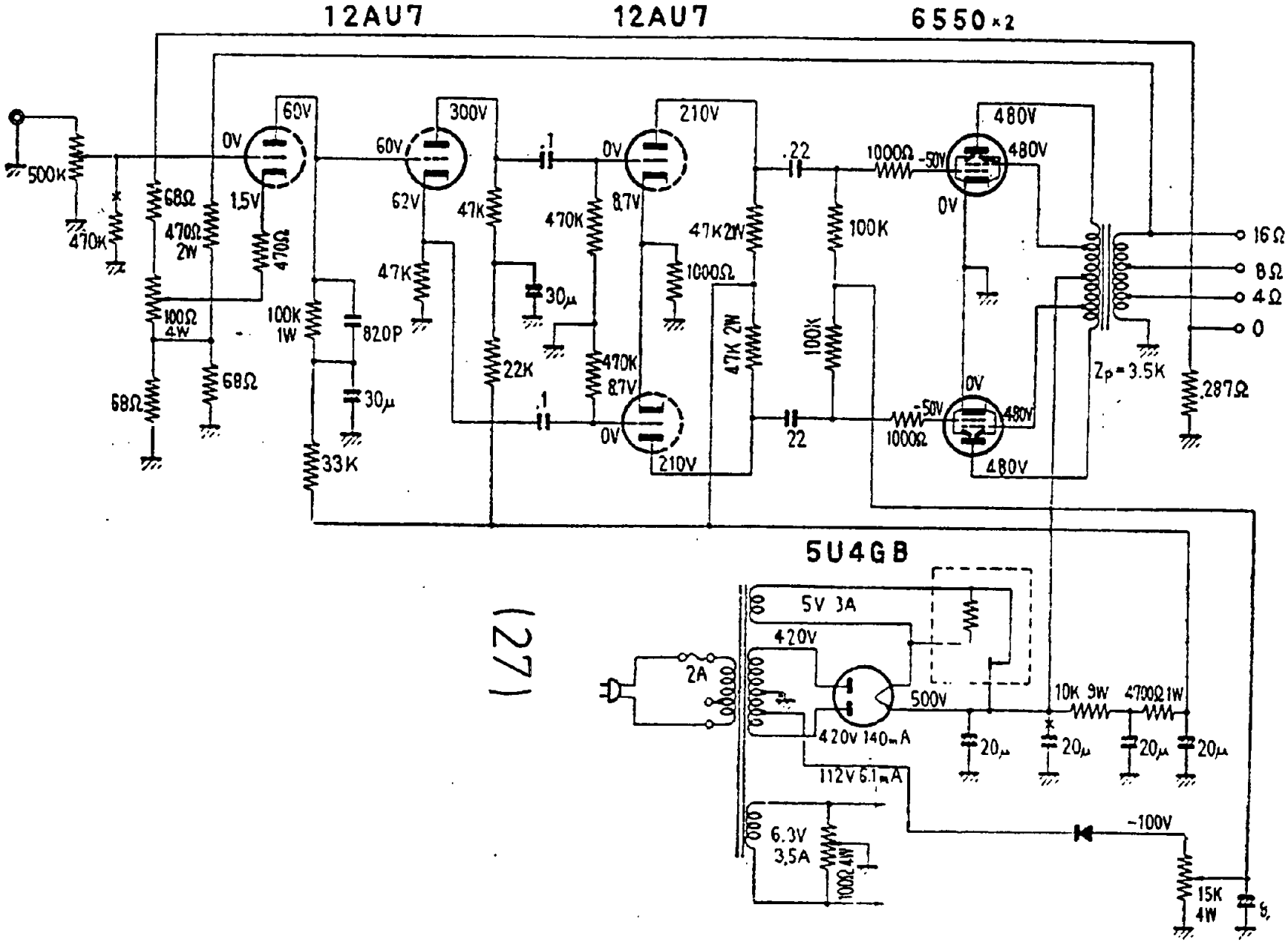
(22)-(23)

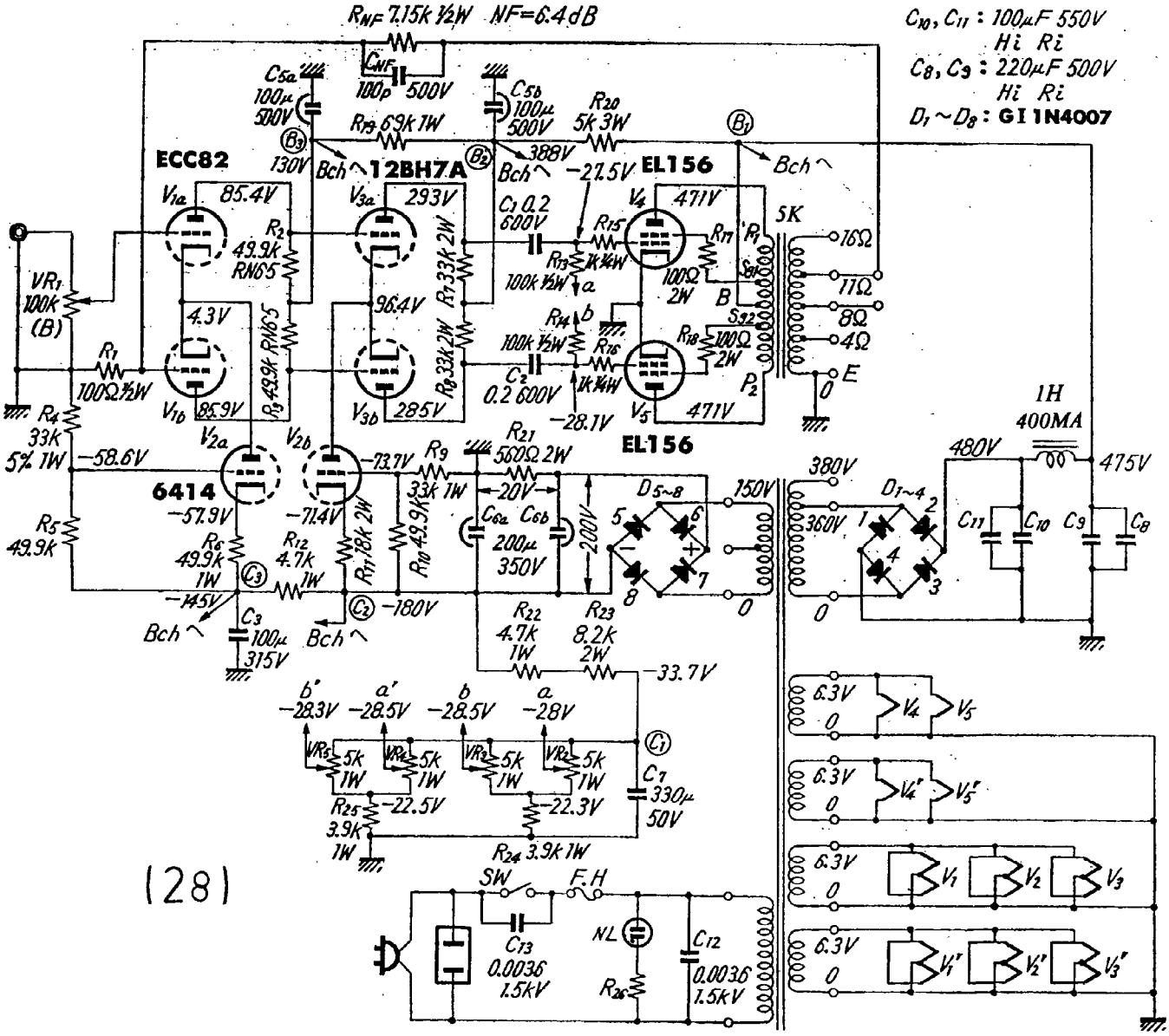

EF86
5814
22K
5P
6550×2
0.56μ
1K
100K
50Ω 2W
180Ω
2W
10W
100μ 100V
30μ 350V
5K
16Ω
8Ω
COM
0.25μ
510K
390K
20μ 450V
100K 2W
20K 3W
20K3W
EF86
5814
6550×2
6550×2
AC
5.6K2W
3.0K2W
230V
40μ 450V
10H 200MA
500Ω 5W
220μ 550V
0.05μ 3000V oil
450V
400V
350V
0

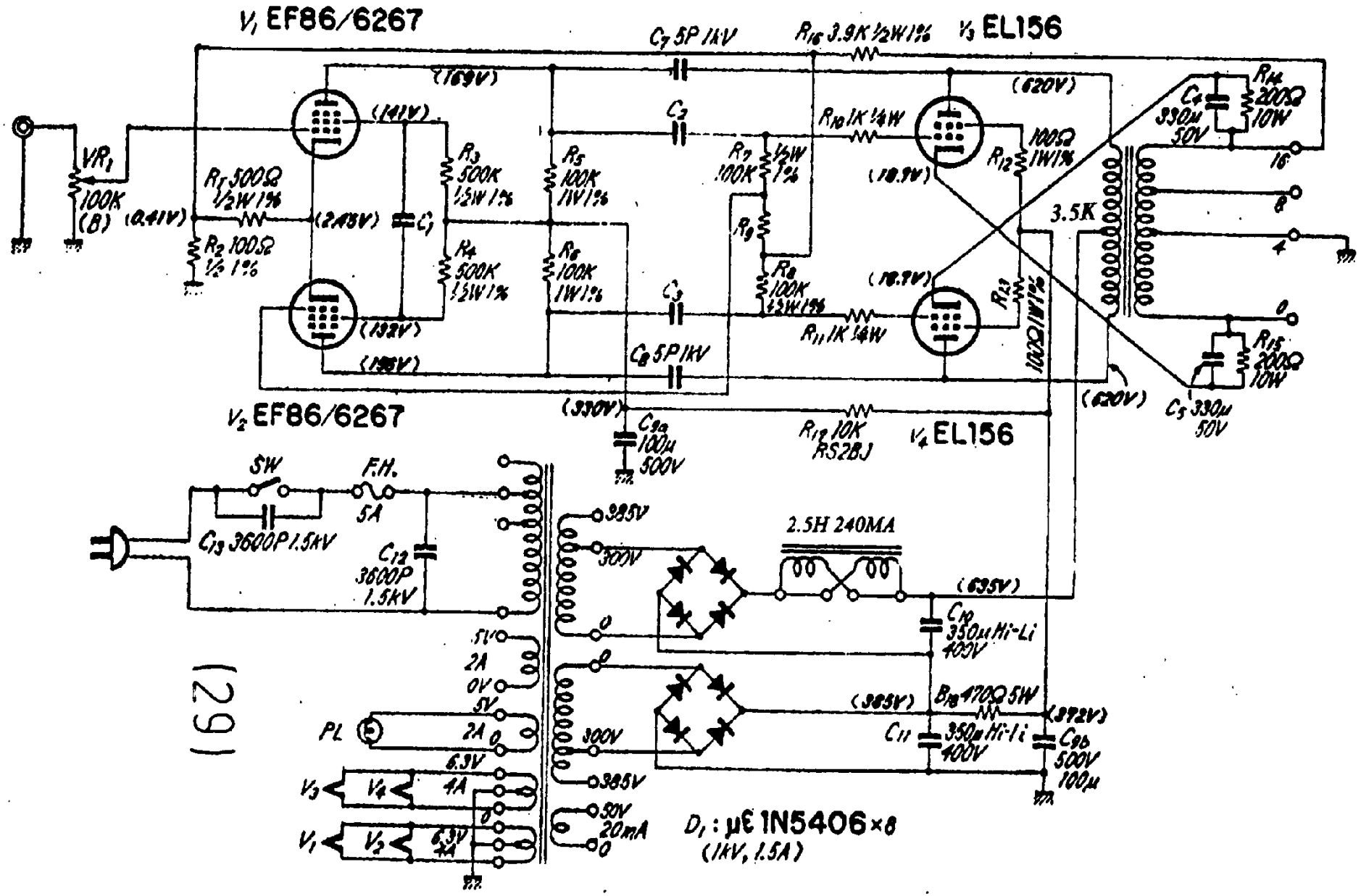

V1 ECC88
V3 6414
V4 6550
V5 6550
V2a 6414
V2b
GI1N4007
ICC-170
Bch
F.H
SW
15H 35MA
0.7H 500MA
1kV 2.5A
3.5K
C6 : 350V 200+200μF (L)
C8 ~C11
550V 100μF (L)

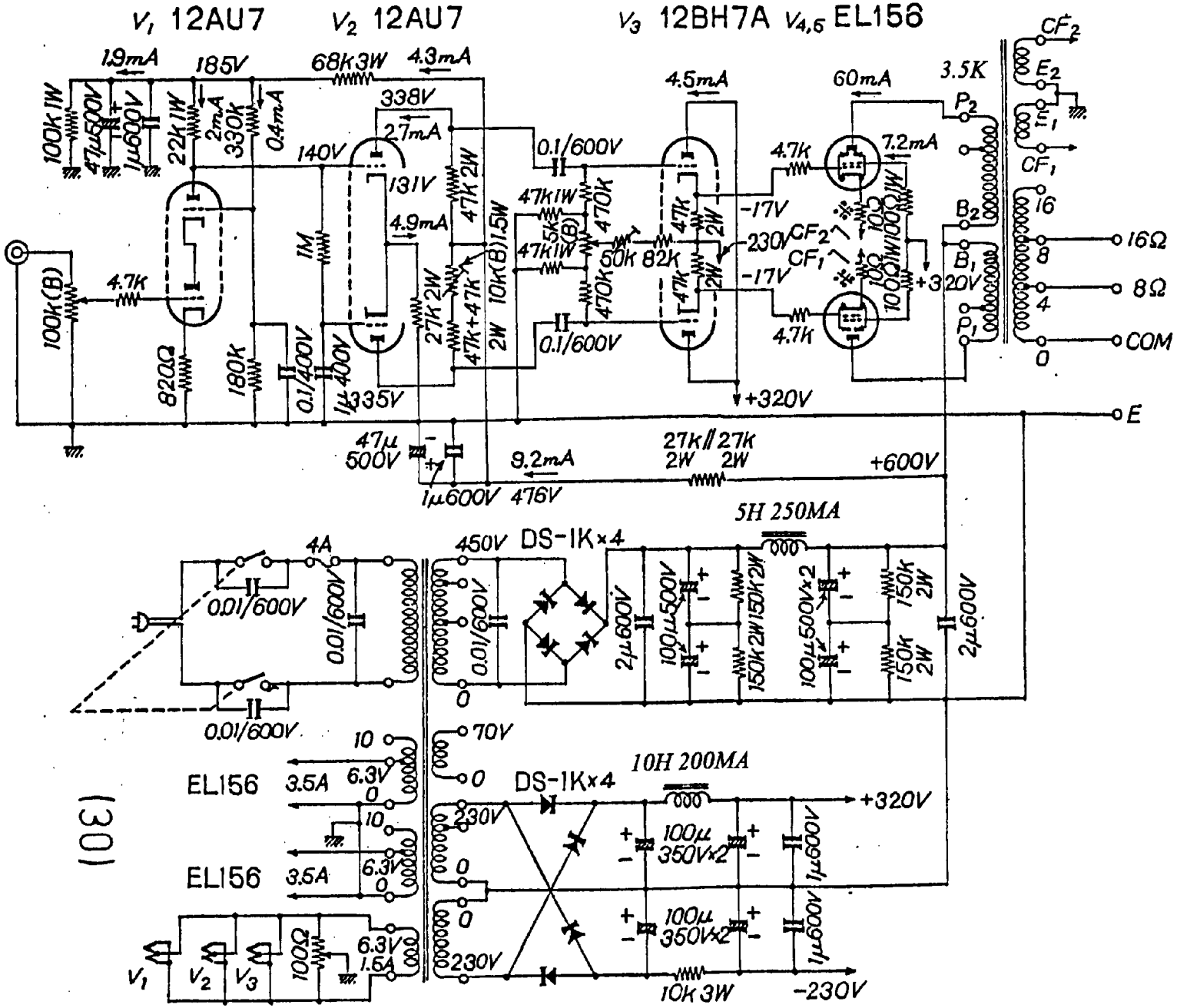

12AU7
12BH7A
6550
6267
6550
R_{NF} 12k ½W
C_1 0.15 400V TRW
C_2 0.15 400V TRW
R_{18} 1k ½W
R_{19} 49.9k ½W
R_{20} 2.2k 3W
R_{17} 100Ω 1W
R_{16} 1Ω 1W
5K
C_{FC} 0.033 400V
R_{FC} 18Ω 2W
VR_1 100K (B)
R_1 147Ω
R_2 20K 1W
R_3 20K 1W
R_4 30K 2W
R_5 30K 2W
R_6 12k ½W
R_7 470K ½W
R_8 470Ω ½W
R_9 15k 2W
R_{10} 18k 2W
R_{11} 50k 5W
C_{3a} 100μ 500V
C_{3b} 100μ 500V
80V
3.0V
79V
297V
87V
307V
456V
457V
456V
-34V
-54V
118V
415V
-14V
-162V
1.9V
148V
3600P 1.5kV
C_{10}
F.H
120k ½W
R_{25}
C_{11} 3600P 1.5kV
N.L
D_1~D_6 : GI1N4007
5H 250MA
350V
CT
477V
461V
C_4 220μ 500V
C_5 100μ 550V
6.3V
5A
70V
D_5
D_6
-185V
-162V
C_7 100μ 160V (T)
R_{23} 1k 2W
C_6 200μ 200V (L)
C_8 100μ 160V (T)
R_{24} 5.1k 1W
C_9 100μ 160V (T)
-61V
VR_5
VR_4
VR_3
VR_2
R_{22} 15k 1W
R_{21} 15k 1W
VR_2~VR_5 : 10k ½W

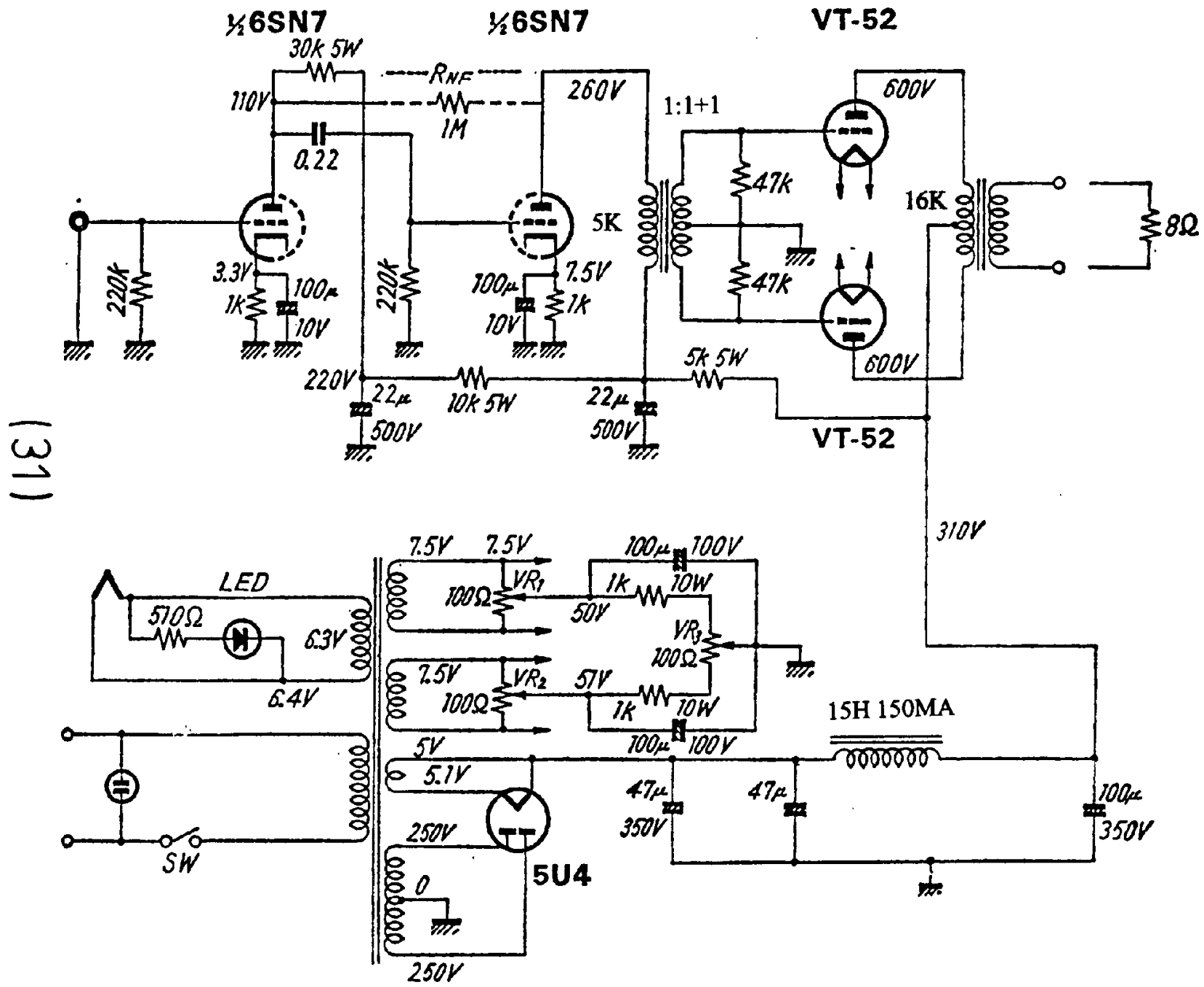

12AX7A(Hi-Fi)
6FQ7
6550(UL)×2
Rch INPUT
Lch INPUT
Rch OUTPUT
16Ω
8Ω
4Ω
0
0.1μ (250V)
33Ω (6W)
25K
83P
5K
250KΩ (A)
33K
100K (1W)
1K
15K
68P
1M
15K (3W)
1.2μ (400V)
0.5μ (400V)
27K (2W)
5K (B)
100K (1W)
3.3K
10Ω (±1%)
180Ω (1W)
SG1
SG2
B
P1
P2
T1
T2
103V
330V
500V
55.3mA
501.5V
0.6V
0.9V
111.5V
4.7mA
500.2V
435V
195V
1.5H 500MA
F
(5A)
SW
AC
NL
.047μ 100Ω (630V)
380V
340V
300V
20V
5Ω (10W)
D1
D2
D3
D4
C1
C2
C3
475.5V
470V
150K (2W)
2.2K (5W)
100μ (500V)
47μ (500V)
Rch 12AX7A 6FQ7 6550×2
Lch 12AX7A 6FQ7 6550×2
100Ω (B)
6.3V 4A
-23V
D5
D6
D7
D8
C4
504.8V
0.1μ (1KV)
D9
-35V
2K(3W)
-65V
70V
100μ (160V)
100μ (50V)×4
1.5K (2W)
5KΩ (B)×4
47μF (160V)×4
D1~D4 ····· V0-6G
D5~D9 ····· V0-6E
C1 ····· 0.1μ (1KV)
C2, C3 ···· 0.01μ (630V)
C4 ····· 5000μ (50V)
①~④ ··· -55V


12AU7
12AU7
6550×2
5U4GB
500K
470K
68Ω
470Ω 2W
470Ω
100Ω 4W
68Ω
68Ω
100K 1W
820P
30μ
33K
1.5V
60V
0V
62V
60V
300V
47K
47K
22K
.1
.1
30μ
470K 8.7V
470K 8.7V
0V
210V
210V
47K 2W
47K 2W
1000Ω
.22
22
100K
100K
1000Ω -50V
1000Ω -50V
480V
480V
0V
0V
480V
480V
Zp=3.5K
16Ω
8Ω
4Ω
0
.287Ω
5V 3A
420V
2A
500V
420V 140mA
112V 6.1mA
6.3V 3.5A
100Ω 4W
10K 9W
4700Ω 1W
20μ
20μ
20μ
20μ
-100V
15K 4W
(27)

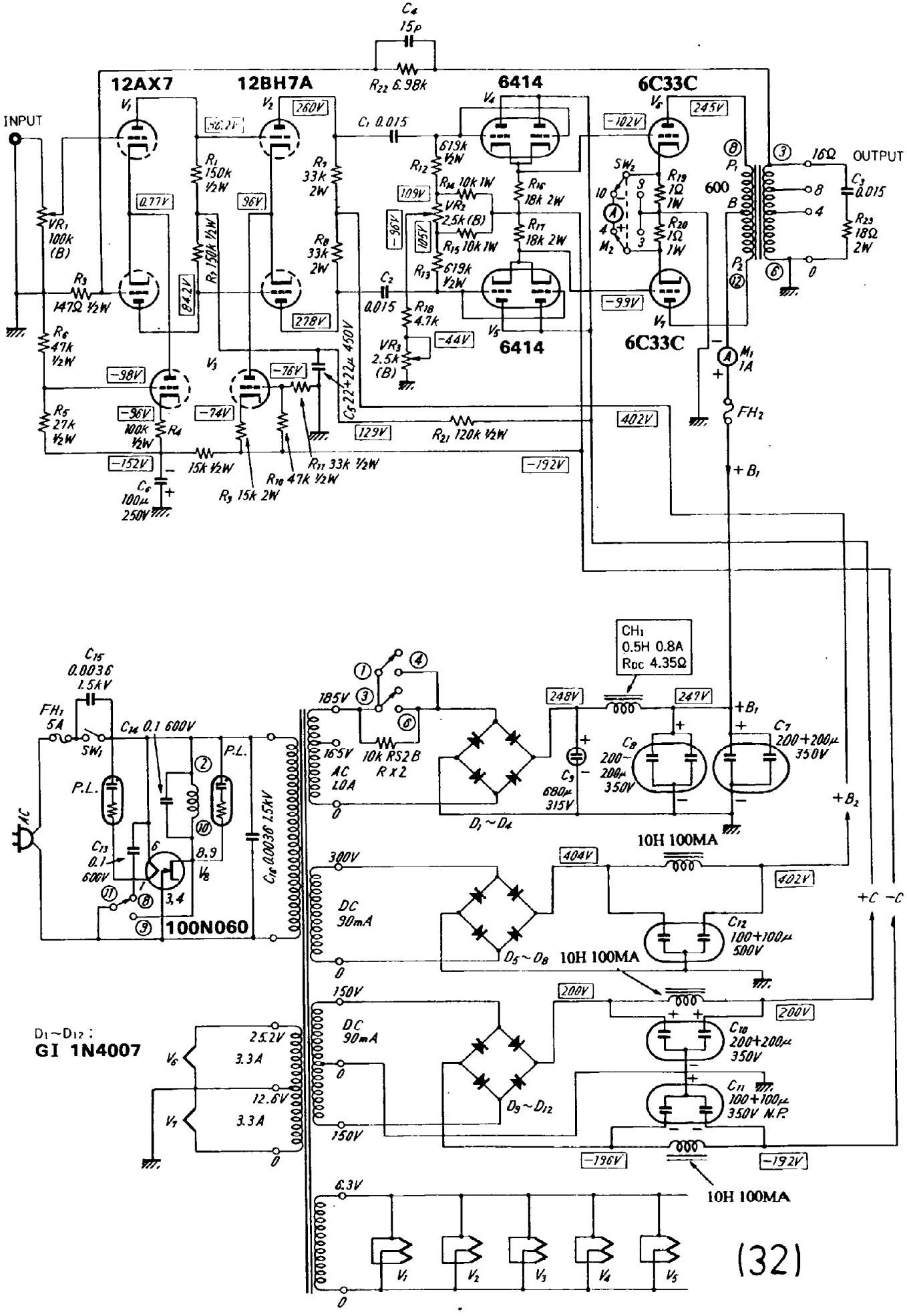

R_{NF} 7.15k ½W NF=6.4dB
C_{NF} 100p 500V
C_{10}, C_{11} : 100μF 550V Hi Ri
C_8, C_9 : 220μF 500V Hi Ri
D_1~D_8 : GI 1N4007
ECC82
12BH7A
EL156
EL156
6414
C_{5a} 100μ 500V
C_{5b} 100μ 500V
R_{19} 69k 1W
R_{20} 5k 3W
V_{1a} 85.4V
V_{3a} 293V
V_4 471V
C_1 0.2 600V
R_{15}
R_{13} 1K ¼W
100k ½W
R_{17} 100Ω 2W
P_1 5K
R_2 49.9k RN65
R_7 33k 2W
R_8 33k 2W
R_{14}
R_{16} 1K ¼W
100k ½W
R_{18} 100Ω 2W
C_2 0.2 600V
VR_1 100k (B)
R_1 100Ω ½W
R_3 49.9k RN65
4.3V
96.4V
V_{1b} 85.9V
V_{3b} 285V
V_5 471V
P_2
16Ω
11Ω
8Ω
4Ω
E
R_4 33k 5% 1W
R_5 49.9k
R_6 49.9k 1W
R_{12} 4.7k 1W
R_{11} 18k 2W
R_{10} 49.9k
R_9 33k 1W
R_{21} 560Ω 2W
C_{6a} C_{6b} 200μ 350V
$D_{5\sim8}$
$D_{1\sim4}$
C_3 100μ 315V
R_{22} 4.7k 1W
R_{23} 8.2k 2W
C_{11} C_{10} C_9 C_8
1H 400MA
380V
360V
480V
475V
150V
200V
-58.6V
-57.9V
-71.4V
-73.7V
-20V
-145V
-180V
-33.7V
Bch
V_{2a} V_{2b}
b' -28.3V
a' -28.5V
b -28.5V
a -28V
VR_5 5k 1W
VR_4 5k 1W
VR_3 5k 1W
VR_2 5k 1W
R_{25} 3.9k 1W
-22.5V
-22.3V
R_{24} 3.9k 1W
C_7 330μ 50V
SW
F.H
NL
C_{13} 0.0036 1.5kV
C_{12} 0.0036 1.5kV
R_{26}
6.3V
0
V_4 V_5
V_4' V_5'
V_1 V_2 V_3
V_1' V_2' V_3'

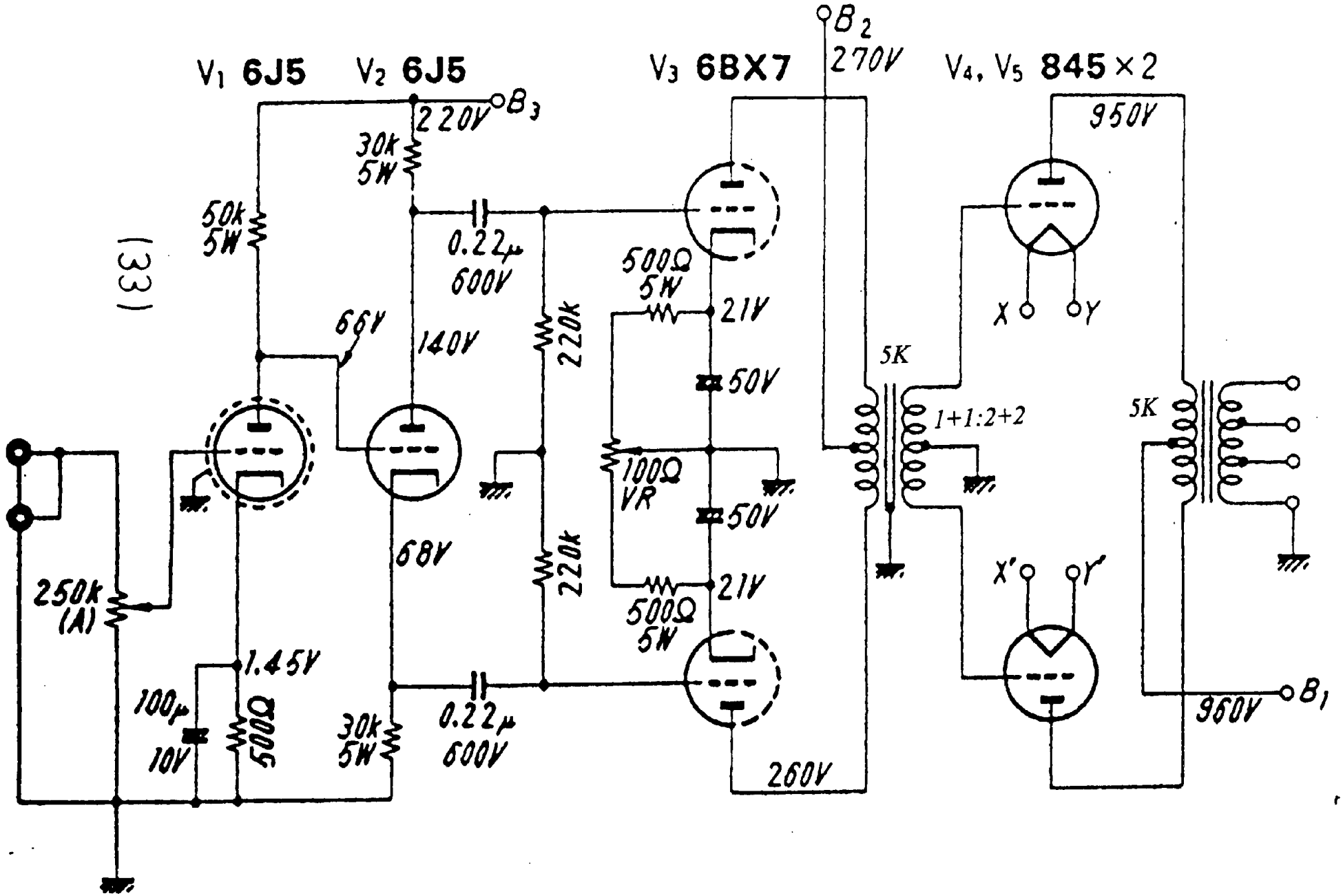

V1 EF86/6267
C7 5P 1kV
R16 3.9K ½W 1%
V3 EL156
(169V)
(620V)
(141V)
C2
R10 1K ¼W
R14 200Ω 10W
C4 330μ 50V
VR1 100K (B)
(0.41V)
R1 500Ω ½W 1%
(2.43V)
C1
R3 500K ½W 1%
R5 100K 1W 1%
R7 100K ½W 1%
(18.9V)
R12 100Ω 1W 1%
3.5K
16
8
4
0
R2 100Ω ½ 1%
R4 500K ½W 1%
R6 100K 1W 1%
R9
R8 100K ½W 1%
(132V)
(18.9V)
R11 1K ¼W
R13 100Ω 1W 1%
C3
C8 5P 1kV
(620V)
C5 330μ 50V
R15 200Ω 10W
V2 EF86/6267
(330V)
C9a 100μ 500V
R17 10K RS2BJ
V4 EL156
SW
F.M. 5A
C13 3600P 1.5kV
C12 3600P 1.5kV
385V
300V
0
2.5H 240MA
(635V)
C10 350μ Hi-Li 400V
5V
2A
0V
5V
PL
2A
0
6.3V
4A
0
V3
V4
V1
V2
6.3V 2A
300V
385V
50V 20mA
0
(385V)
R18 470Ω 5W
C11 350μ Hi-Li 400V
(372V)
C9b 500V 100μ
D1 : μ ε 1N5406×8
(1kV, 1.5A)

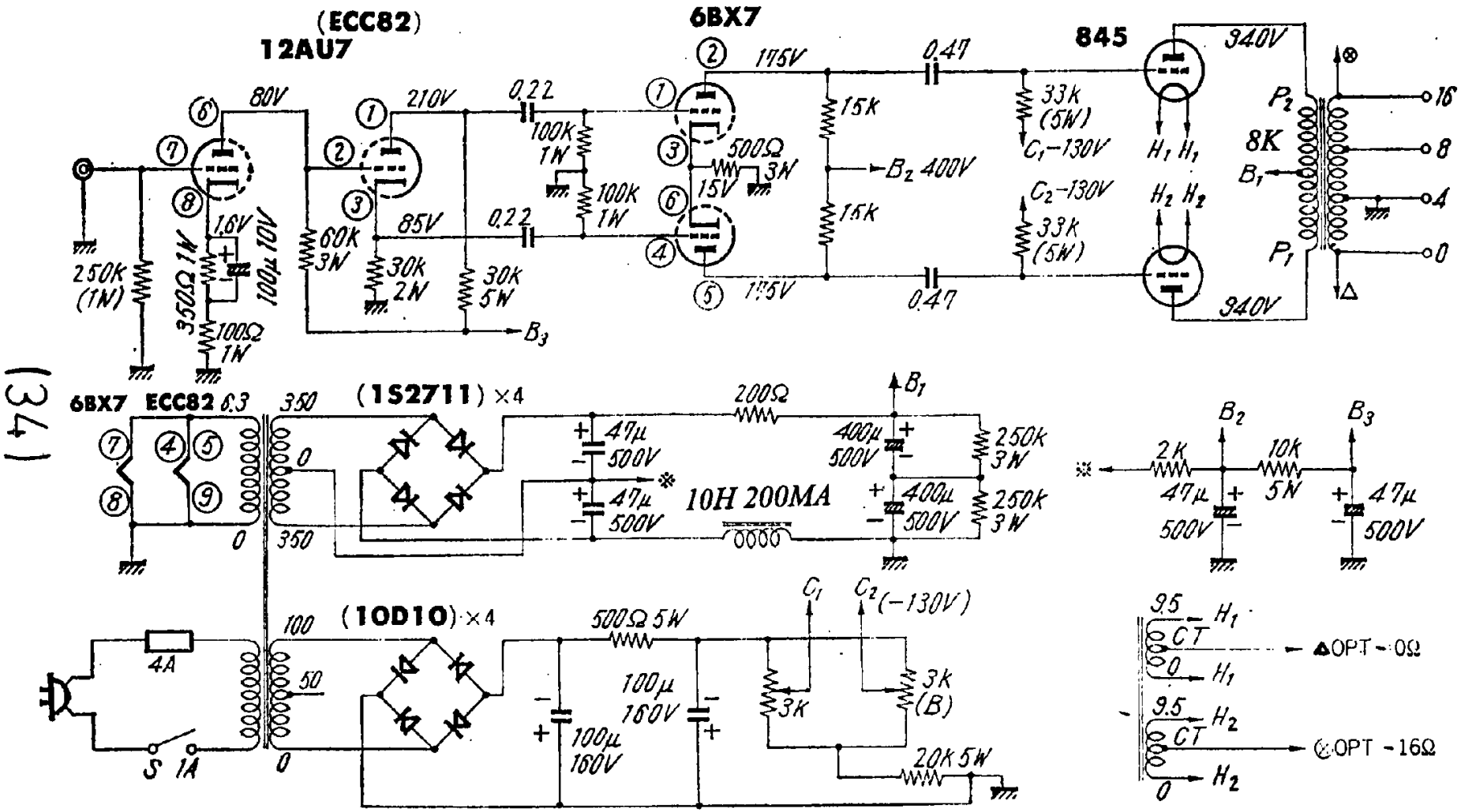

V1 12AU7
V2 12AU7
V3 12BH7A
V4,5 EL156
1.9mA
185V
68K 3W
4.3mA
338V
2.7mA
140V
131V
4.9mA
4.5mA
60mA
3.5K
7.2mA
-17V
230V
+320V
+600V
9.2mA
476V
5H 250MA
DS-1K×4
450V
4A
70V
10H 200MA
EL156
3.5A
6.3V
1.6A
-230V
16Ω
8Ω
COM
E
(103)


½6SN7
½6SN7
VT-52
30k 5W
R_{NF}
110V
1M
260V
0.22
1:1+1
600V
47k
16K
8Ω
5K
220k
3.3V
1K
100μ
10V
220k
100μ
10V
7.5V
1K
47k
600V
220V
22μ
500V
10k 5W
22μ
500V
5k 5W
VT-52
310V
7.5V
7.5V
100μ
100V
LED
510Ω
6.3V
100Ω
VR_1
50V
1k
10W
VR_3
100Ω
6.4V
7.5V
VR_2
100Ω
57V
1K
10W
15H 150MA
5V
5.1V
100μ
100V
47μ
350V
47μ
100μ
350V
SW
250V
5U4
0
250V

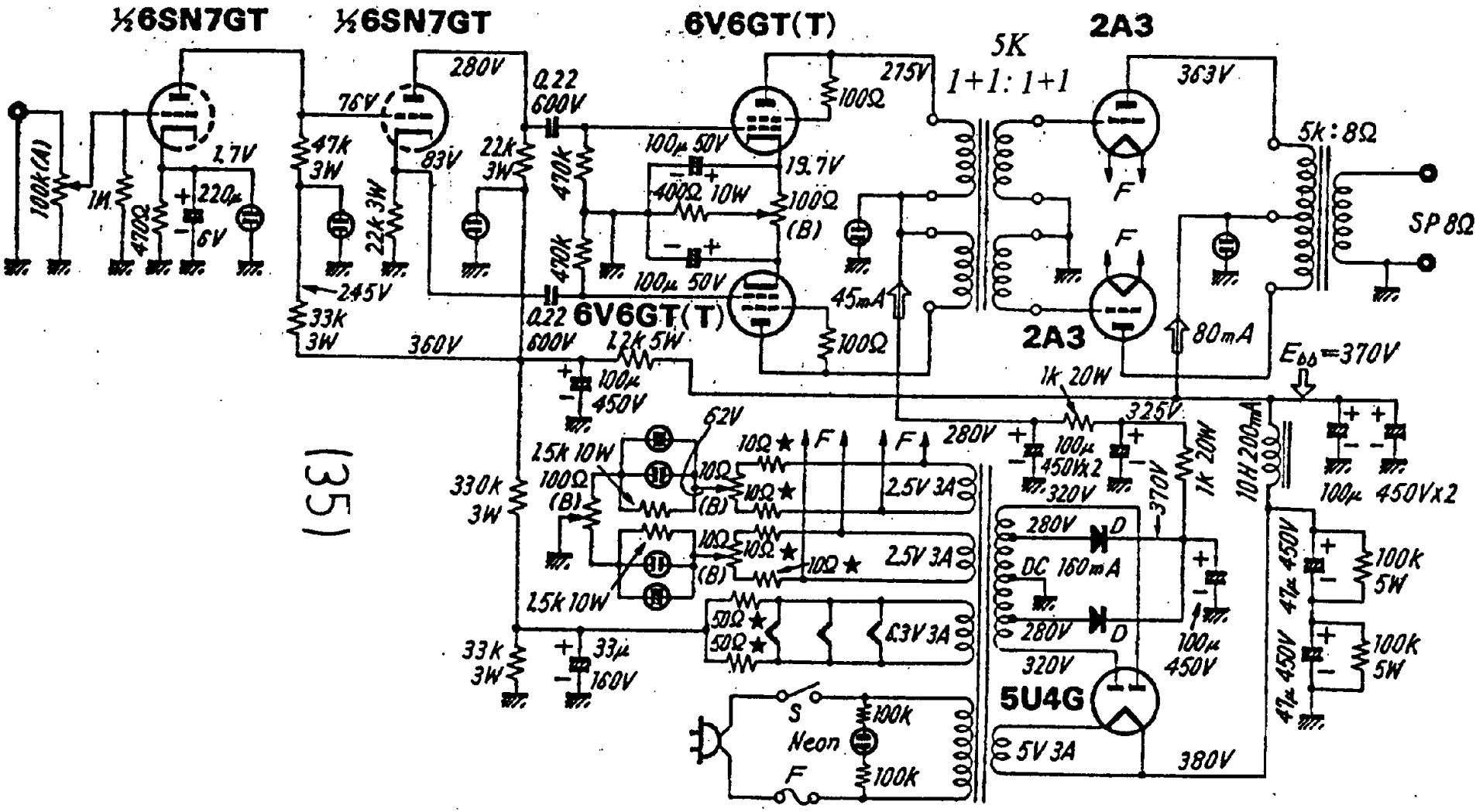
(31)

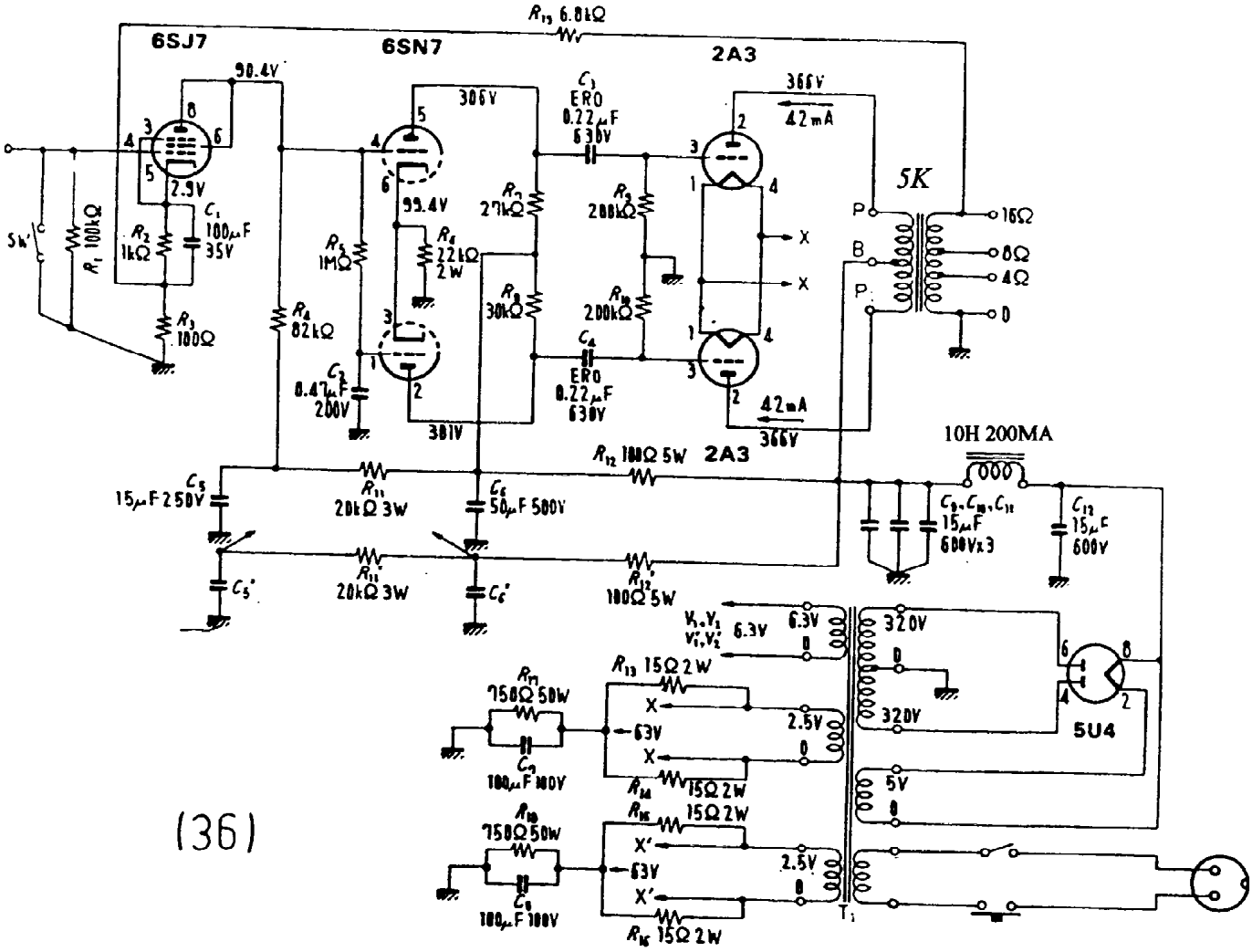

12AX7
12BH7A
6414
6C33C
INPUT
OUTPUT
16Ω
600
6414
6C33C
100N060
CH1
0.5H 0.8A
Rdc 4.35Ω
10H 100MA
10H 100MA
10H 100MA
D1~D12 :
GI 1N4007
DC 90mA
DC 90mA
AC 10A
+B1
+B2
+C
-C
FH1 5A
FH2
SW1
SW2
P.L.
P.L.
AC
0
0
0
0
0
(32)

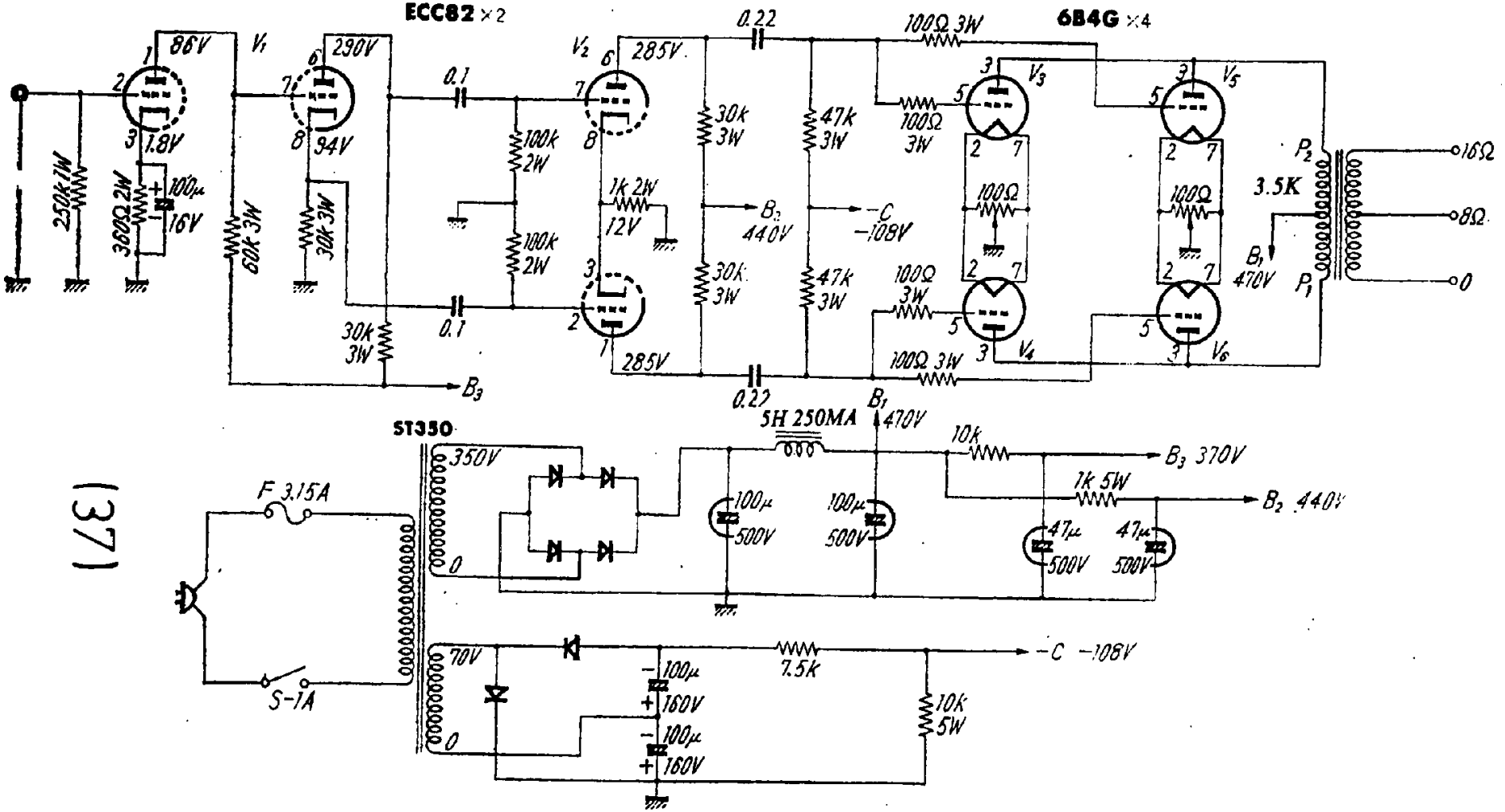

V1 6J5
V2 6J5
V3 6BX7
V4, V5 845×2
B2
270V
B3
220V
950V
30k 5W
50k 5W
0.22μ 600V
500Ω 5W
21V
50V
66V
140V
220k
5K
1+1:2+2
X
Y
100Ω VR
68V
250k (A)
1.45V
100μ 10V
500Ω
30k 5W
0.22μ 600V
260V
X'
Y'
960V
B1


(ECC82)
12AU7
6BX7
845
80V
210V
0.22
100K 1W
100K 1W
175V
0.47
15K
33K (5W)
940V
250K (1N)
350Ω 1W
1.6V
100μ 10V
100Ω 1W
60K 3W
30K 2W
85V
0.22
30K 5W
500Ω 3W
15V
175V
0.47
15K
B_2 400V
C_1 −130V
C_2 −130V
33K (5W)
H_1 H_1
H_2 H_2
940V
P_2
8K
B_1
P_1
16
8
4
0
B_3
6BX7 ECC82 6.3
350
0
350
(1S2711) ×4
200Ω
B_1
47μ 500V
400μ 500V
250K 3W
47μ 500V
10H 200MA
400μ 500V
250K 3W
B_2
B_3
2K
10K 5W
47μ 500V
47μ 500V
100
50
0
(10D10) ×4
500Ω 5W
C_1
C_2 (−130V)
100μ 160V
100μ 160V
3K
3K (B)
20K 5W
4A
S
1A
9.5
CT
0
H_1
△OPT − 0Ω
9.5
CT
0
H_2
OPT − 16Ω

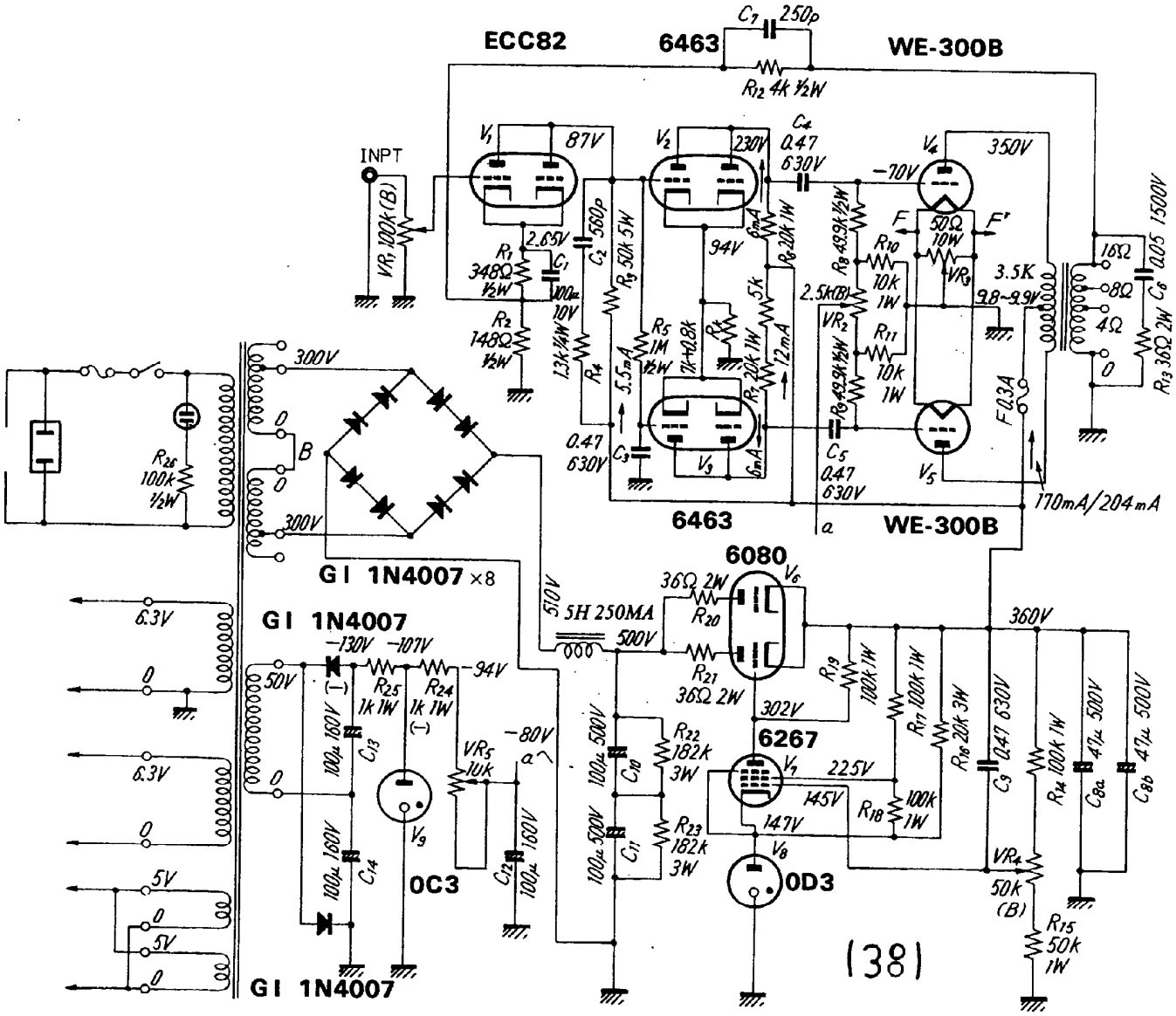
(47)

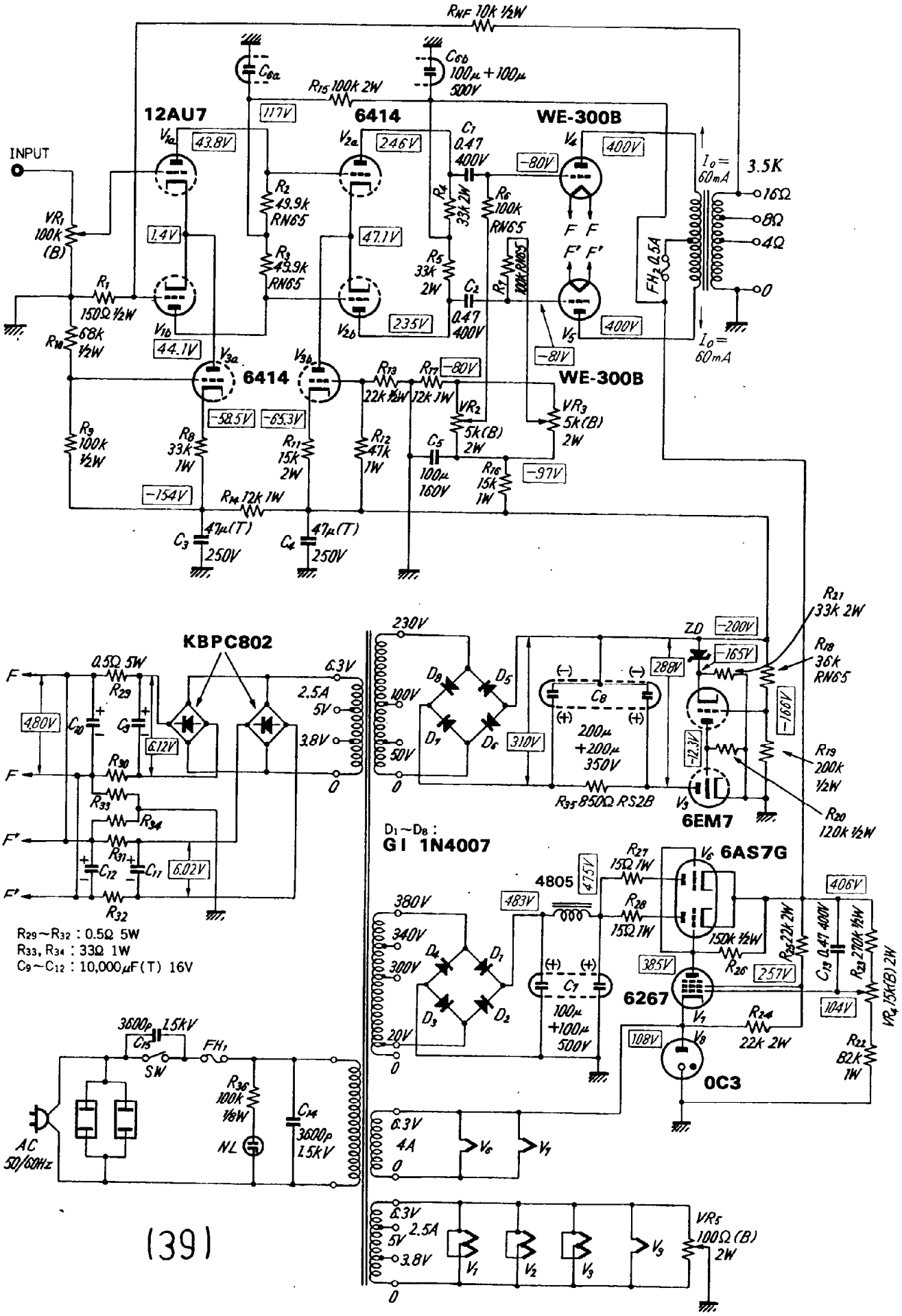

½6SN7GT
½6SN7GT
6V6GT(T)
2A3
5K
1+1: 1+1
100k(A)
1M
470Ω
220μ
6V
1.7V
47k 3W
22k 3W
22k 3W
33k 3W
245V
76V
83V
280V
0.22 600V
470k
470k
100μ 50V
400Ω 10W
100Ω (B)
19.7V
275V
100Ω
45mA
0.22 600V
6V6GT(T)
1.2k 5W
100μ 450V
360V
100Ω
363V
5k:8Ω
SP 8Ω
F
2A3
80mA
Ebb=370V
1k 20W
325V
280V
100μ 450V×2
320V
370V
1k 20W
10H 200mA
100μ 450V×2
62V
2.5k 10W
100Ω (B)
330k 3W
10Ω
2.5V 3A
2.5V 3A
2.5k 10W
50Ω
50Ω
6.3V 3A
33k 3W
33μ 160V
S
Neon
100k
100k
F
280V
D
DC 160mA
280V
D
320V
5U4G
5V 3A
380V
100μ 450V
41μ 450V
100k 5W
41μ 450V
100k 5W

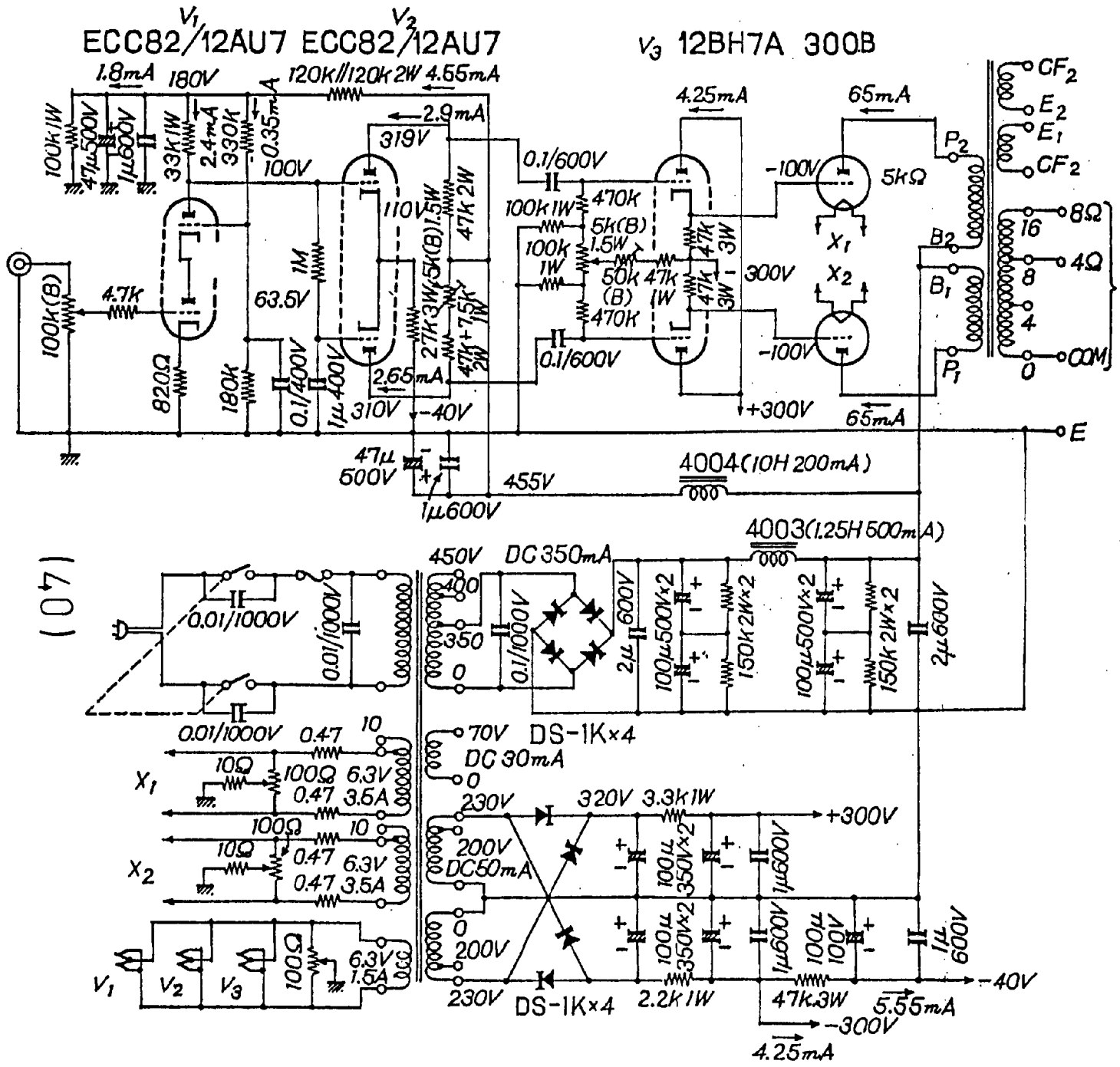

6SJ7
6SN7
2A3
2A3
5K
5U4
10H 200MA
90.4V
306V
366V
42mA
99.4V
381V
366V
42mA
2.9V
6.3V
320V
5V
63V
2.5V
16Ω
8Ω
4Ω
0
100kΩ
1kΩ
100μF 35V
100Ω
82kΩ
1MΩ
22kΩ 2W
27kΩ
30kΩ
288kΩ
200kΩ
0.22μF 630V
0.47μF 200V
0.22μF 630V
15μF 250V
20kΩ 3W
50μF 500V
20kΩ 3W
100Ω 5W
15μF 600V×3
15μF 600V
750Ω 50W
100μF 100V
750Ω 50W
100μF 100V
15Ω 2W
15Ω 2W
15Ω 2W
15Ω 2W

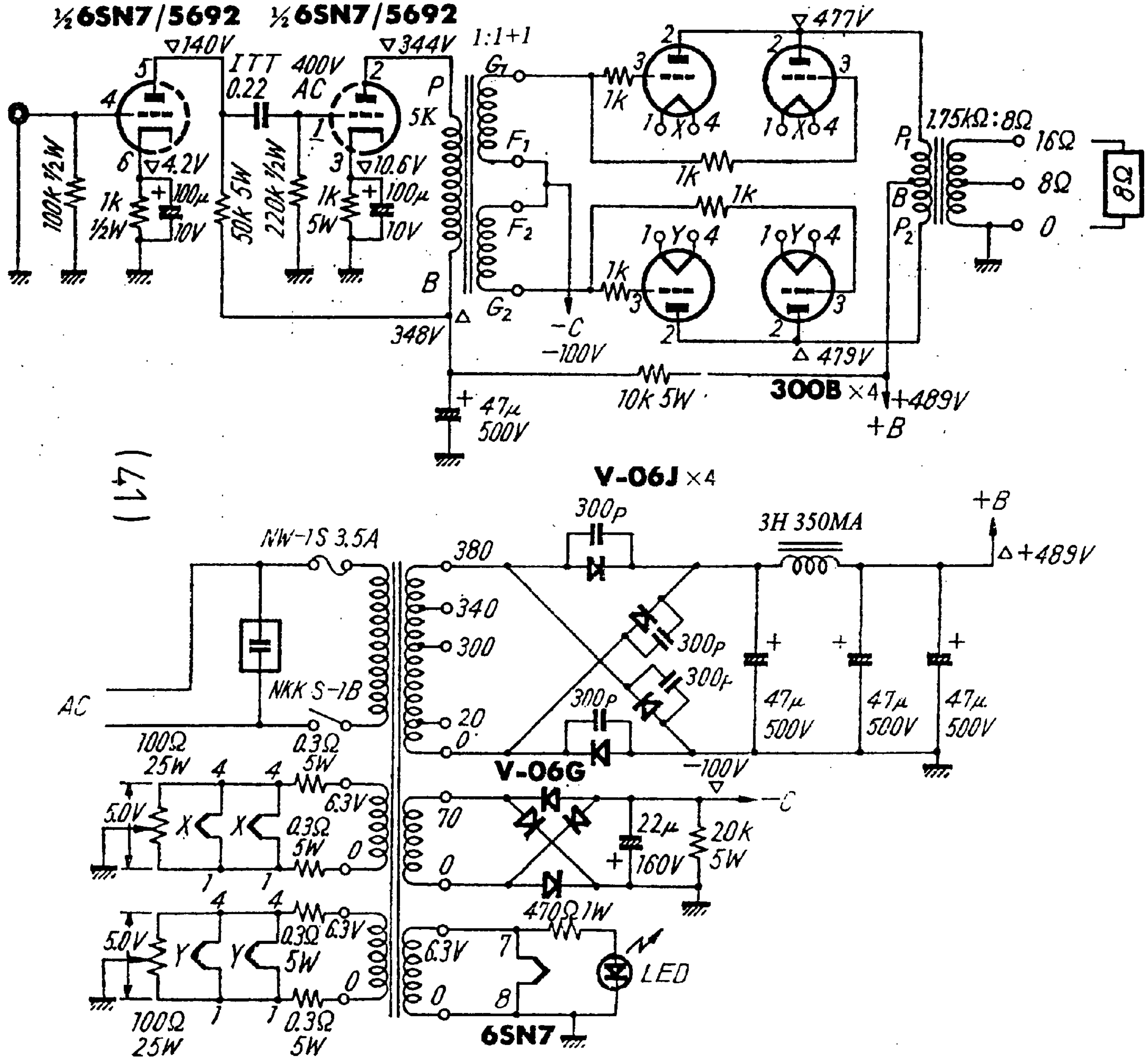

ECC82 ×2
6B4G ×4
ST350
5H 250MA
86V
290V
285V
94V
1.8V
16V
100µ
250k 1W
360Ω 2W
60k 3W
30k 3W
100k 2W
1k 2W
12V
0.1
0.22
100Ω 3W
30k 3W
47k 3W
100Ω 3W
100Ω
3.5K
16Ω
8Ω
0
B1 470V
B2 440V
B3 370V
-C -108V
350V
70V
F 3.15A
S-1A
100µ 500V
47µ 500V
7.5k
10k 5W
1k 5W
10k
160V

(37)

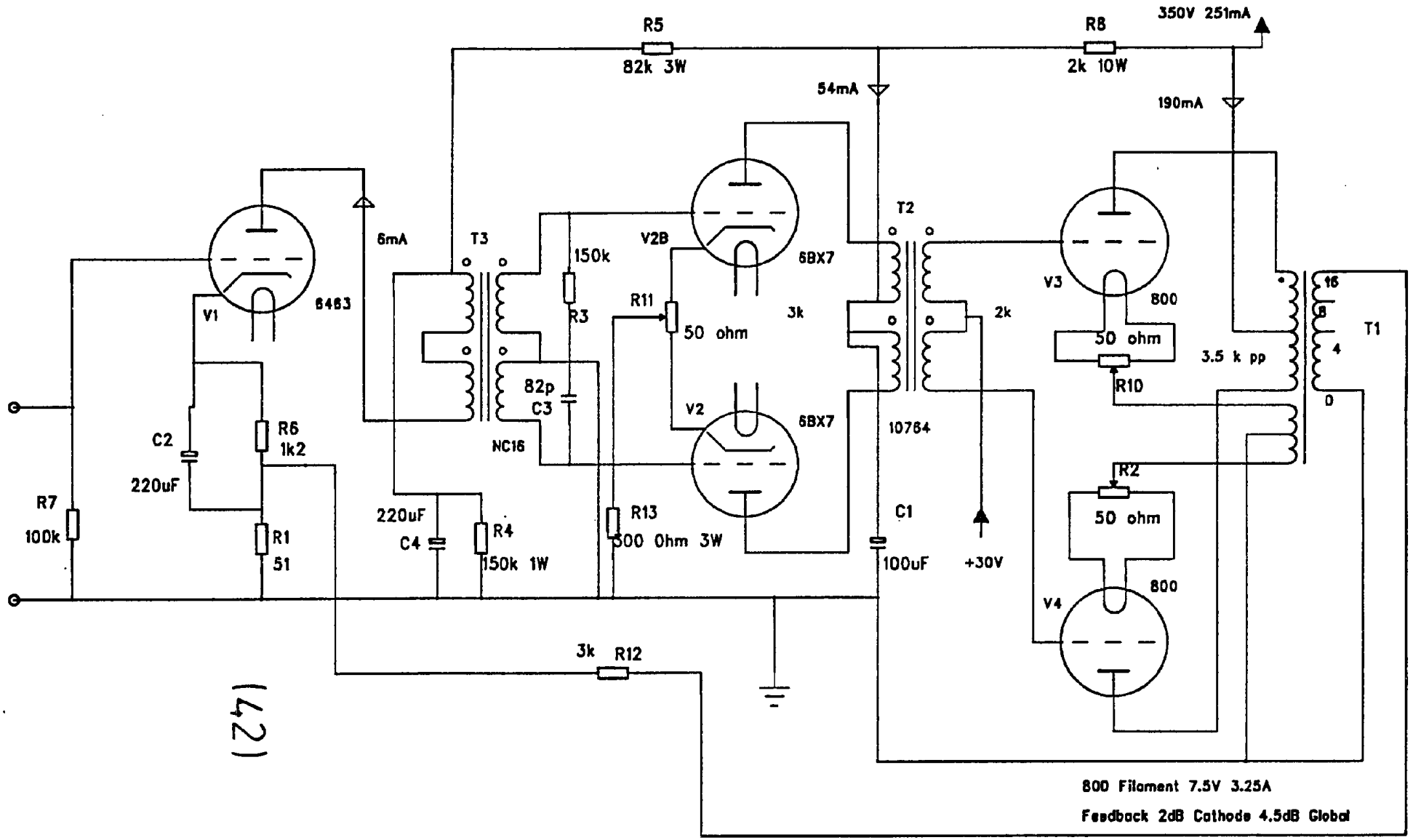

ECC82
6463
WE-300B
INPT
VR1 100K(B)
V1
87V
V2
230V
C7 250p
R12 4k ½W
C4 0.47 630V
V4
350V
-70V
F
50Ω 10W
F'
3.5K
9.8-9.9V
16Ω
8Ω
4Ω
0
C6 0.05 1500V
R13 36Ω 2W
R1 348Ω ½W
C1 100μ 10V
2.65V
R2 148Ω ½W
C2 560p
R3 50k 5W
94V
6mA
R6 20k 1W
R8 49.9k ½W
R10 10k 1W
VR3
2.5k(B)
VR2
R11 10k 1W
R9 49.9k ½W
R4 13k ¼W
R5 1M ½W
5.5mA
1k+2.8k
R7 20k 1W
12mA
5k
C3 0.47 630V
V3
6mA
C5 0.47 630V
V5
F 0.3A
170mA/204mA
6463
a
WE-300B
300V
0
B
0
300V
R26 100k ½W
GI 1N4007 ×8
6080
V6
36Ω 2W
R20
R21 36Ω 2W
510V
5H 250MA
500V
360V
6.3V
0
6.3V
0
5V
0
5V
0
GI 1N4007
GI 1N4007
50V
-130V
-107V
-94V
R25 1k 1W
R24 1k 1W
100μ 160V
C13
C14
V9
0C3
VR5 10k
-80V
a
C12 100μ 160V
100μ 500V
C10
C11
R22 182k 3W
R23 182k 3W
302V
6267
V7
225V
145V
147V
V8
0D3
R19 100k 1W
R17 100k 1W
R16 20k 3W
R18 100k 1W
C9 0.47 630V
R14 100k 1W
C8a 47μ 500V
C8b 47μ 500V
VR4 50k (B)
R15 50k 1W


12AU7
6414
6414
WE-300B
WE-300B
6EM7
6AS7G
6267
0C3
KBPC802
INPUT
3.5K
16Ω
8Ω
4Ω
0
D1~D8 :
GI 1N4007
R29~R32 : 0.5Ω 5W
R33, R34 : 33Ω 1W
C9~C12 : 10,000μF(T) 16V
AC
50/60Hz
NL
SW
4805

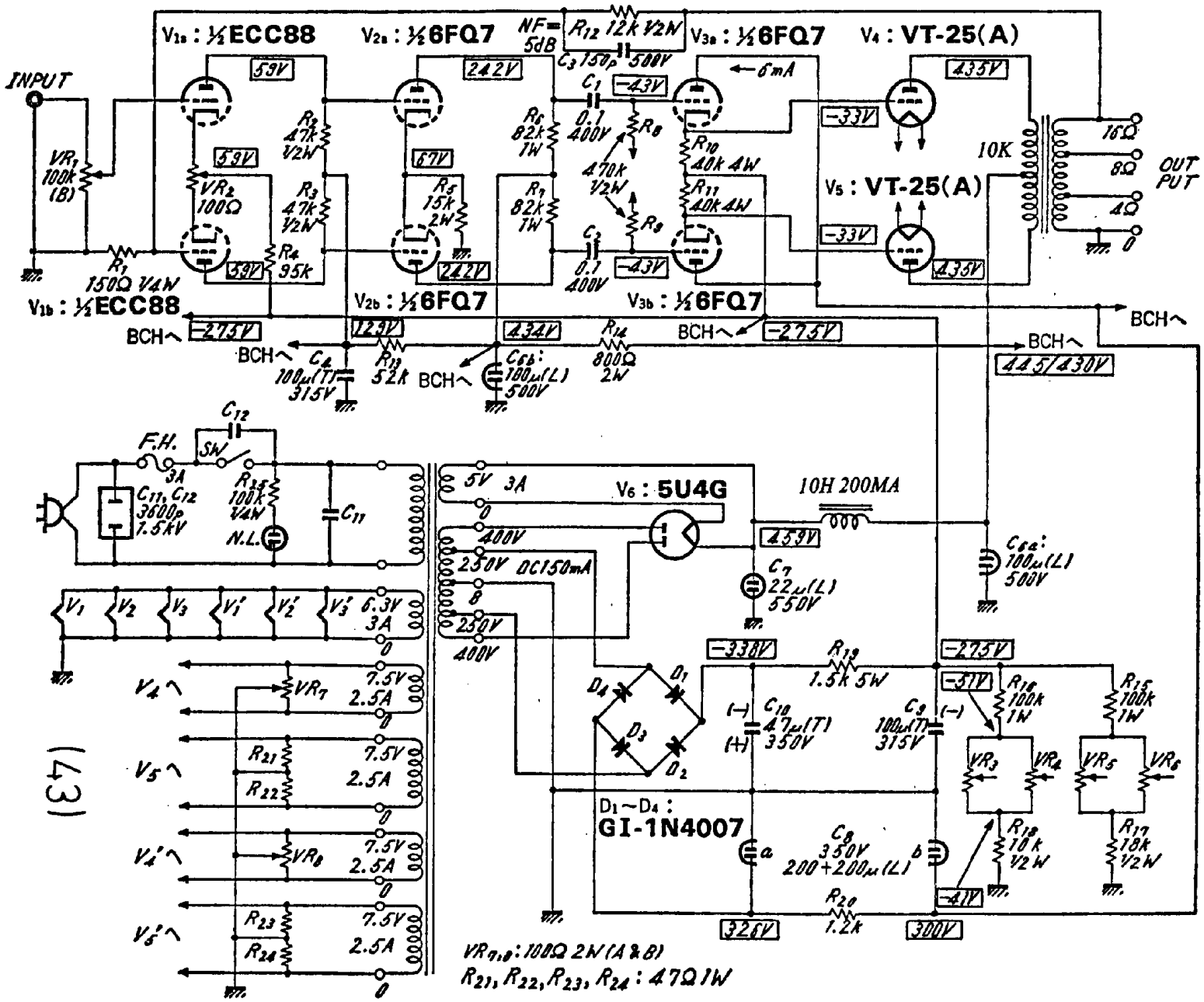

V1
ECC82/12AU7
V2
ECC82/12AU7
V3 12BH7A 300B
1.8mA
180V
120K//120K 2W 4.55mA
2.9mA
319V
4.25mA
65mA
CF2
E2
E1
CF2
8Ω
16
4Ω
8
4
0
COM
P2
B2
B1
P1
100K(B)
4.7K
820Ω
63.5V
180K
0.1/400V
1μ400V
310V
2.65mA
-40V
110V
47K 2W
27K 3W
5K(B) 1.5W
47K+7.5K 2W
100K 1W
470K
5K(B) 1.5W
50K (B)
47K 1W
47K 3W
300V
-100V
5kΩ
X1
X2
+300V
65mA
E
47μ 500V
1μ600V
455V
4004(10H 200mA)
4003(1.25H 500mA)
450V DC 350mA
400
350
0
0.1/1000V
2μ 600V
100μ500V×2
150K 2W×2
2μ600V
0.01/1000V
0.47
10
10Ω
100Ω 6.3V 3.5A
X1
X2
V1
V2
V3
100Ω
6.3V 1.5A
70V DC 30mA
DS-1K×4
230V
320V 3.3K 1W
200V DC50mA
100μ 350V×2
1μ600V
100μ 100V
1μ 600V
47K 3W
2.2K 1W
5.55mA
-300V
4.25mA
-40V
(07)

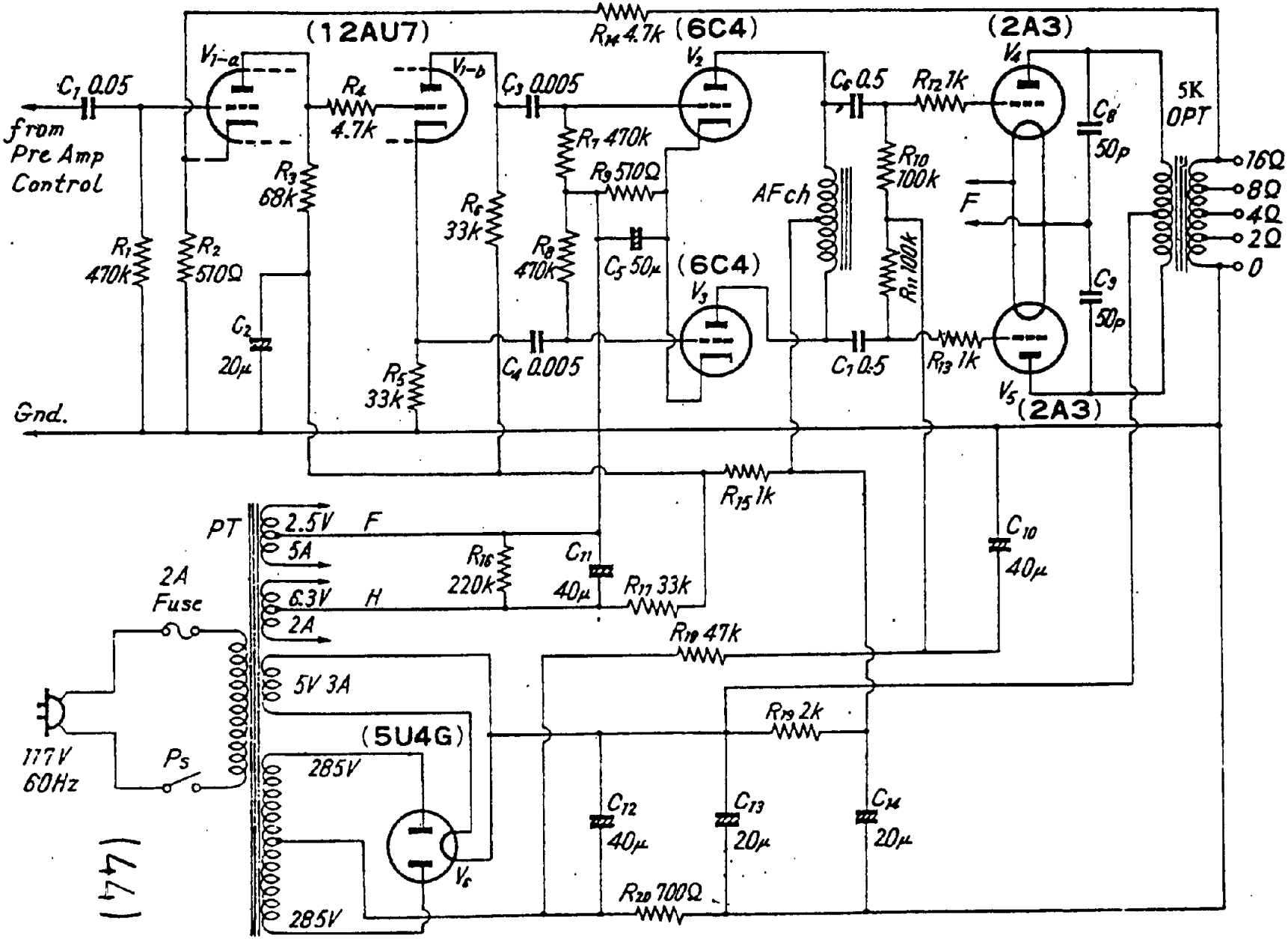


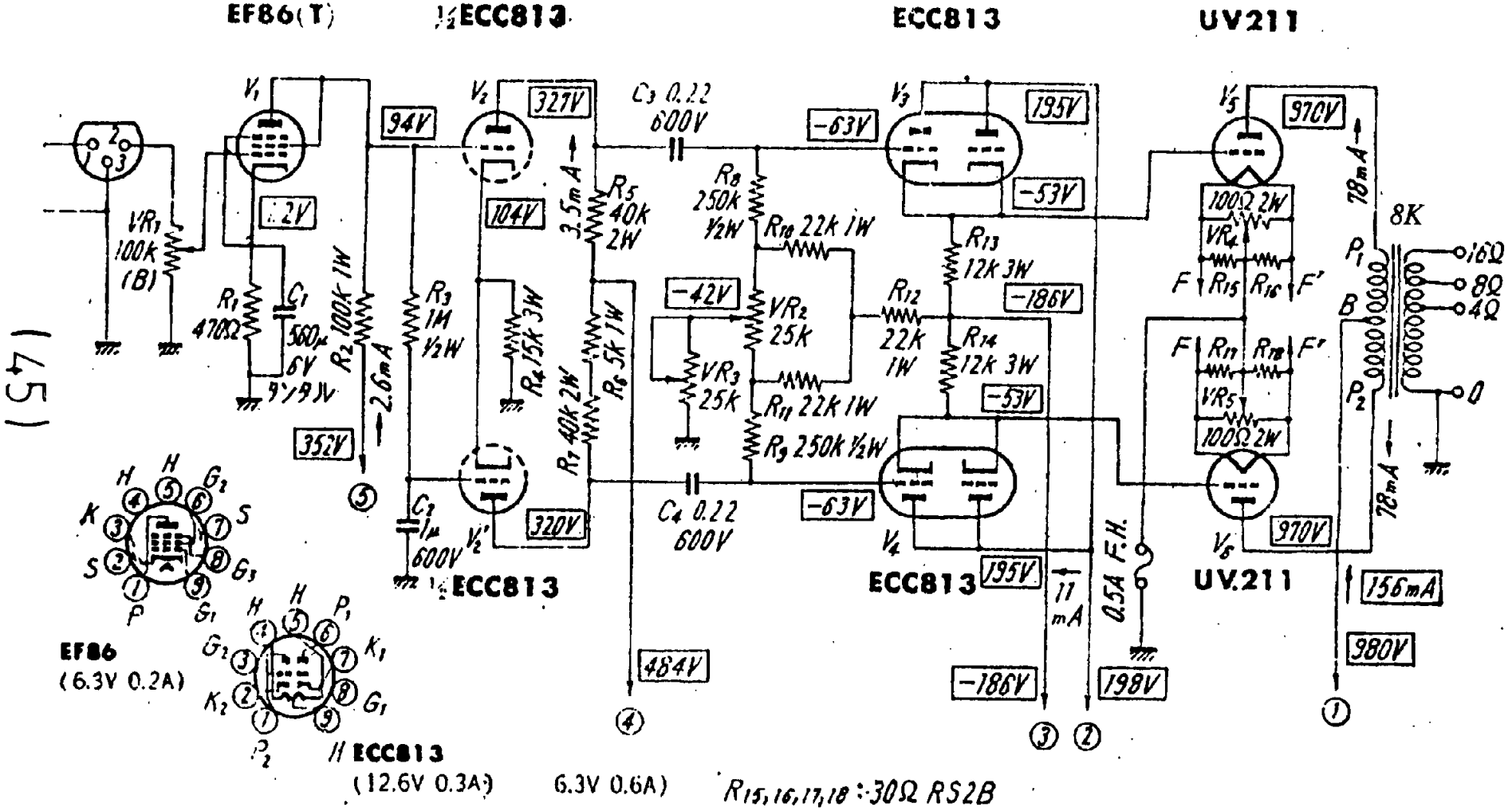
½ 6SN7/5692
½ 6SN7/5692
▽140V
ITT 400V
0.22 AC
▽344V
1:1+1
G1
G2
F1
F2
P
5K
B
▽4.2V
100μ
10V
1k
½W
100k ½W
50k 5W
220k ½W
▽10.6V
100μ
10V
1k
5W
348V
−C
−100V
10k 5W
+ 47μ
500V
▽477V
△479V
1k
300B ×4
+489V
+B
1.75kΩ : 8Ω
P1
B
P2
16Ω
8Ω
0
8Ω
V-06J ×4
300p
3H 350MA
+B
△+489V
NW-1S 3.5A
NKK S-1B
AC
380
340
300
20
0
300p
300p
300p
V-06G
−100V
47μ
500V
100Ω
25W
0.3Ω
5W
6.3V
5.0V
X
Y
70
22μ
160V
20k
5W
−C
470Ω 1W
LED
6.3V
7
8
6SN7

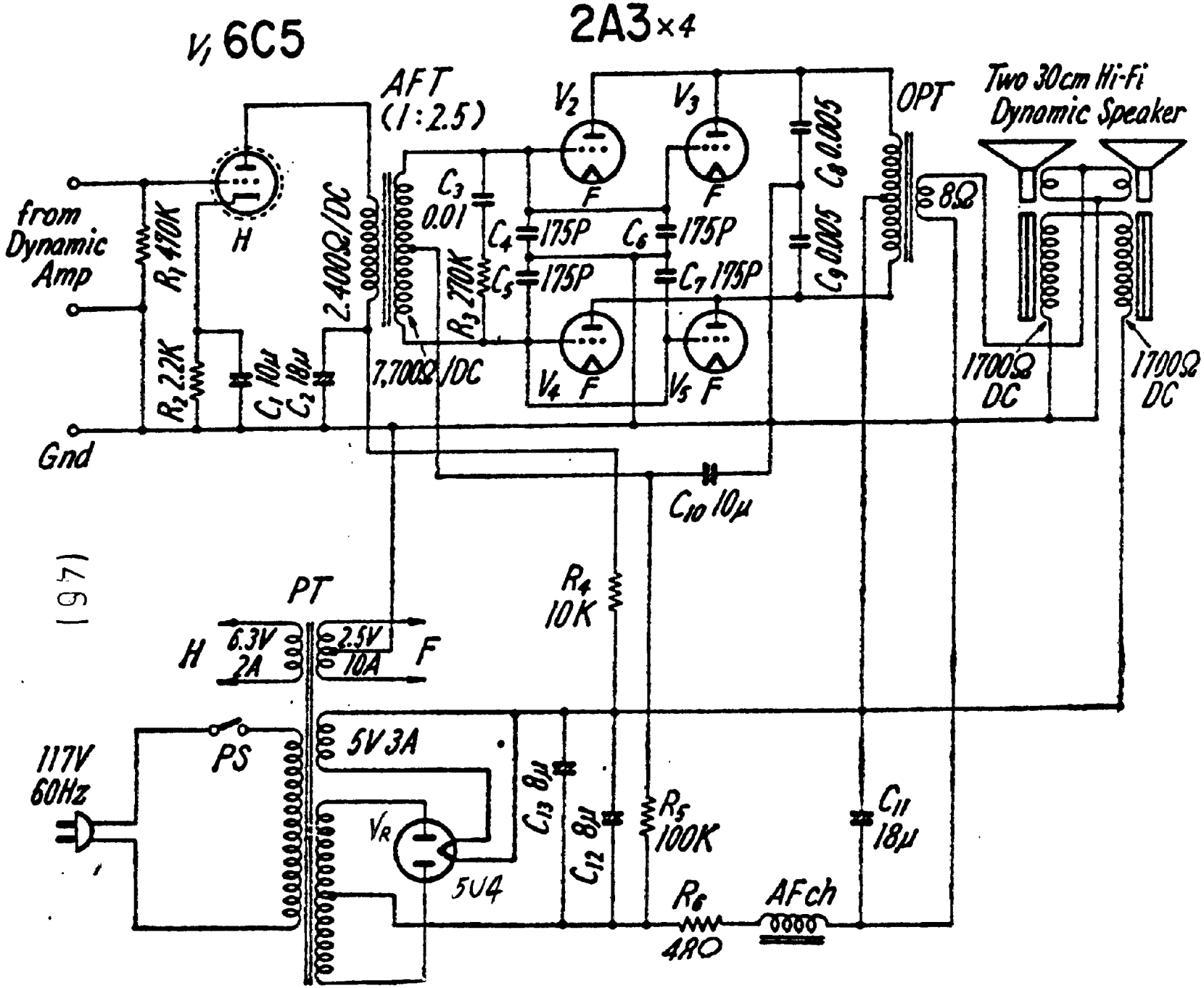

R5
82k 3W
R8
2k 10W
350V 251mA
54mA
190mA
6mA
T3
V1
6463
150k
R3
V2B
6BX7
R11
50 ohm
3k
T2
V3
800
50 ohm
R10
2k
16
8
4
0
T1
3.5 k pp
82p
C3
NC16
V2
6BX7
10764
C2
220uF
R6
1k2
R7
100k
R1
51
220uF
C4
R4
150k 1W
R13
500 Ohm 3W
C1
100uF
+30V
R2
50 ohm
800
V4
3k
R12
800 Filament 7.5V 3.25A
Feedback 2dB Cathode 4.5dB Global

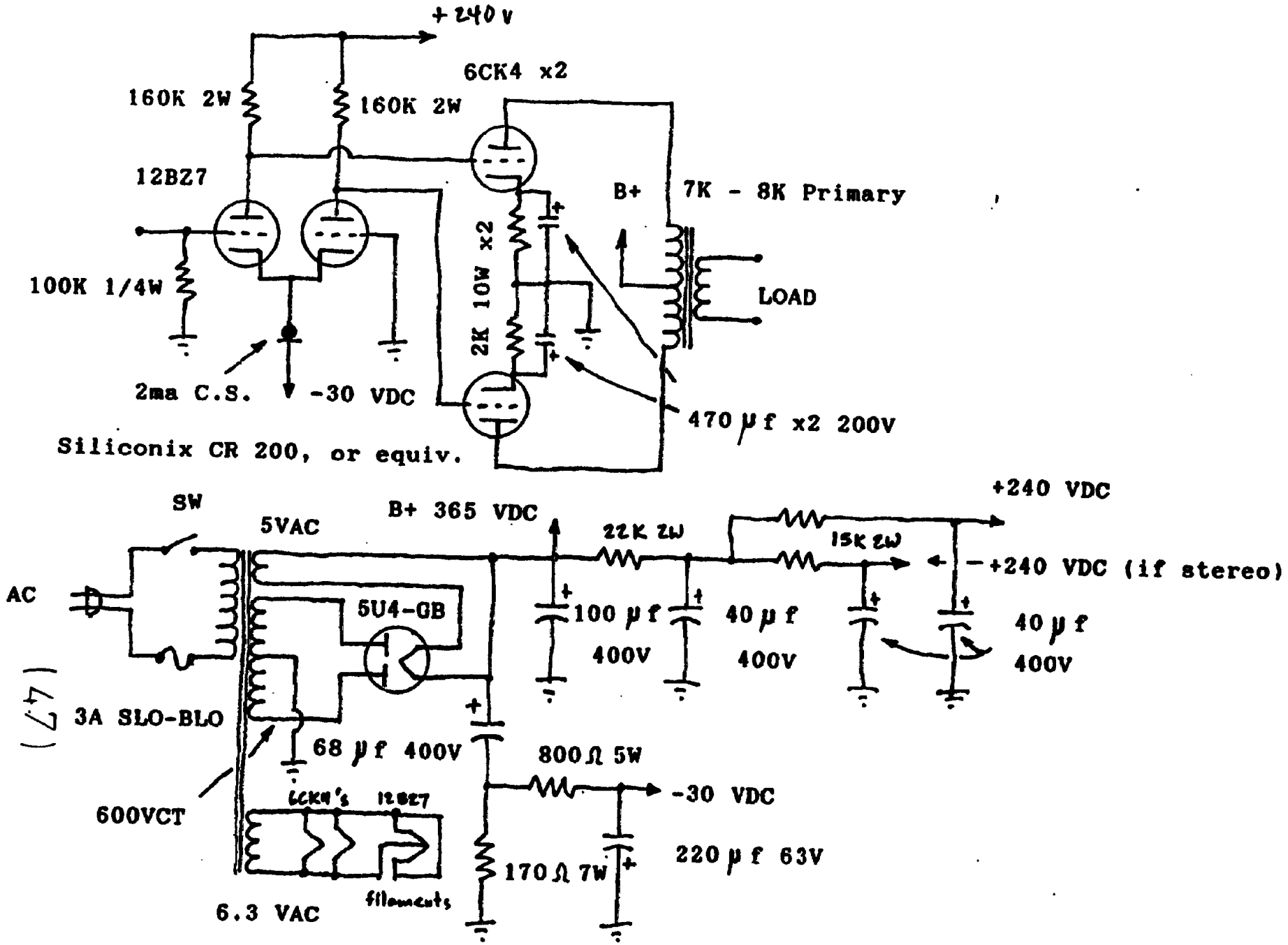
(121)

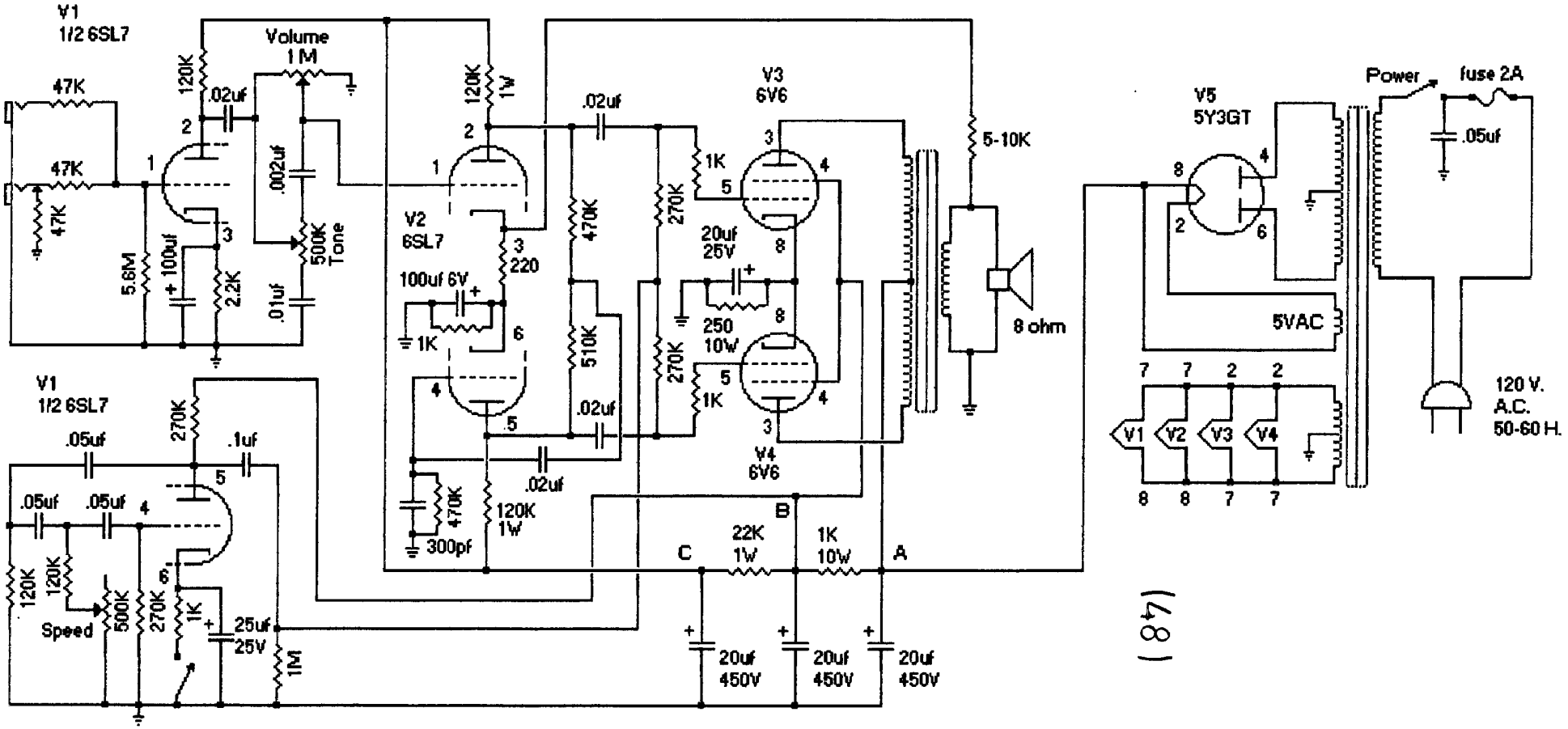

INPUT
V1a : ½ECC88
V2a : ½6FQ7
V3a : ½6FQ7
V4 : VT-25(A)
V5 : VT-25(A)
V1b : ½ECC88
V2b : ½6FQ7
V3b : ½6FQ7
V6 : 5U4G
NF=5dB
R12 12k V2W
C3 150p 500V
C1 0.1 400V
C2 0.1 400V
470k V2W
R8
R9
R10 40k 4W
R11 40k 4W
6mA
VR1 100k (B)
VR2 100Ω
R1 150Ω V4W
R2 47k V2W
R3 47k V2W
R4 95k
R5 15k 2W
R6 82k 1W
R7 82k 1W
10K
16Ω
8Ω
4Ω
OUT PUT
BCH へ
C4 100μ(T) 315V
R13 52k
C6b: 100μ(L) 500V
R14 800Ω 2W
C6a: 100μ(L) 500V
C12
F.H.
SW
3A
C11, C12 3600p 7.5kV
R14 100k V4W
N.L.
C11
5V 3A
0
400V
230V DC150mA
230V
400V
10H 200MA
C7 22μ(L) 550V
V1 V2 V3 V1' V2' V3' 6.3V 3A
VR7
VR8
7.5V 2.5A
R21
R22
R23
R24
47Ω 1W
D1 D2 D3 D4
D1~D4 : GI-1N4007
C10 47μ(T) 350V
C9 100μ(T) 315V
R19 1.5k 5W
R16 100k 1W
R15 100k 1W
VR3 VR4 VR5 VR6
C8 350V 200+200μ(L)
R18 10k V2W
R17 18k V2W
R20 1.2k
VR7,8 : 100Ω 2W (A & B)
R21, R22, R23, R24 : 47Ω 1W

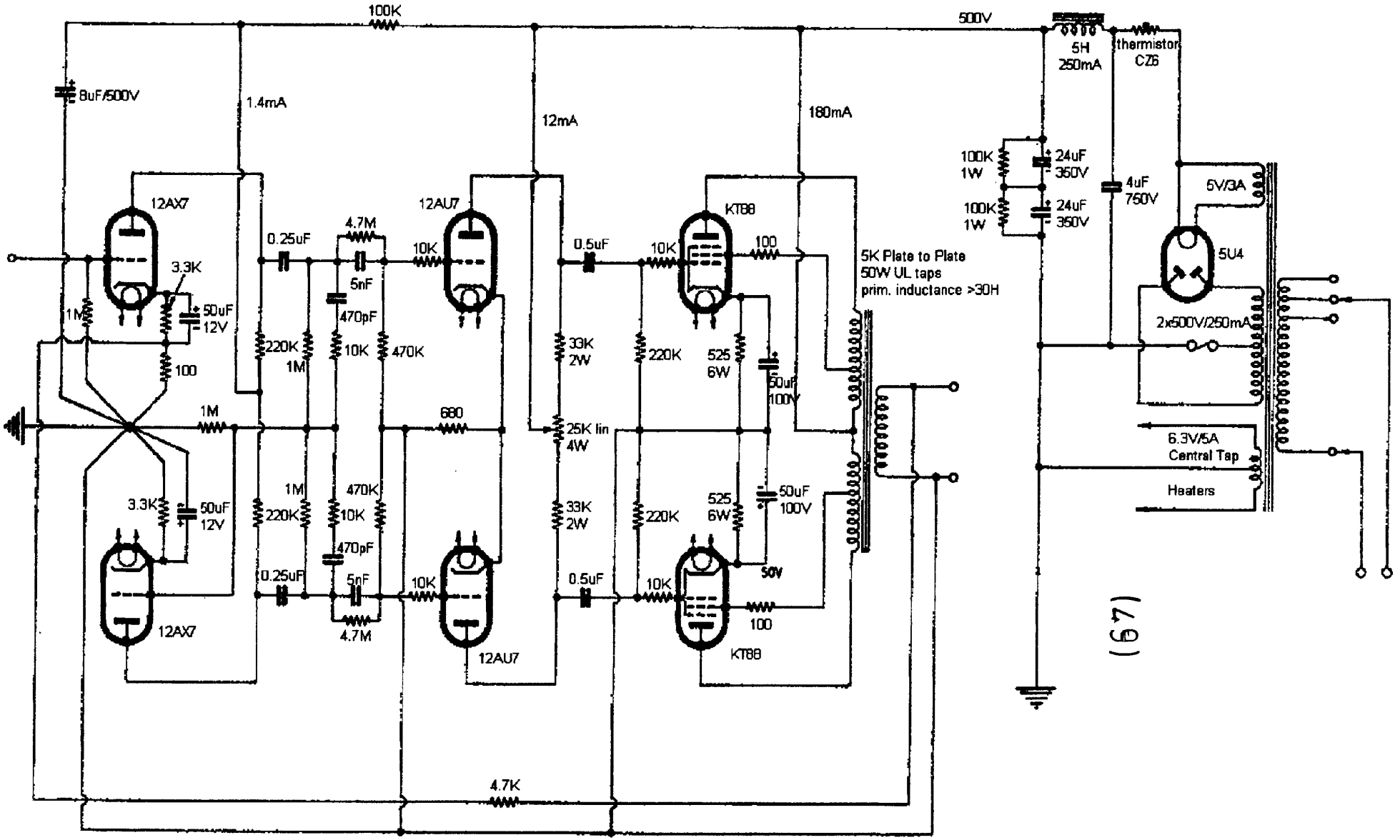

(12AU7)
(6C4)
(2A3)
(6C4)
(2A3)
(5U4G)
from Pre Amp Control
Gnd.
AF ch
F
H
PT
2A Fuse
117V 60Hz
Ps
5K OPT
16Ω
8Ω
4Ω
2Ω
0
2.5V 5A
6.3V 2A
5V 3A
285V
285V
C1 0.05
C2 20μ
C3 0.005
C4 0.005
C5 50μ
C6 0.5
C7 0.5
C8 50p
C9 50p
C10 40μ
C11 40μ
C12 40μ
C13 20μ
C14 20μ
R1 470k
R2 510Ω
R3 68k
R4 4.7k
R5 33k
R6 33k
R7 470k
R8 470k
R9 510Ω
R10 100k
R11 100k
R12 1k
R13 1k
R14 4.7k
R15 1k
R16 220k
R17 33k
R18 47k
R19 2k
R20 700Ω
V1-a
V1-b
V2
V3
V4
V5
V6


EF86(T)
½ECC813
ECC813
UV211
V1
V2
V2'
V3
V4
V5
V6
VR1 100K (B)
R1 470Ω
C1 560μ 6V
2V
R2 100K 1W
2.6mA
94V
352V
R3 1M ½W
C2 1μ 600V
½ECC813
R4 15K 3W
R5 40K 2W
3.5mA
327V
104V
320V
R6 5K 1W
R7 40K 2W
C3 0.22 600V
484V
R8 250K ½W
R10 22K 1W
-42V
VR2 25K
VR3 25K
R11 22K 1W
R9 250K ½W
C4 0.22 600V
-63V
195V
-53V
R13 12K 3W
R12 22K 1W
-186V
R14 12K 3W
-53V
-63V
195V
ECC813
11 mA
-186V
0.5A F.H.
198V
970V
100Ω 2W
VR4
R15
R16
F
F'
78mA
8K
P1
B
P2
16Ω
8Ω
4Ω
0
R17
R18
VR5
100Ω 2W
970V
UV.211
156mA
980V
EF86
(6.3V 0.2A)
// ECC813
(12.6V 0.3A)
6.3V 0.6A)
R15,16,17,18 : 30Ω RS2B


V1 6C5
2A3×4
AFT
(1:2.5)
V2
V3
OPT
Two 30cm Hi-fi
Dynamic Speaker
from
Dynamic
Amp
R1 470K
H
2400Ω/DC
C3
0.01
C4 175P
C5 175P
C6 175P
C7 175P
C8 0.005
C9 0.005
8Ω
R3 270K
R2 2.2K
C1 10μ
C2 18μ
7,700Ω/DC
V4 F
V5 F
1700Ω
DC
1700Ω
DC
Gnd
C10 10μ
PT
R4
10K
H
6.3V
2A
2.5V
10A
F
117V
60Hz
PS
5V 3A
VR
5U4
C13 8μ
C12 8μ
R5
100K
C11
18μ
R6
4RO
AFch


+240 V
6CK4 x2
160K 2W
160K 2W
12BZ7
B+
7K - 8K Primary
100K 1/4W
2K 10W x2
LOAD
2ma C.S.
-30 VDC
470 µf x2 200V
Siliconix CR 200, or equiv.
SW
5VAC
B+ 365 VDC
22K 2W
15K 2W
+240 VDC
+240 VDC (if stereo)
AC
5U4-GB
100 µf 400V
40 µf 400V
40 µf 400V
3A SLO-BLO
68 µf 400V
800Ω 5W
-30 VDC
600VCT
6CK4's
12BZ7
220 µf 63V
170Ω 7W
6.3 VAC
filaments

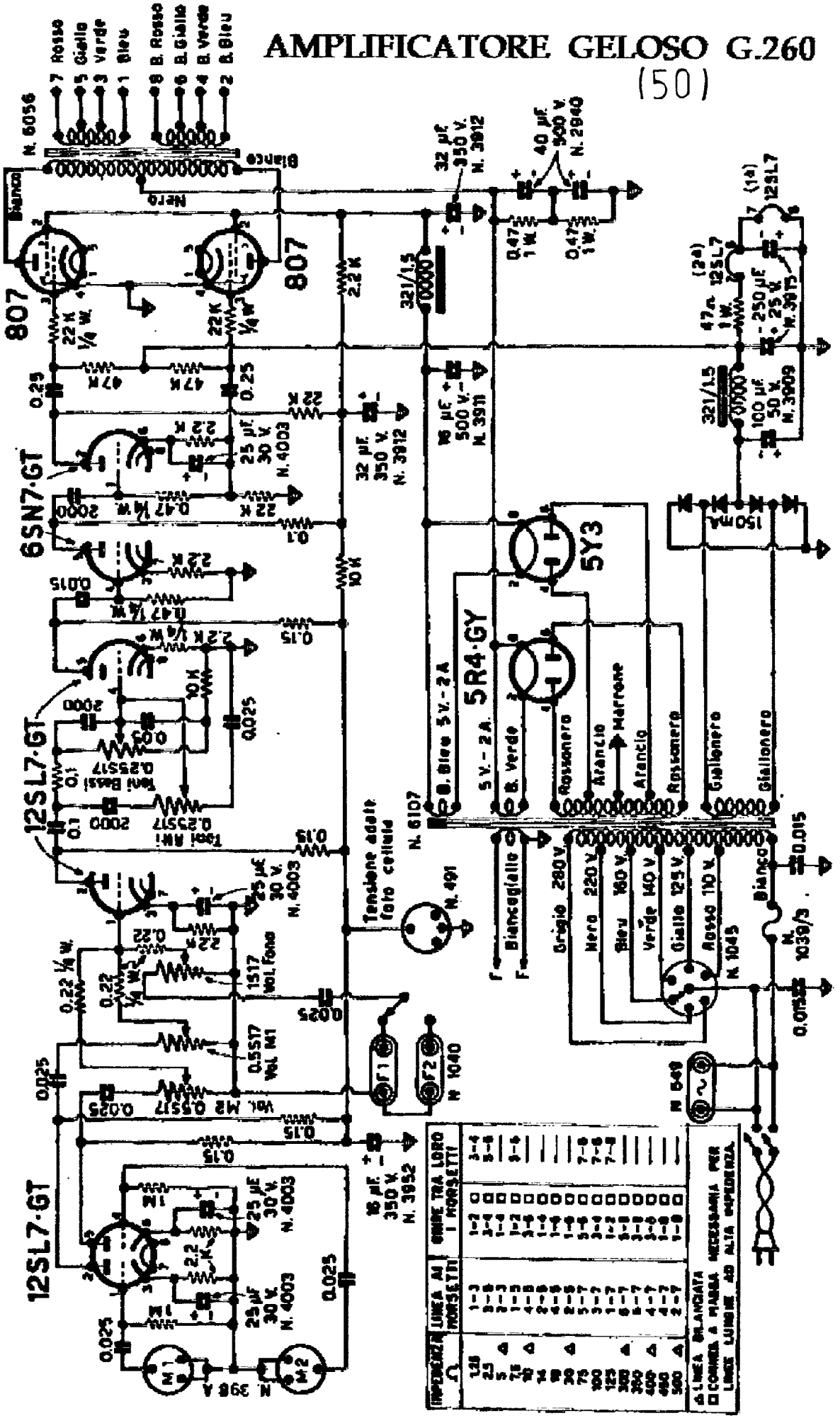

V1
1/2 6SL7
47K
47K
47K
120K
.02uf
Volume
1 M
.002uf
500K
Tone
.01uf
5.6M
100uf
2.2K
V2
6SL7
120K
1W
.02uf
470K
220
100uf 6V
1K
510K
.02uf
120K
1W
300pf
V3
6V6
1K
270K
20uf
25V
250
10W
V4
6V6
270K
1K
.02uf
5-10K
8 ohm
V1
1/2 6SL7
.05uf
270K
.1uf
.05uf
.05uf
120K
120K
500K
Speed
270K
1K
25uf
25V
1M
B
C
22K
1W
1K
10W
A
20uf
450V
20uf
450V
20uf
450V
V5
5Y3GT
Power
fuse 2A
.05uf
5VAC
V1
V2
V3
V4
120 V.
A.C.
50-60 H.

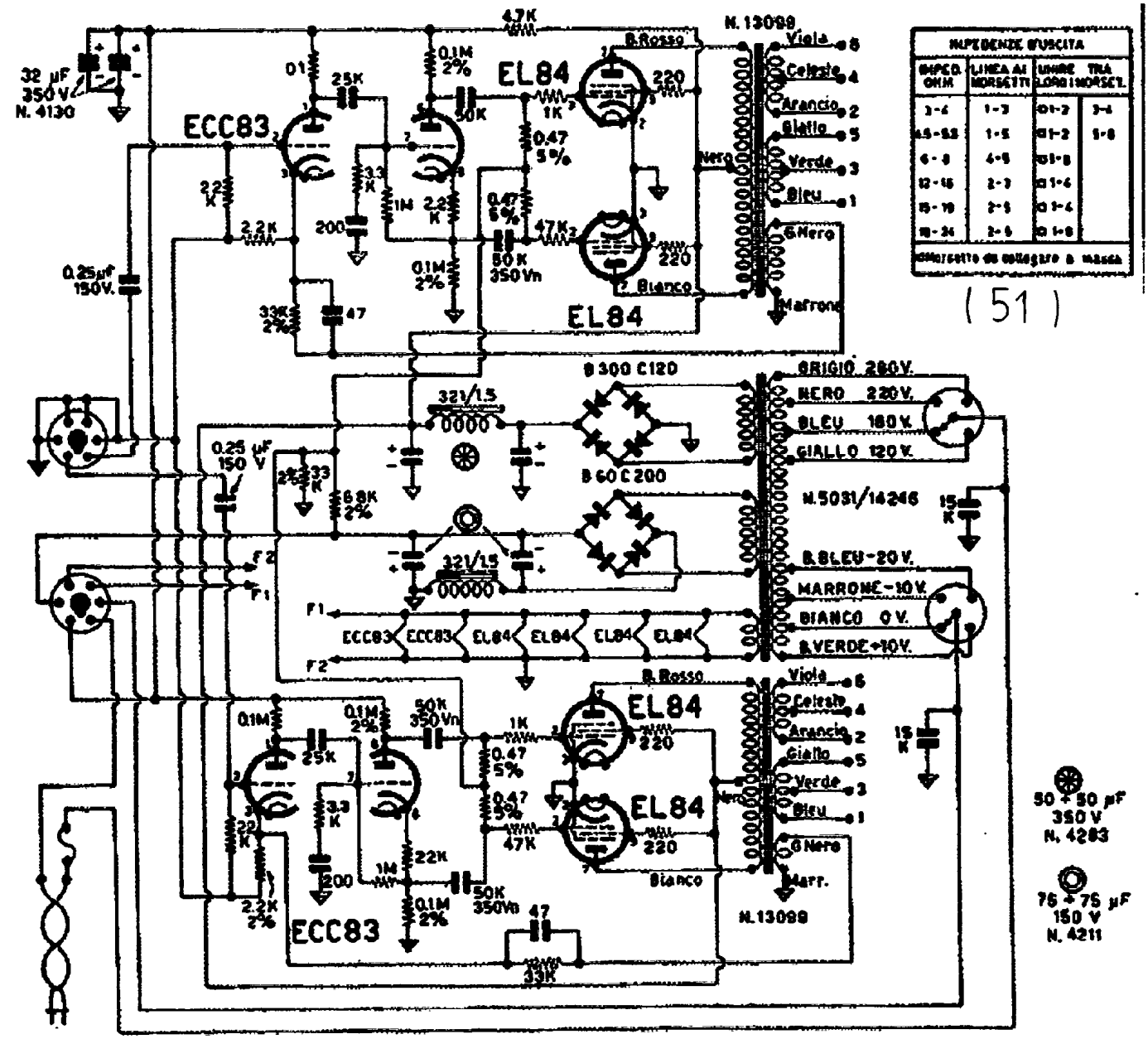

100K
500V
8uF/500V
1.4mA
12mA
180mA
5H
250mA
thermistor
CZ6
100K
1W
24uF
350V
100K
1W
24uF
350V
4uF
750V
5V/3A
5U4
2x500V/250mA
12AX7
0.25uF
4.7M
5nF
470pF
10K
470K
220K
1M
3.3K
50uF
12V
100
1M
680
12AU7
0.5uF
10K
KT88
100
5K Plate to Plate
50W UL taps
prim. inductance >30H
33K
2W
220K
525
6W
50uF
100V
25K lin
4W
6.3V/5A
Central Tap
Heaters
50V
4.7K

(67)

AMPLIFICATORE GELOSO G.260

(50)

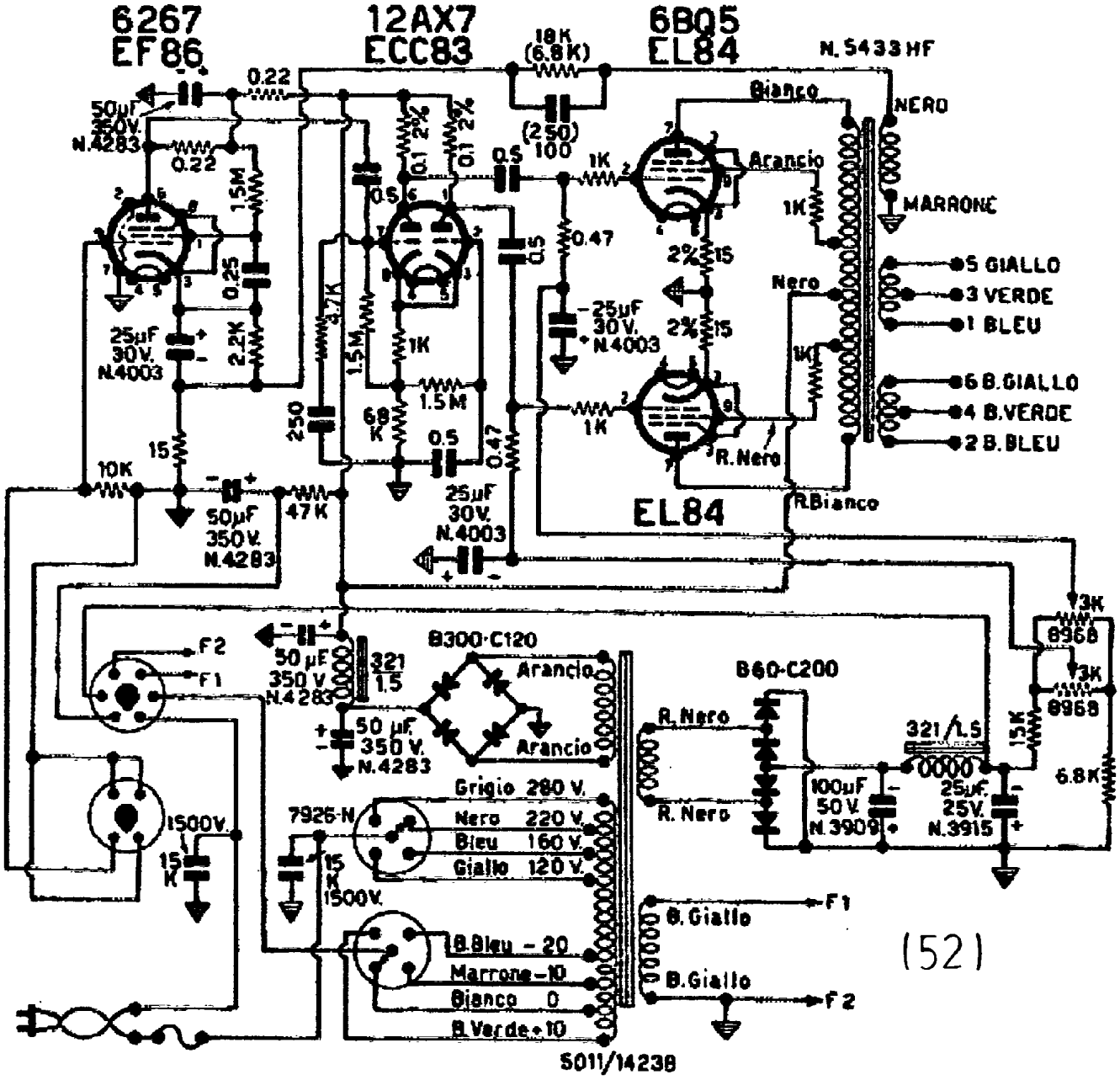




IMPEDENZE D'USCITA			
IMPED. OHM	LINEA AI MORSETTI	UNIRE TRA LORO I MORSETT.	
3-4	1-3	1-2	3-4
4.5-5.5	1-5	1-2	1-8
6-8	4-5	1-8	
12-16	2-3	1-4	
15-19	2-5	1-4	
18-24	2-6	1-8	

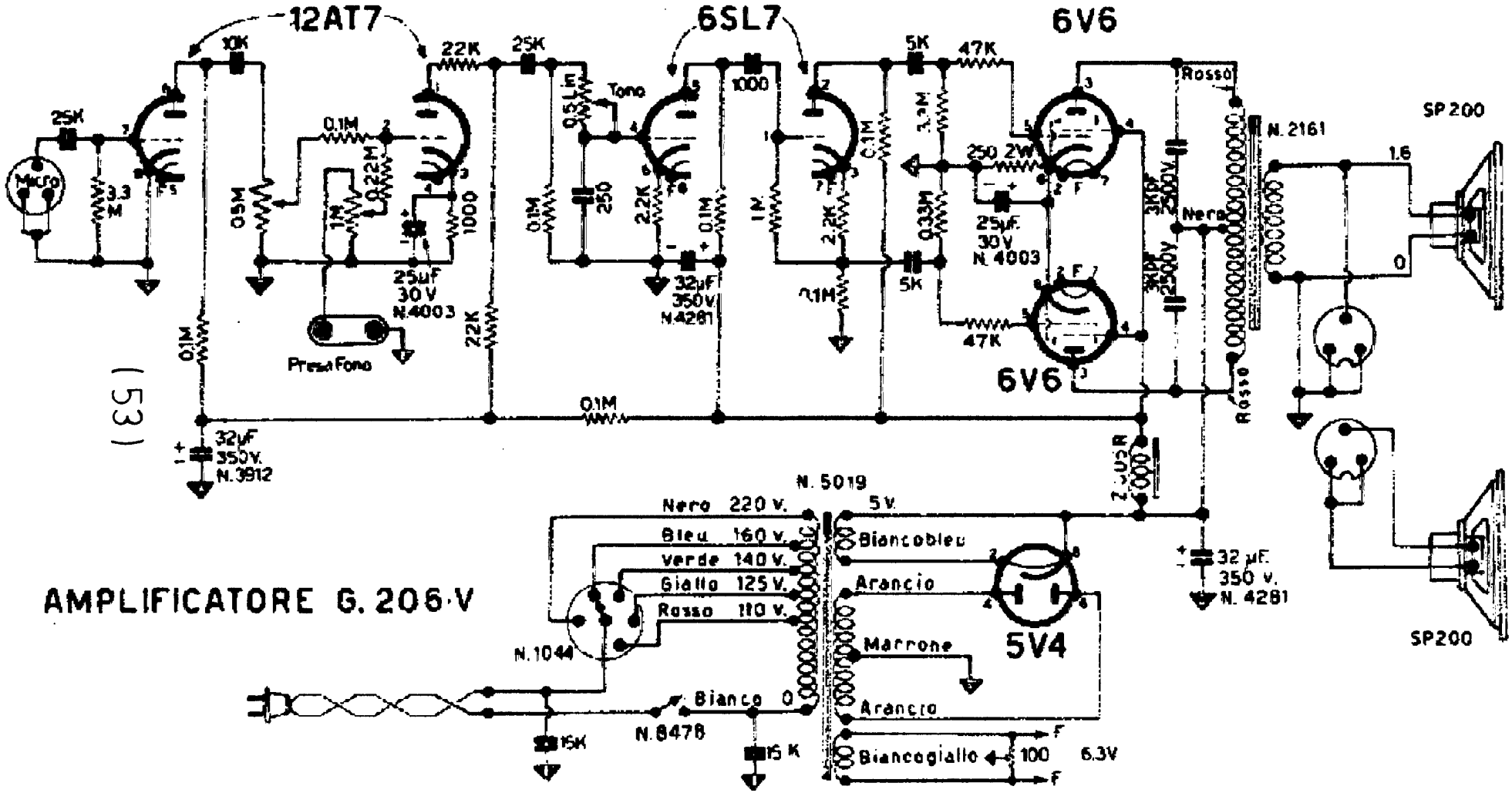
(51)

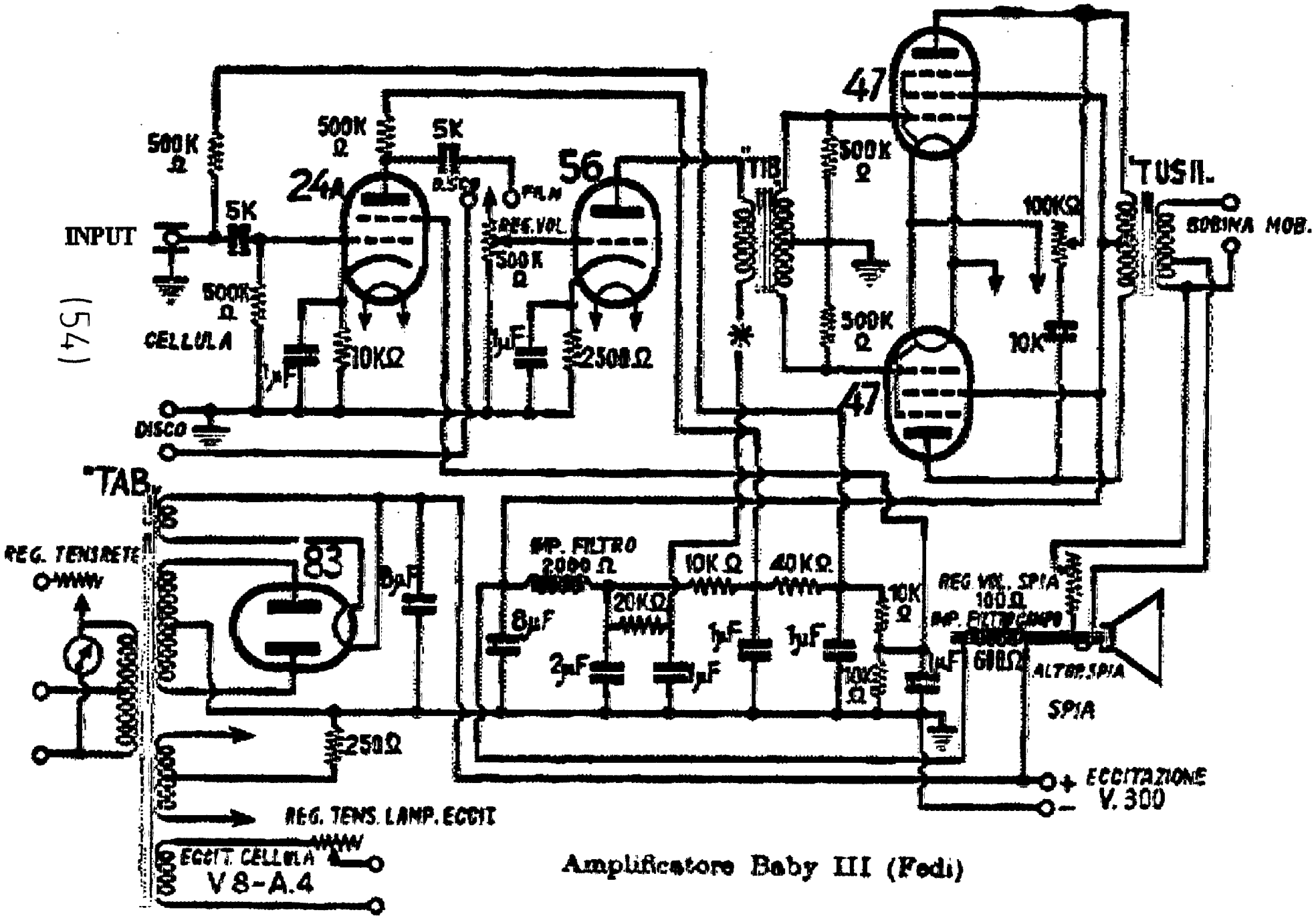
AMPLIFICATORE STEREO G.236



(52)

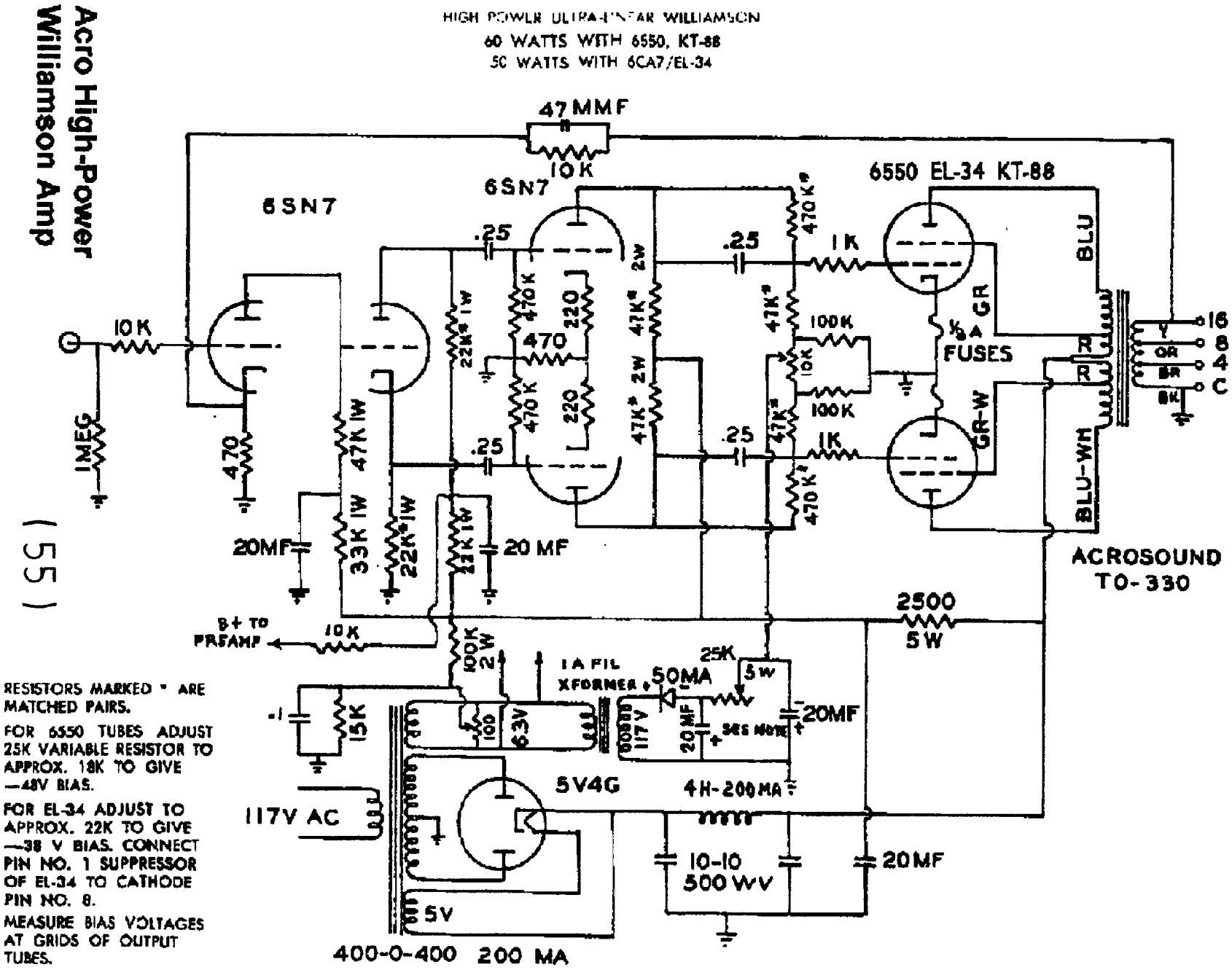
AMPLIFICATORE G.234


12AT7
6SL7
6V6
6V6
5V4
SP200
SP200
Presa Fono
Tono
Nero 220 v.
Bleu 160 v.
verde 140 v.
Giallo 125 v.
Rosso 110 v.
Bianco
Biancobleu
Arancio
Marrone
Arancio
Biancogiallo
6.3V
N. 5019
N. 1044
N. 8478
N. 2161
N. 3912
N. 4003
N. 4281
AMPLIFICATORE G. 206-V



Amplificatore Baby III (Fedi)

Acro High-Power Williamson Amp



RESISTORS MARKED * ARE MATCHED PAIRS.

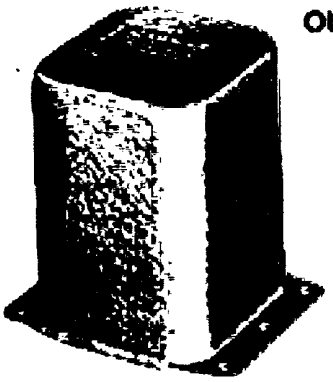
FOR 6550 TUBES ADJUST 25K VARIABLE RESISTOR TO APPROX. 18K TO GIVE —48V BIAS.

FOR EL-34 ADJUST TO APPROX. 22K TO GIVE —38 V BIAS. CONNECT PIN NO. 1 SUPPRESSOR OF EL-34 TO CATHODE PIN NO. 8.

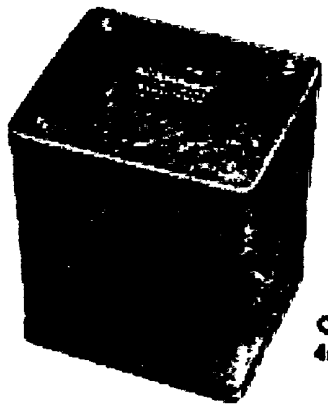
MEASURE BIAS VOLTAGES AT GRIDS OF OUTPUT TUBES.

ACROSOUND TRANSFORMERS

OUTPUT TRANSFORMERS



Case Type "A"
3⅝x3¼x4⅛ high



Case Type "B"
4x4½x5⅝ high

Model	Impedances*	Power Rating	Frequency Response	Rated Primary Current per Tube	Permissible DC Primary Unbalance	** Case Type	Weight	Net Price	Application
TO-250	3000 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 20 kc 40 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	150 ma	20%	A	7 lbs.	$14.50	For use with 6B4's or 2A3's fixed bias as per 6L6's, etc.
TO-260	5000 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 20 kc 20 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	75 ma	20%	A	6 lbs.	11.75	For use with 6B4's or 2A3's self bias, 6L6's, class A, etc.
TO-270	10,000 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 20 kc 20 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	75 ma	20%	A	6 lbs.	11.75	For use with 6V6's, 6K6's, etc.
TO-280	7000 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 20 kc 40 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	75 ma	20%	A	7 lbs.	14.50	For use with 6L6's, class AB1
TO-290	12,000 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 20 kc 40 watts— 30 cps to 15 kc	±1 db 10 cps to 40 kc	75 ma	20%	A	7 lbs.	15.75	For use with triode connected 807's or 5881's in Williamson type circuit
TO-300	6600 plate-to-plate 4, 8, 16 secondary	20 watts— 20 cps to 30 kc 40 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	75 ma	15%	A	7 lbs.	24.75	For Ultra-Linear operation of KT-66's, 807's, 5881's, 6L6's and 6L6's, Ultra-Linear operation of Williamson type circuit
TO-310	8000 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 30 kc 20 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	75 ma	10%	A	6 lbs.	18.75	For Ultra-Linear operation of 6V6's or EL-84's
TO-320	3500 plate-to-plate 4, 8, 16 secondary	10 watts— 20 cps to 30 kc 20 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	75 ma	10%	A	6 lbs.	18.75	For Ultra-Linear operation of 6V6's
TO-330	3800 plate-to-plate 4, 8, 16 secondary	50 watts— 20 cps to 30 kc 100 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	150 ma	25%	B	14 lbs.	29.75	For push pull Ultra-Linear 6550's, QL-34's, KT88's, 6CA7's or for push pull parallel operation of KT-66's, 807's, etc.
TO-340	3000 plate-to-plate 4, 8, 16 secondary	50 watts— 20 cps to 30 kc 100 watts— 30 cps to 20 kc	±1 db 10 cps to 100 kc	150 ma	25%	B	14 lbs.	29.75	For push pull Ultra-Linear 6550's KT-66's, in grid bias operation
TO-350	6600 plate-to-plate 4, 8, 16 secondary	100 watts— 20 cps to 20 kc	±1 db 7 cps to 70 kc	175 ma	30%	B	14 lbs.	49.50	For Ultra-Linear operation of 6146 tubes using tertiary winding for screen connection.

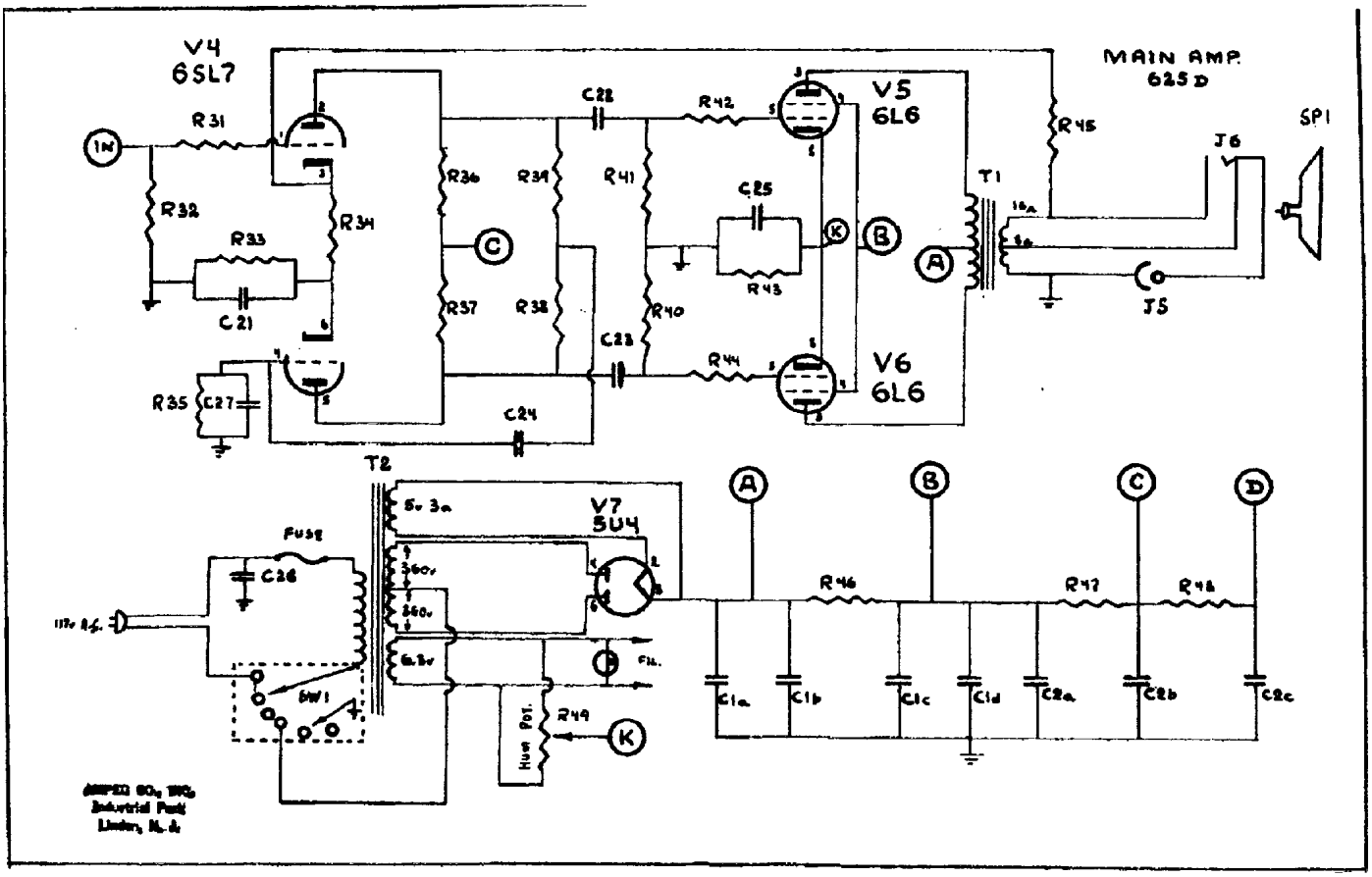
* All models available with additional line winding (115 volt tap shown) at extra cost of $4.00 net for models with ratings up to TO-330 and $10.00 net for models TO-340 and TO-350. Models with line winding are designated by model numbers ending in "L". For example, Model TO-260 with additional line winding is specified as TO-260L.

** All cases are furnished in silver gray hammertone finish, although other metal wire leads are brought out through case bottom.
Case type "A" mounts with base flange. Case type "B" is provided with four #8 mounting lugs.

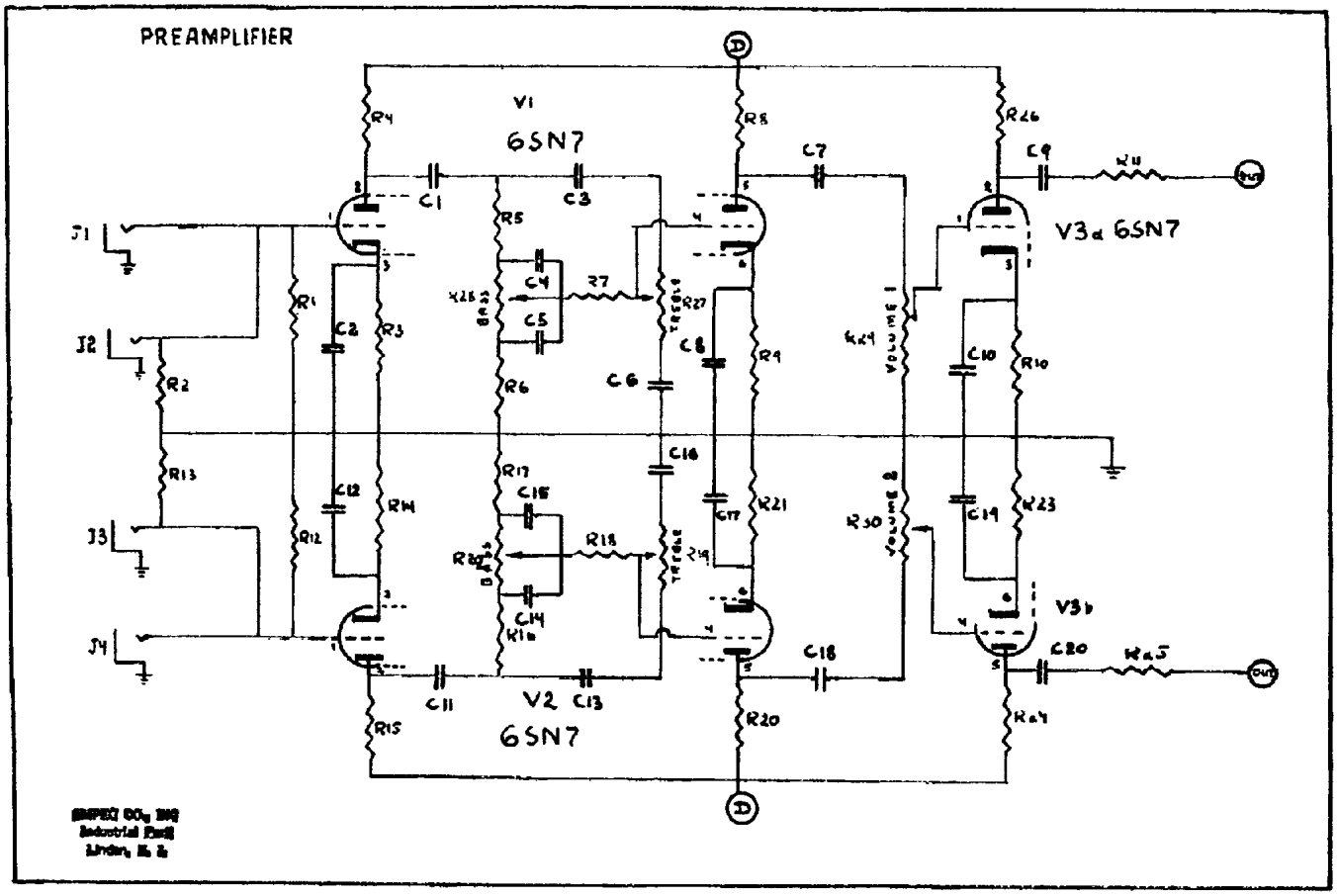
POWER TRANSFORMERS

Model	Voltages		Use	Net Price
TP-520	250-0-250	175 ma	For 6Y6, 6V6, EL84	
	6.3V	5a	Amplifiers	9.75
	5V	2a		
	825-290-41-100-290-825			
TP-550	6.3V	6a	For 6146	
	5V	6a	Amplifiers	33.75
	5V	2a		

All power transformers supplied in gray hammertone steel bells with upright mounting.


V4
6SL7
MAIN AMP.
625 D
V5
6L6
V6
6L6
T1
T2
V7
5U4
SP1
J6
J5
IN
R31
R32
R33
C21
R34
R35
C27
R36
R37
R38
R39
R40
R41
R42
R43
R44
C22
C23
C24
C25
R45
R46
R47
R48
C1a
C1b
C1c
C1d
C2a
C2b
C2c
Fuse
C26
SW1
R49
Hum Pot.

(56)


PREAMPLIFIER
V1
6SN7
V2
6SN7
V3a 6SN7
V3b
J1
J2
J3
J4
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
Volume I
Volume II
Treble
Bass

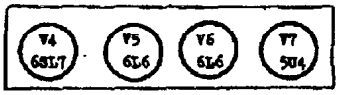
TUBES.

Item N°.	Tube	Use
V 1	6SN7	Voltage amplifier (ch. one)
V 2	6SN7	Voltage amplifier (ch. two)
V 3	6SN7	Voltage amplifier for ch.1&2
V 4	6SL7	Phase Inverter
V 5	6L6	Power amplifier
V 6	6L6	Power amplifier
V 7	5U4	Rectifier

TUBE LOCATION.

Preamplifier

Main amplifier



CONTROLS

Item N°.	Ohms	Type	Use
R 30	1 mg	LAG.	Volume
R 22	1 mg	Lin.	Ch. 1 Bass
R 19	1 mg	Lin.	Treble
R 29	1 mg	Log.	Volume
R 28	1 mg	Lin.	Treble
R 27	1 mg	Lin.	Ch. 2 Bass
R 49	300		Humpot.

SPEAKER.

Item N°.	Size	Field	Part N°.	Imp.
SP 1	12"	P.M.		8 ohm
SP 2	12"	P.M.		8 ohm

TRANSFORMER.

Item N°.	Part N°.	Use.
T 1	OT 213	Audio output
T 2	PT 180	Power supply

MICELLANEOUS.

Item N°.	Notes.
J 1	Input jack, open crt.
J 2	Input jack, close crt.
J 3	Input jack, open crt.
J 4	Input jack, close crt.
J 5	Output jack for 16 ohms
J 6	Output jack for 8 ohms
Fuse	3a 250v
SW.1	Standby switch.

CAPACITORS.

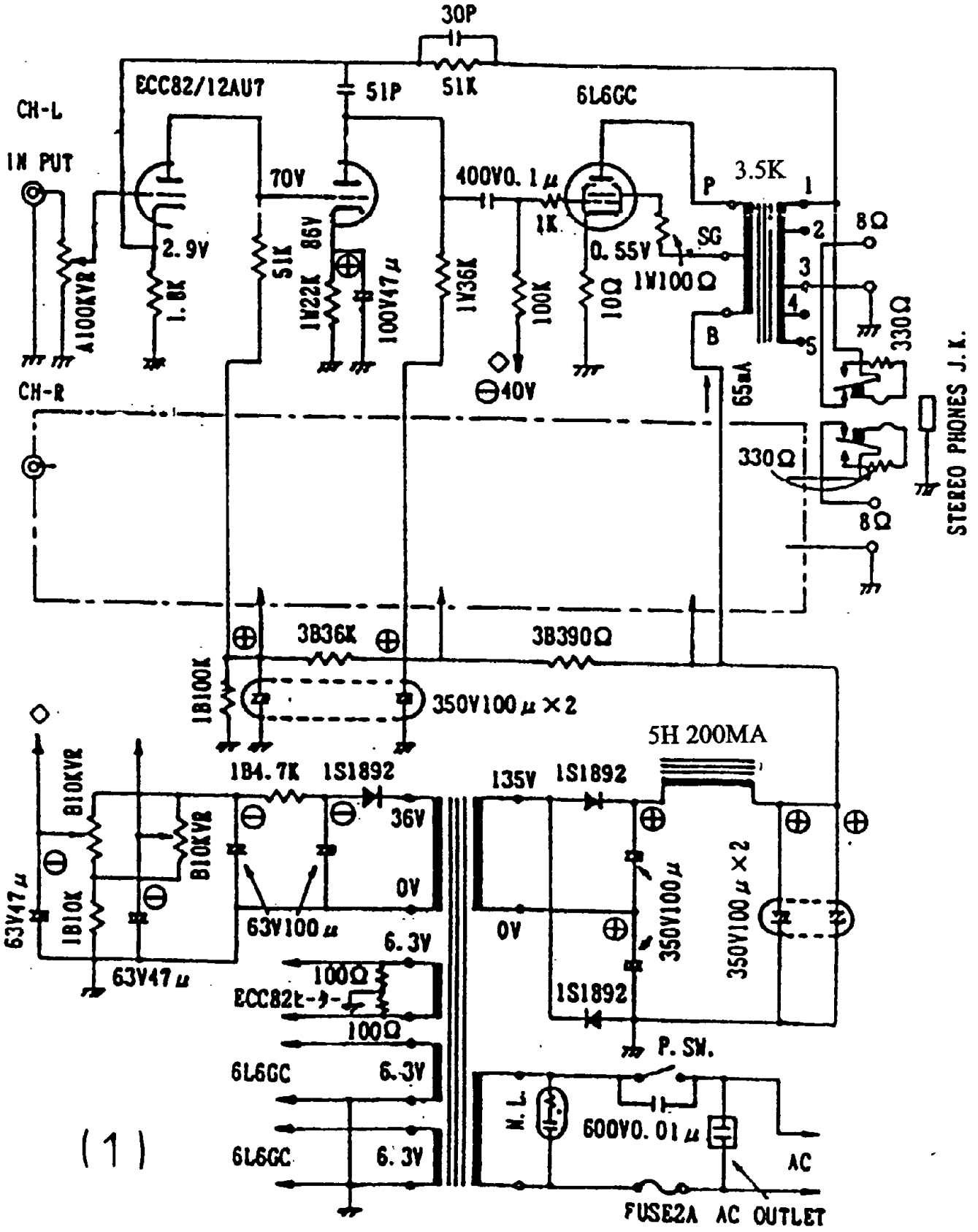
Item N°.	Rating		Type
	Cap.	Volt	
C 1	.02	400	paper
C 2	25	6	electrolytic
C 3	500	500	ceramic
C 4	.002	600	paper
C 5	.02	400	"
C 6	.002	600	"
C 7	.02	400	"
C 8	25	6	electrolytic
C 9	.02	400	paper
C 10	25	6	electrolytic
C 11	.02	400	paper
C 12	100	12	electrolytic
C 13	500	500	ceramic
C 14	.002	600	paper
C 15	.02	400	"
C 16	.002	600	"
C 17,19,21.	100	12	electrolytic
C 18,20,22, 23,24.	.02	400	paper
C 25	50	50	electrolytic
C 26	.1	200	paper
C 27	500	500	ceramic
C 1A	30	500	electrolytic
C 1b	20	500	"
C 1c,C 1d	20	500	"
C 2a,2b,2c.	20	450	"

Capacity given in the rating colosm are in mfd for electrolytic and paper, and in mmfd for ceramic capacitors.

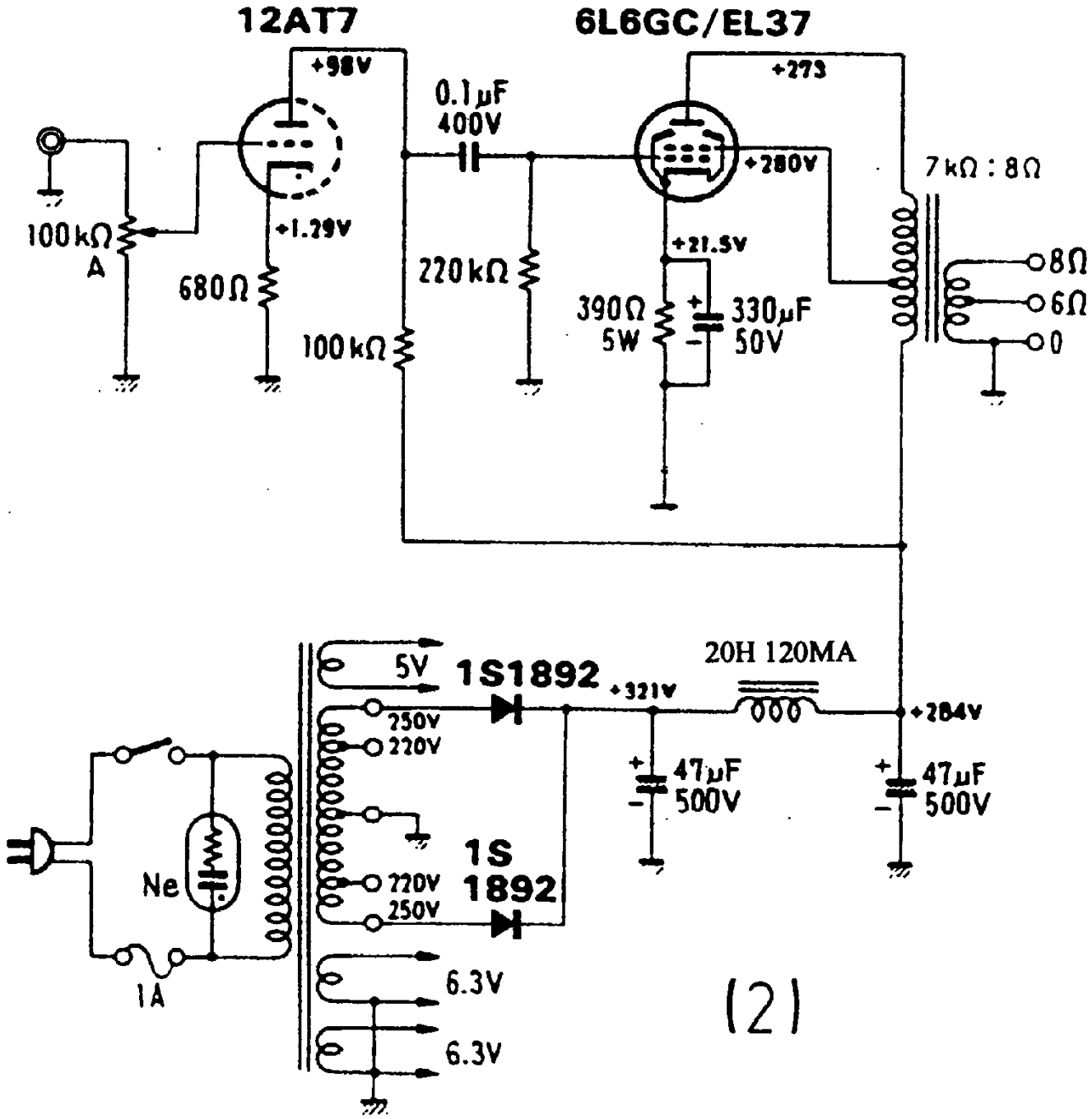
RESISTORS.

Item N°.	Rating	
	Ohms	Watt
R 1	1 mg	1/2
R 2, 13, 16, 5, 7, 18, 36, 37.	120k	1/2
R 3	3.3k	1/2
R 4	100k	1
R 6, 17, 31.	10k	1/2
R 8, 20, 45.	22K	1
R 9, 10, 21, 23, 26, 47.	2.2k	1/2
R 11, 25, 40.	270k	1/2k
R 12	5.6mg	1/2
R 14	3.3k	1/2
R 15	100k	1
R 24	22k	1
R 26	22k	1
R 32	1 mg	1/2
R 33, 42, 44.	1 k	1/2
R 34	220	1/2
R 35	470k	1/2
R 39	470k	1/2
R 38 5%	510k	1/2
R 41	270k	1/2
R 43	250	10
R 45	3.3k	1/2
R 46	1 k	10

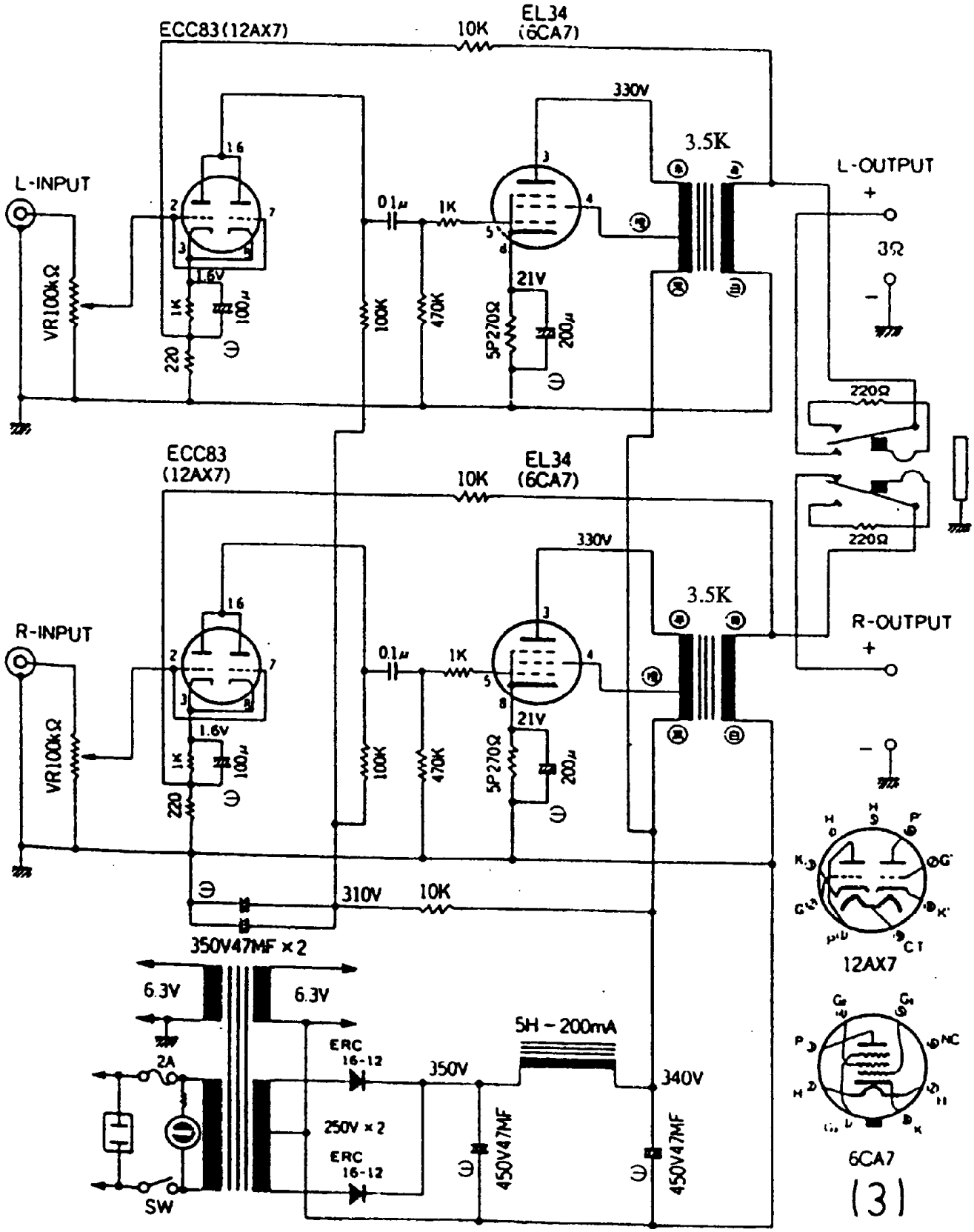
Resistors ± 10%

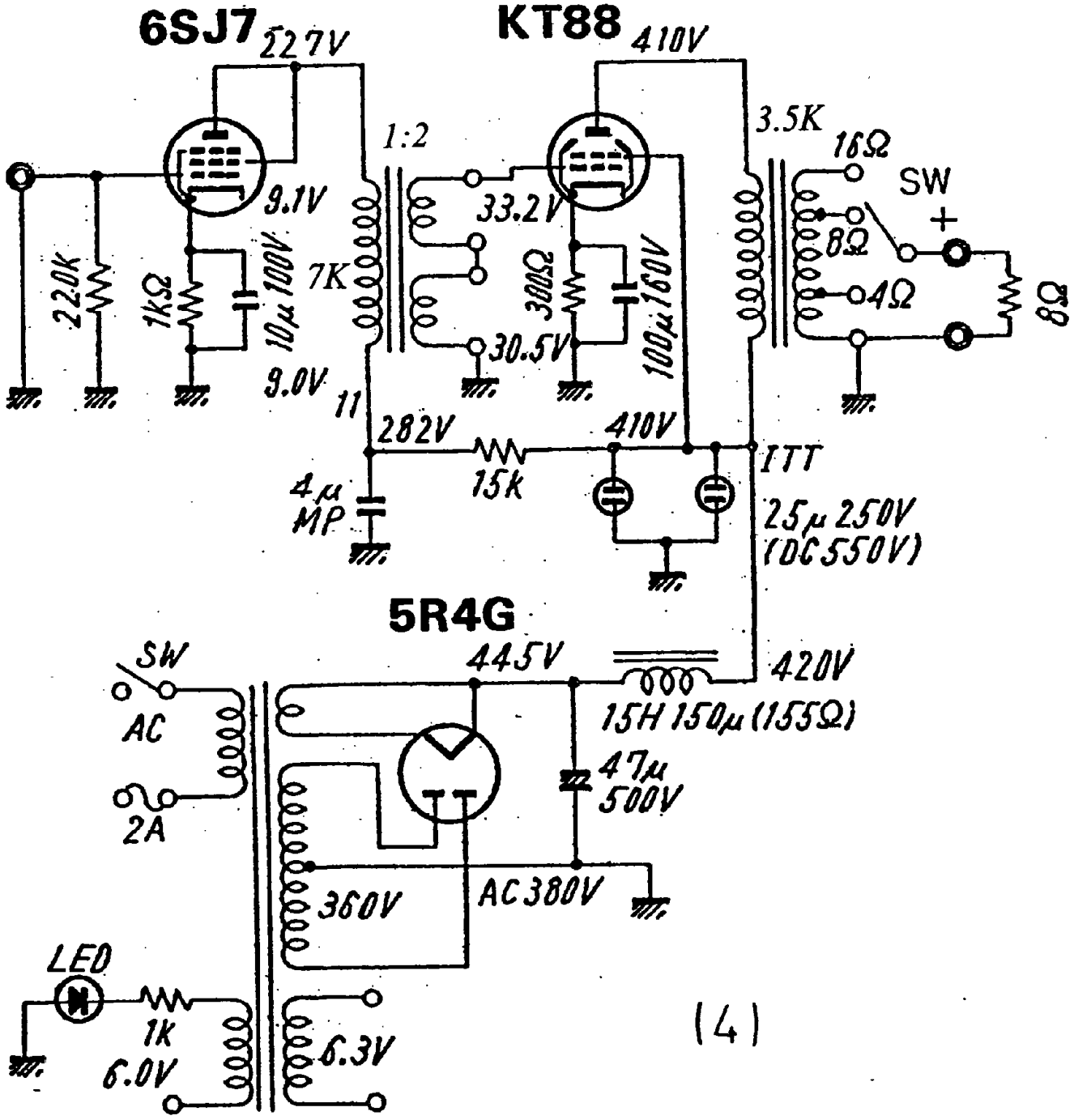

30P
ECC82/12AU7
51P
51K
6L6GC
CH-L
IN PUT
70V
400V0.1μ
3.5K
P
1K
SG
0.55V
1W100Ω
2.9V
1.8K
A100KVR
51K
1W22K
86V
100V47μ
1W36K
100K
10Ω
B
65mA
40V
CH-R
330Ω
8Ω
STEREO PHONES J.K.
3B36K
3B390Ω
1B100K
350V100μ×2
5H 200MA
1B4.7K
1S1892
135V
B10KVR
B10KVR
1B10K
63V47μ
36V
0V
63V100μ
6.3V
100Ω
ECC82ヒーター
100Ω
6L6GC
6.3V
6L6GC
6.3V
63V47μ
350V100μ
350V100μ×2
1S1892
P.SW.
N.L
600V0.01μ
AC
FUSE2A AC OUTLET

(1)

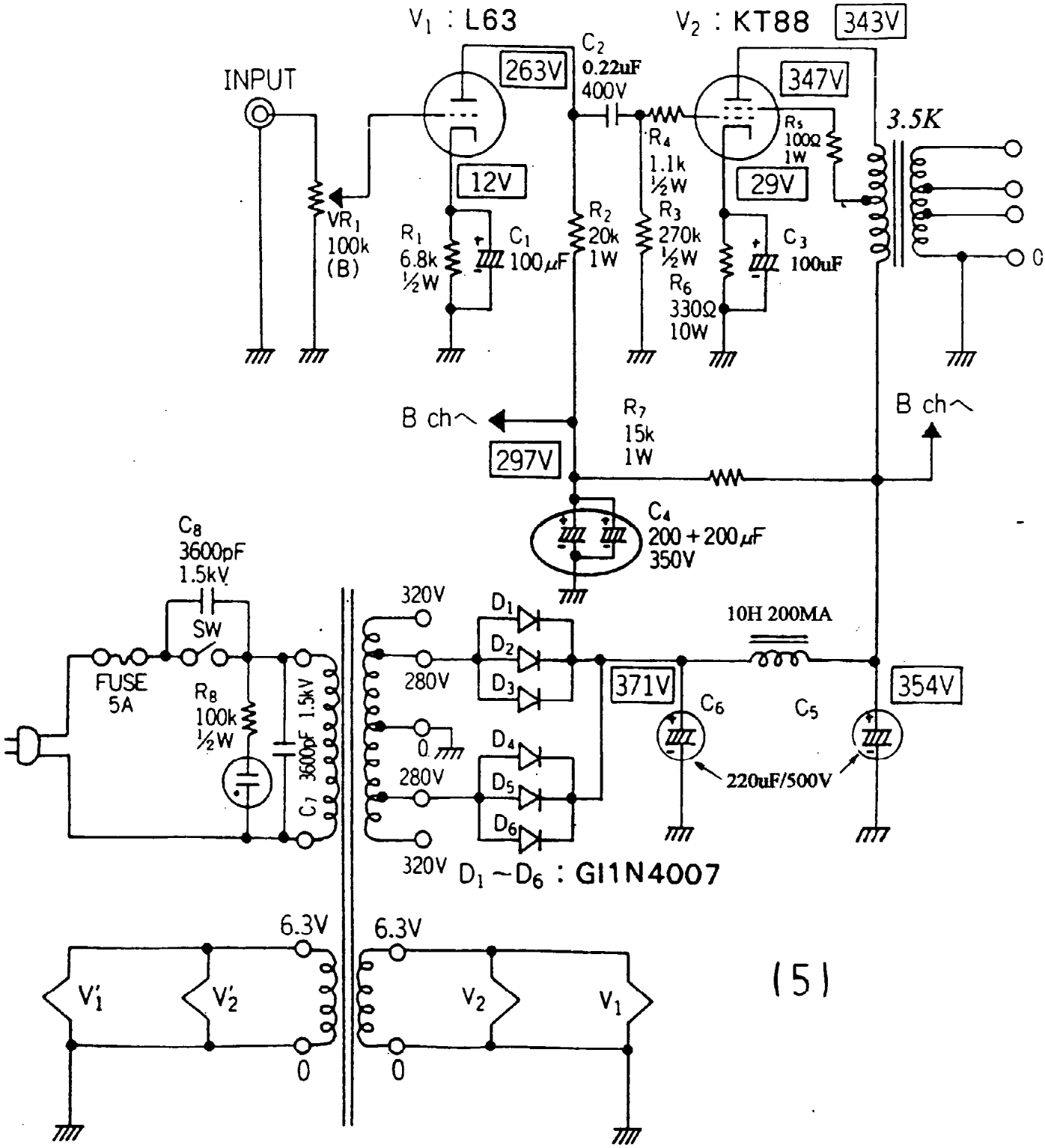

12AT7
6L6GC/EL37
+98V
0.1μF
400V
+273
+280V
7kΩ : 8Ω
100kΩ
A
+1.29V
680Ω
220kΩ
+21.5V
390Ω
5W
330μF
50V
100kΩ
8Ω
6Ω
0
5V
1S1892
+321V
20H 120MA
+284V
250V
220V
47μF
500V
47μF
500V
Ne
1S
1892
220V
250V
1A
6.3V
6.3V

(2)

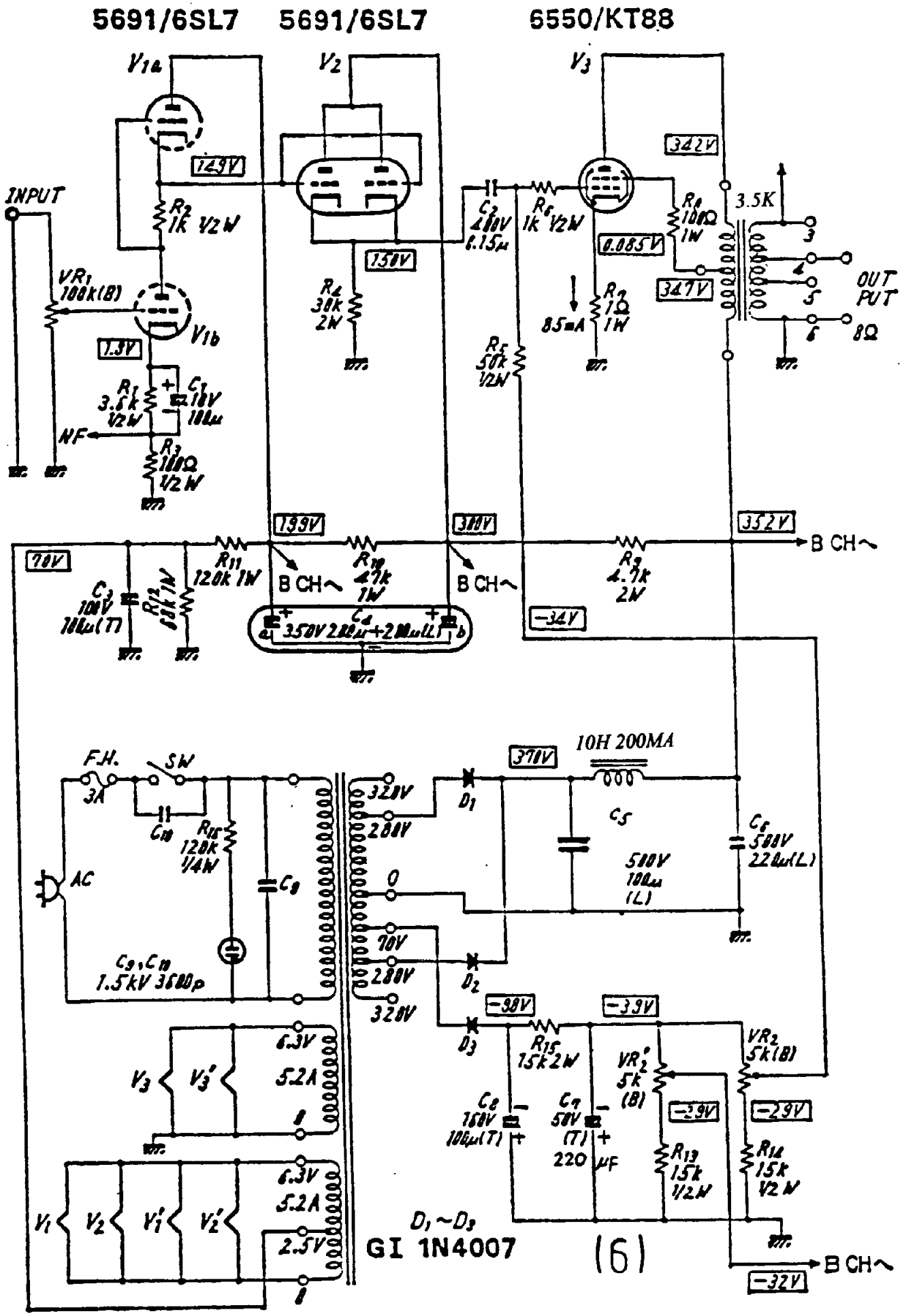

ECC83(12AX7)
10K
EL34
(6CA7)
330V
3.5K
L-OUTPUT
+
3Ω
−
L-INPUT
VR100kΩ
0.1μ
1K
100K
470K
1.6V
100μ
220
21V
5P270Ω
200μ
220Ω
ECC83
(12AX7)
EL34
(6CA7)
10K
330V
3.5K
R-OUTPUT
+
R-INPUT
VR100kΩ
0.1μ
1K
100K
470K
1.6V
100μ
220
21V
5P270Ω
200μ
220Ω
310V
10K
350V47MF×2
6.3V
6.3V
2A
SW
ERC
16-12
250V×2
ERC
16-12
350V
5H−200mA
340V
450V47MF
450V47MF
12AX7
6CA7

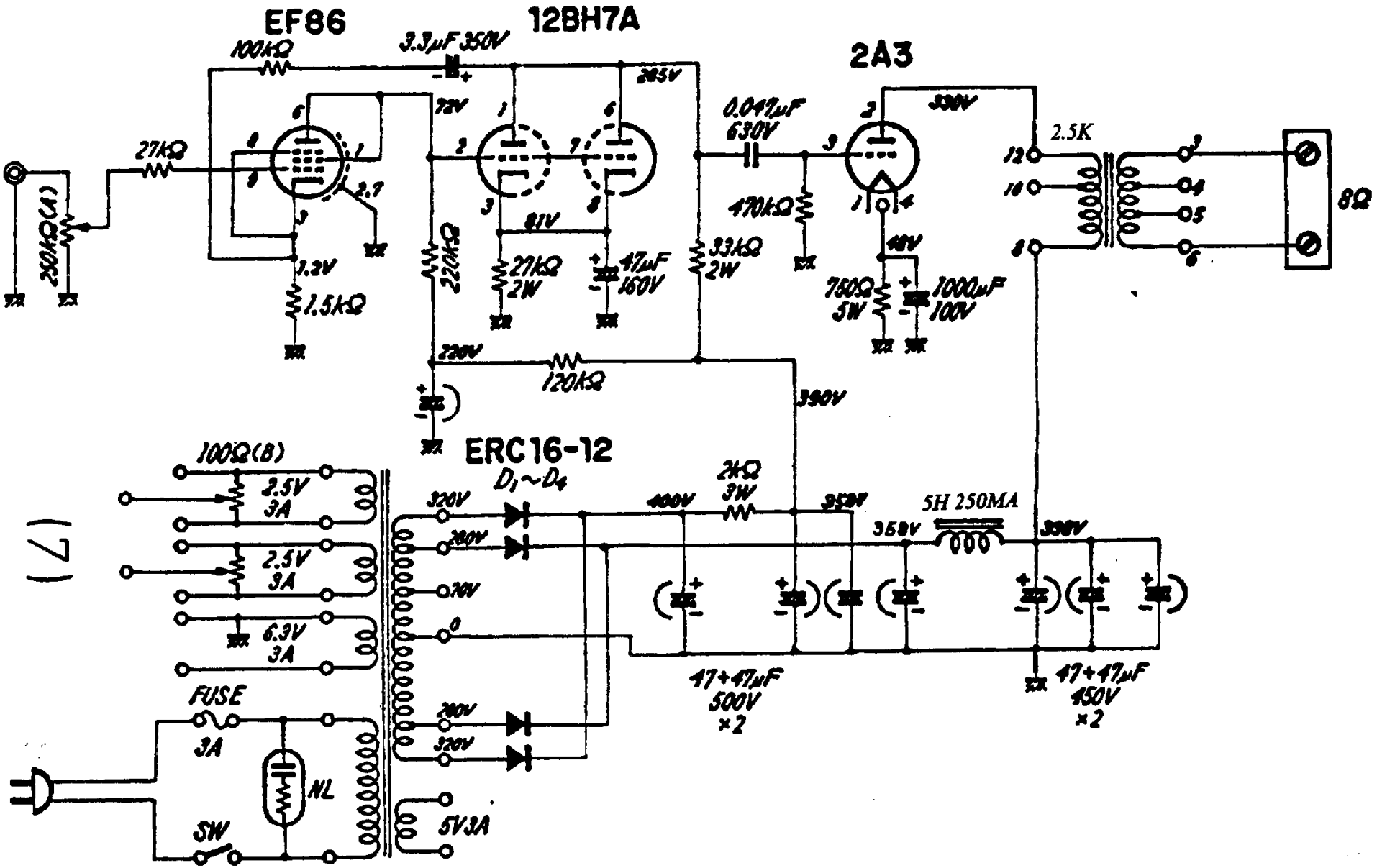

6SJ7
227V
KT88
410V
1:2
3.5K
16Ω
SW
+
8Ω
4Ω
8Ω
9.1V
33.2V
220K
1KΩ
10μ 100V
7K
300Ω
100μ 160V
30.5V
9.0V
11
282V
410V
15k
4μ MP
ITT
25μ 250V (DC 550V)
5R4G
SW
AC
2A
445V
420V
15H 150μ (155Ω)
47μ 500V
360V
AC 380V
LED
1K
6.0V
6.3V

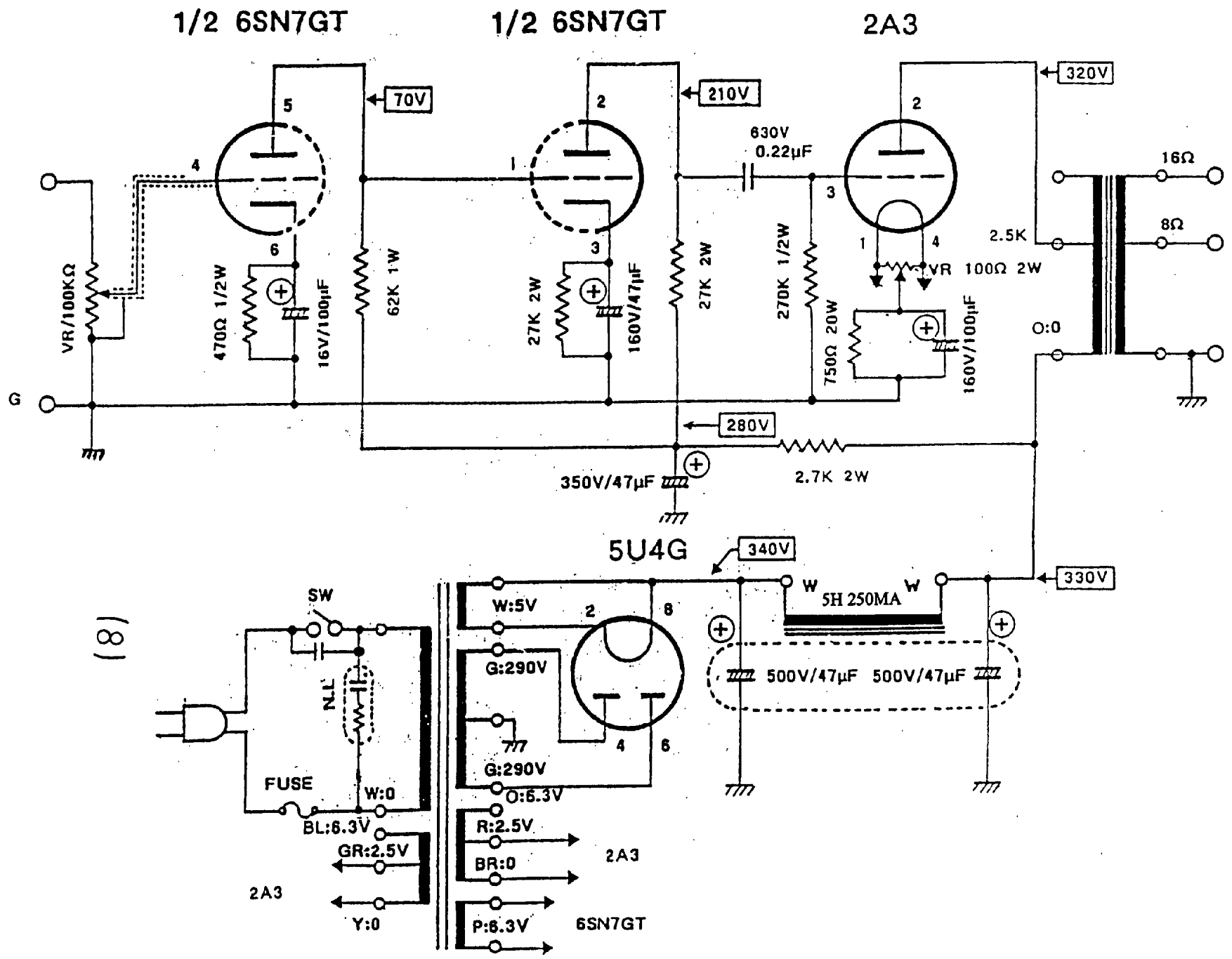
(4)

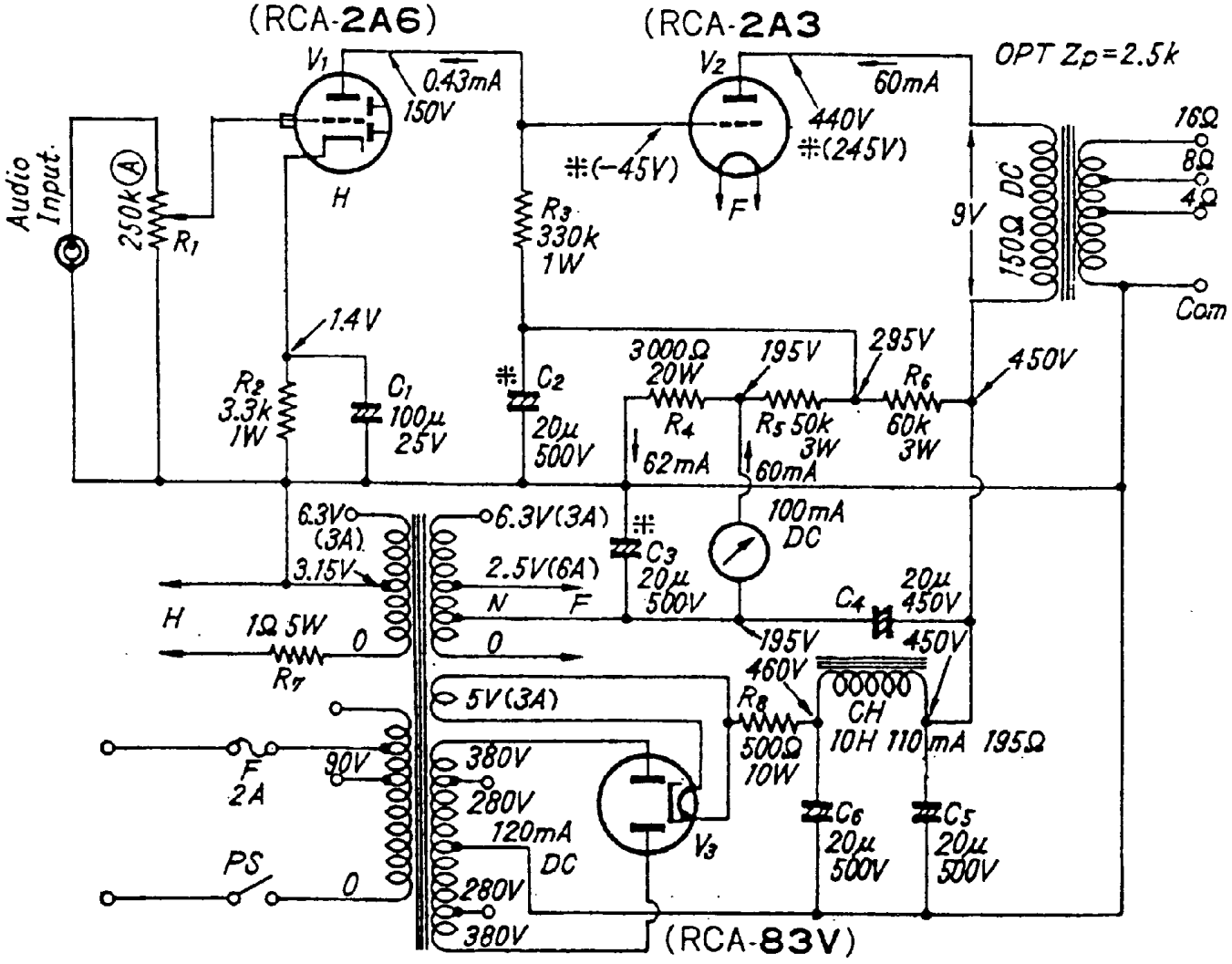

V1 : L63
V2 : KT88
343V
INPUT
263V
C2
0.22uF
400V
347V
3.5K
R4
1.1k
½W
R5
100Ω
1W
12V
29V
VR1
100k
(B)
R1
6.8k
½W
C1
100μF
R2
20k
1W
R3
270k
½W
R6
330Ω
10W
C3
100uF
B ch
297V
R7
15k
1W
C4
200+200μF
350V
C8
3600pF
1.5kV
SW
FUSE
5A
R8
100k
½W
C7 3600pF 1.5kV
320V
280V
0
280V
320V
D1
D2
D3
D4
D5
D6
10H 200MA
371V
354V
C6
C5
220uF/500V
D1~D6 : GI1N4007
6.3V
6.3V
V'1
V'2
V2
V1
0
0

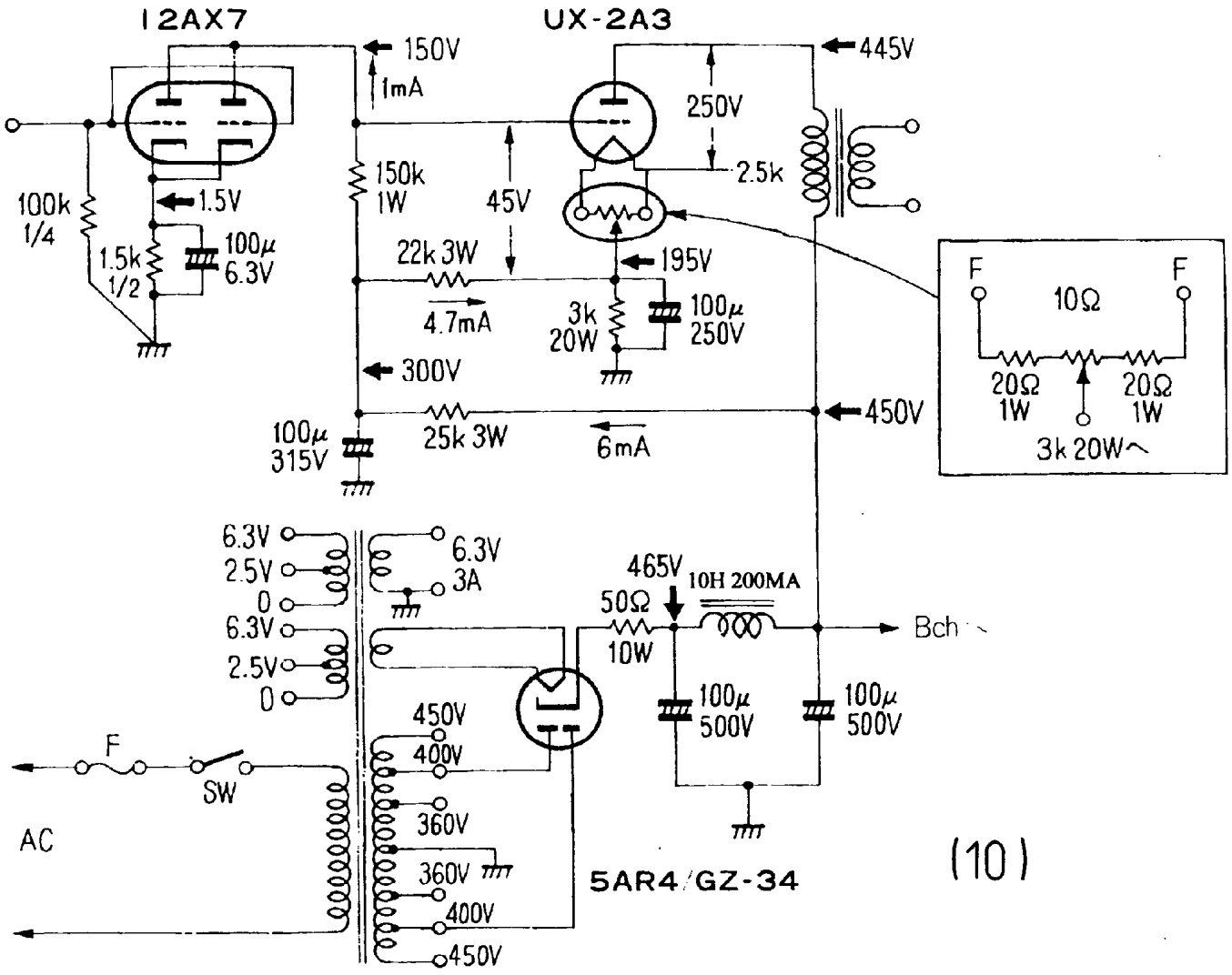
(5)


5691/6SL7
5691/6SL7
6550/KT88
INPUT
149V
150V
342V
347V
0.085V
85mA
3.5K
OUT PUT
8Ω
139V
300V
352V
B CH
-34V
70V
10H 200MA
370V
F.H.
3A
SW
AC
-98V
-39V
-29V
-32V
6.3V
5.2A
2.5V
D1~D3
GI 1N4007

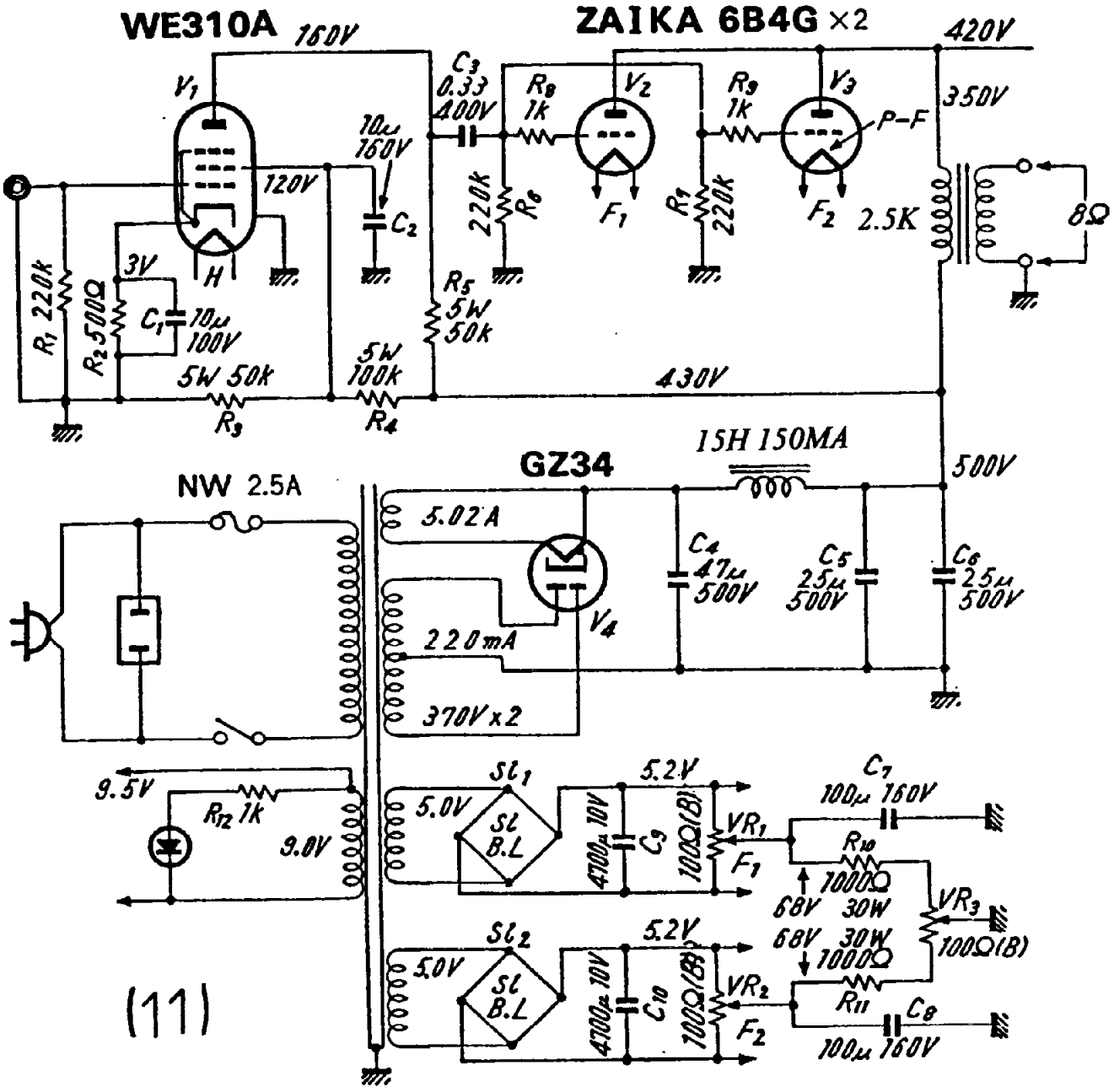

EF86
12BH7A
2A3
100kΩ
3.3μF 350V
285V
72V
81V
0.047μF 630V
330V
2.5K
27kΩ
250kΩ(1)
2.7
1.2V
1.5kΩ
220kΩ
27kΩ 2W
47μF 160V
33kΩ 2W
470kΩ
40V
750Ω 5W
1000μF 100V
8Ω
220V
120kΩ
390V
100Ω(8)
ERC16-12
D1~D4
2.5V 3A
2.5V 3A
6.3V 3A
320V
280V
270V
0
280V
320V
400V
2kΩ 3W
295V
5H 250MA
360V
350V
47+47μF 500V ×2
47+47μF 450V ×2
FUSE
3A
NL
SW
5V3A


1/2 6SN7GT
1/2 6SN7GT
2A3
70V
210V
320V
630V
0.22μF
16Ω
8Ω
2.5K
VR 100Ω 2W
O:0
VR/100KΩ
470Ω 1/2W
16V/100μF
62K 1W
27K 2W
160V/47μF
27K 2W
270K 1/2W
750Ω 20W
160V/100μF
G
280V
350V/47μF
2.7K 2W
5U4G
340V
330V
W
5H 250MA
500V/47μF 500V/47μF
SW
N.L
FUSE
W:0
BL:6.3V
GR:2.5V
Y:0
2A3
W:5V
G:290V
G:290V
O:6.3V
R:2.5V
BR:0
2A3
P:6.3V
6SN7GT

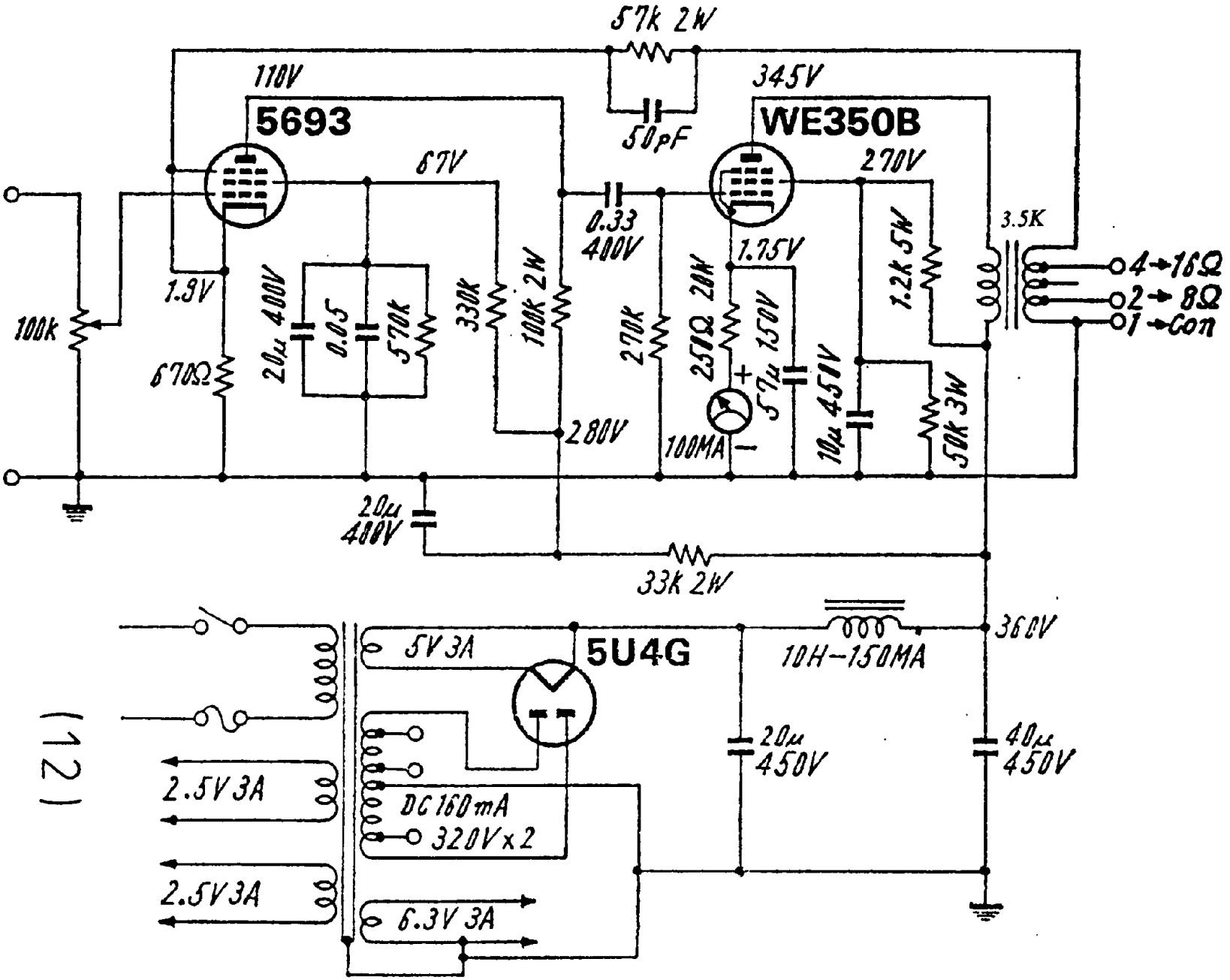

(RCA-2A6)
(RCA-2A3
OPT Zp=2.5k
V1
0.43mA
150V
V2
60mA
440V
*(245V)
*(-45V)
H
F
16Ω
8Ω
4Ω
Com
Audio Input
250k
R1
R3 330k 1W
9V
150Ω DC
1.4V
R2 3.3k 1W
C1 100μ 25V
*C2 20μ 500V
3000Ω 20W
R4
62mA
195V
R5 50k 3W
60mA
295V
R6 60k 3W
450V
6.3V (3A)
3.15V
6.3V(3A)
2.5V(6A)
N
F
*C3 20μ 500V
100mA DC
C4 20μ 450V
195V
450V
H
1Ω 5W
R7
0
460V
R8 500Ω 10W
CH 10H 110mA 195Ω
5V(3A)
F 2A
90V
380V
280V
120mA DC
280V
380V
PS
V3
C6 20μ 500V
C5 20μ 500V
(RCA-83V)

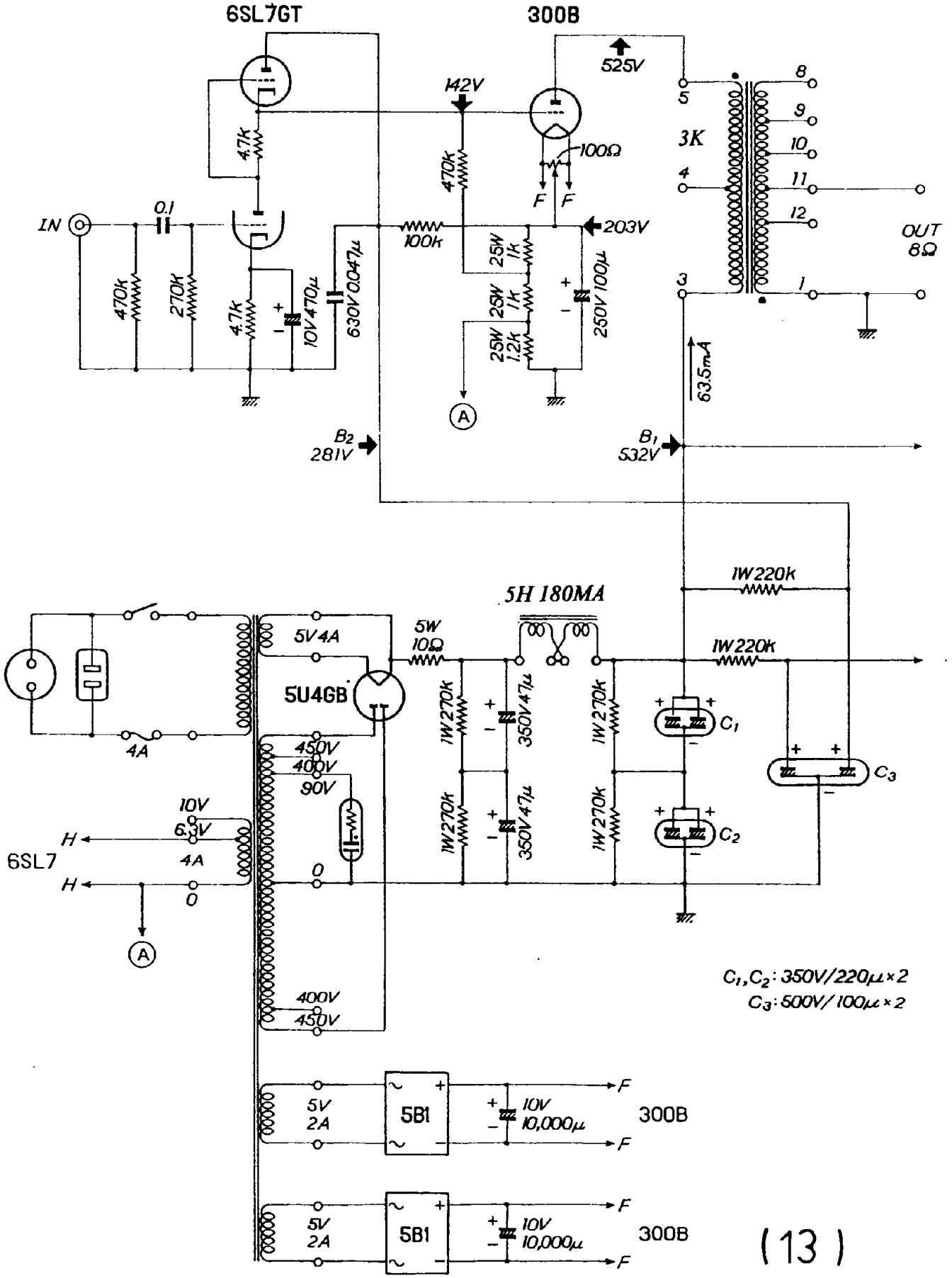

12AX7
UX-2A3
150V
1mA
445V
250V
2.5k
100k
1/4
1.5V
1.5k
1/2
100μ
6.3V
150k
1W
45V
22k 3W
195V
4.7mA
3k
20W
100μ
250V
300V
450V
100μ
315V
25k 3W
6mA
F
10Ω
F
20Ω
1W
20Ω
1W
3k 20W
6.3V
2.5V
0
6.3V
2.5V
0
6.3V
3A
465V
10H 200MA
50Ω
10W
Bch
100μ
500V
100μ
500V
450V
400V
360V
360V
400V
450V
F
SW
AC
5AR4/GZ-34

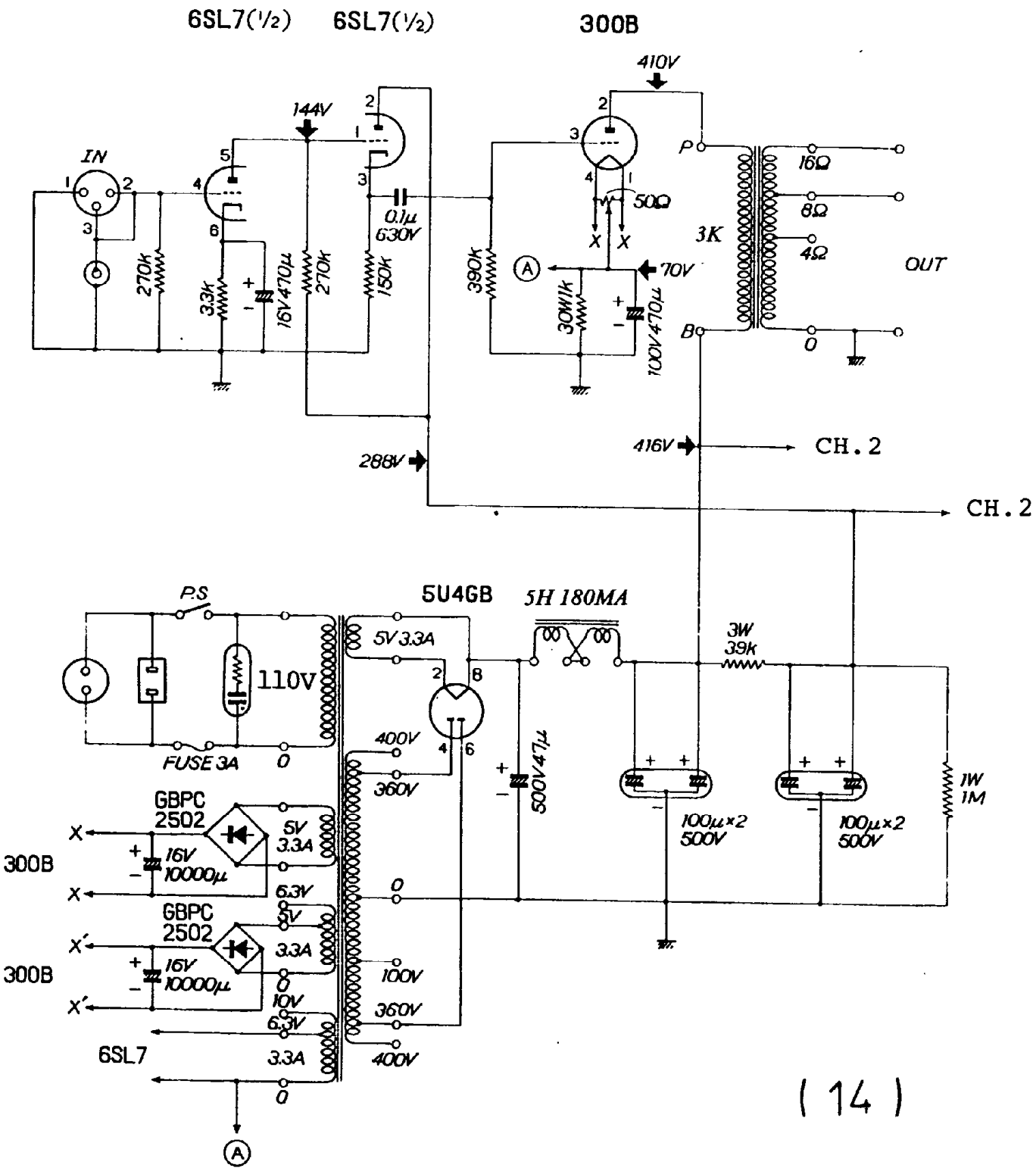
(10)


WE310A
160V
ZA1KA 6B4G ×2
420V
350V
P-P
2.5K
8Ω
120V
3V
430V
GZ34
15H 150MA
500V
NW 2.5A
5.02A
220mA
370V×2
9.5V
9.0V
5.0V
5.2V
68V 30W
1000Ω
100Ω(B)

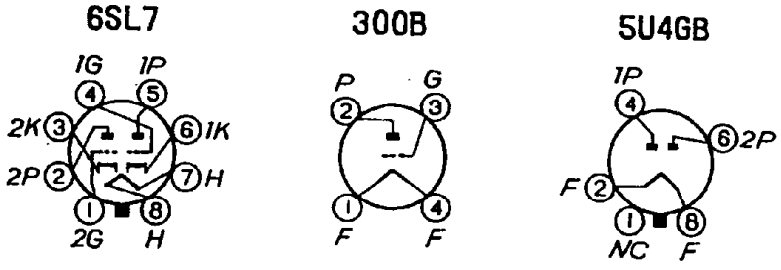
(11)

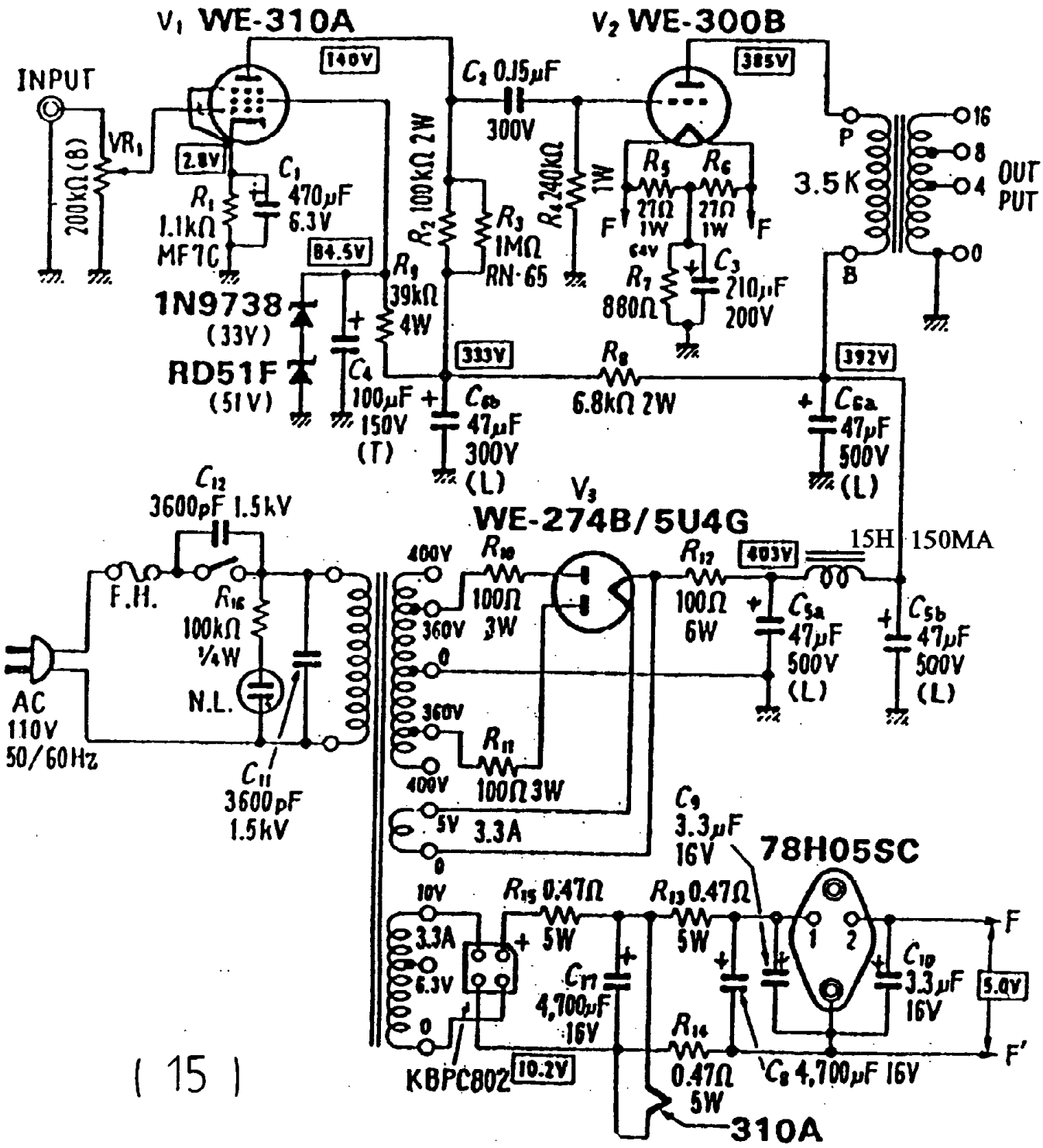

57k 2W
110V
5693
345V
WE350B
50pF
67V
270V
0.33
400V
3.5K
1.75V
1.2k 5W
4→16Ω
2→8Ω
1→Com
1.9V
100k
20μ 400V
0.05
570k
330k
100k 2W
270k
25Ω 2W
57μ 150V
10μ 450V
50k 3W
670Ω
280V
100MA
20μ
400V
33k 2W
5V 3A
5U4G
10H–150MA
360V
20μ
450V
40μ
450V
2.5V 3A
DC 160mA
320V×2
2.5V 3A
6.3V 3A
(12)

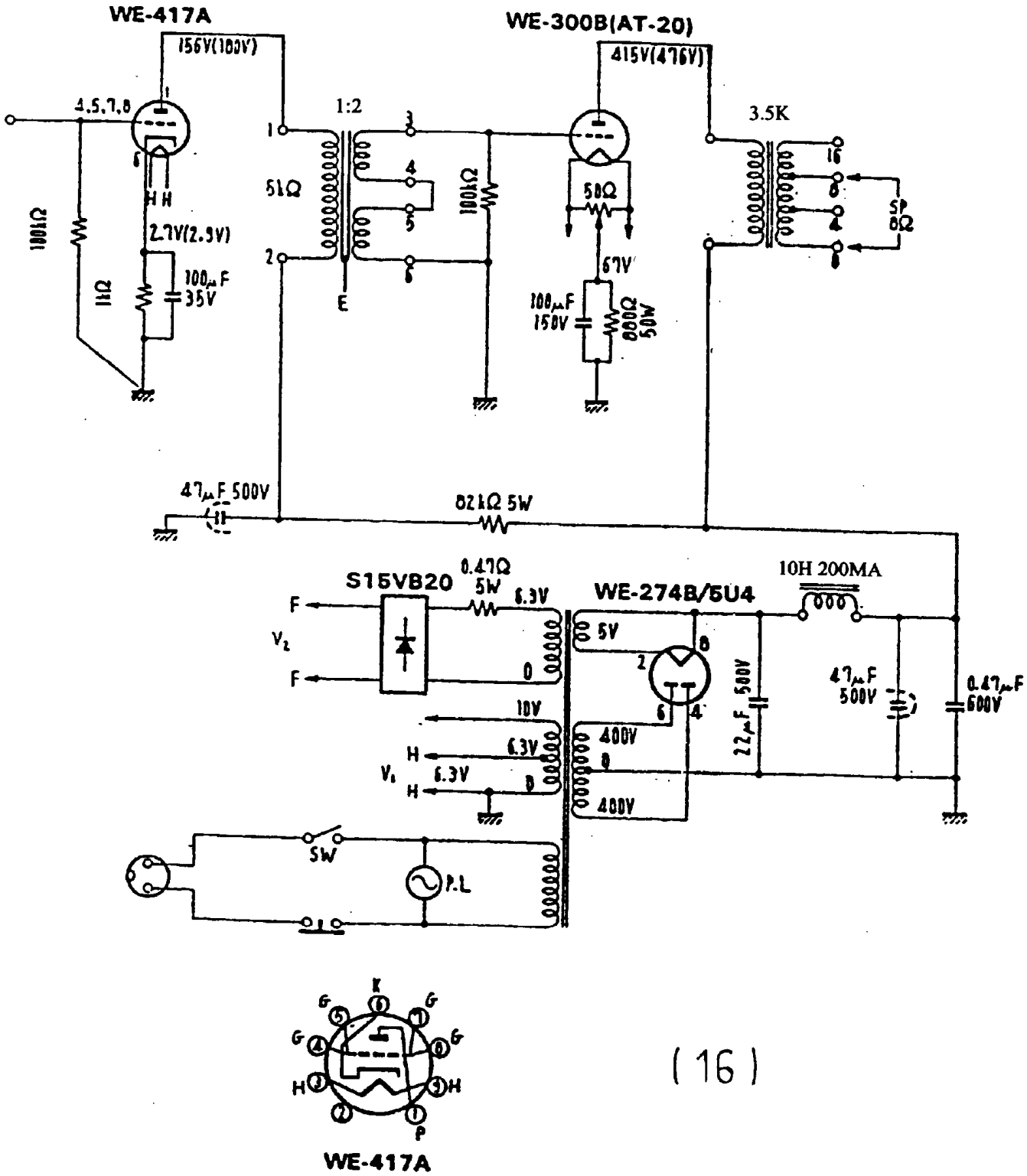

6SL7GT
300B
525V
142V
100Ω
F F
470K
4.7K
IN
0.1
100K
203V
25W 1K
25W 1K
25W 1.2K
250V 100μ
470K
270K
4.7K
10V 470μ
630V 0.047μ
3K
8
9
10
11
12
5
4
3
1
OUT 6Ω
63.5mA
A
B2 281V
B1 532V
1W 220K
5H 180MA
5V 4A
5W 10Ω
1W 220K
5U4GB
4A
450V
400V
90V
1W 270K
350V 47μ
1W 270K
C1
C3
10V
6.3V
4A
H
6SL7
H
0
0
A
1W 270K
350V 47μ
1W 270K
C2
400V
450V
C1, C2: 350V/220μ×2
C3: 500V/100μ×2
5V 2A
5B1
10V 10,000μ
300B
F
5V 2A
5B1
10V 10,000μ
300B
F

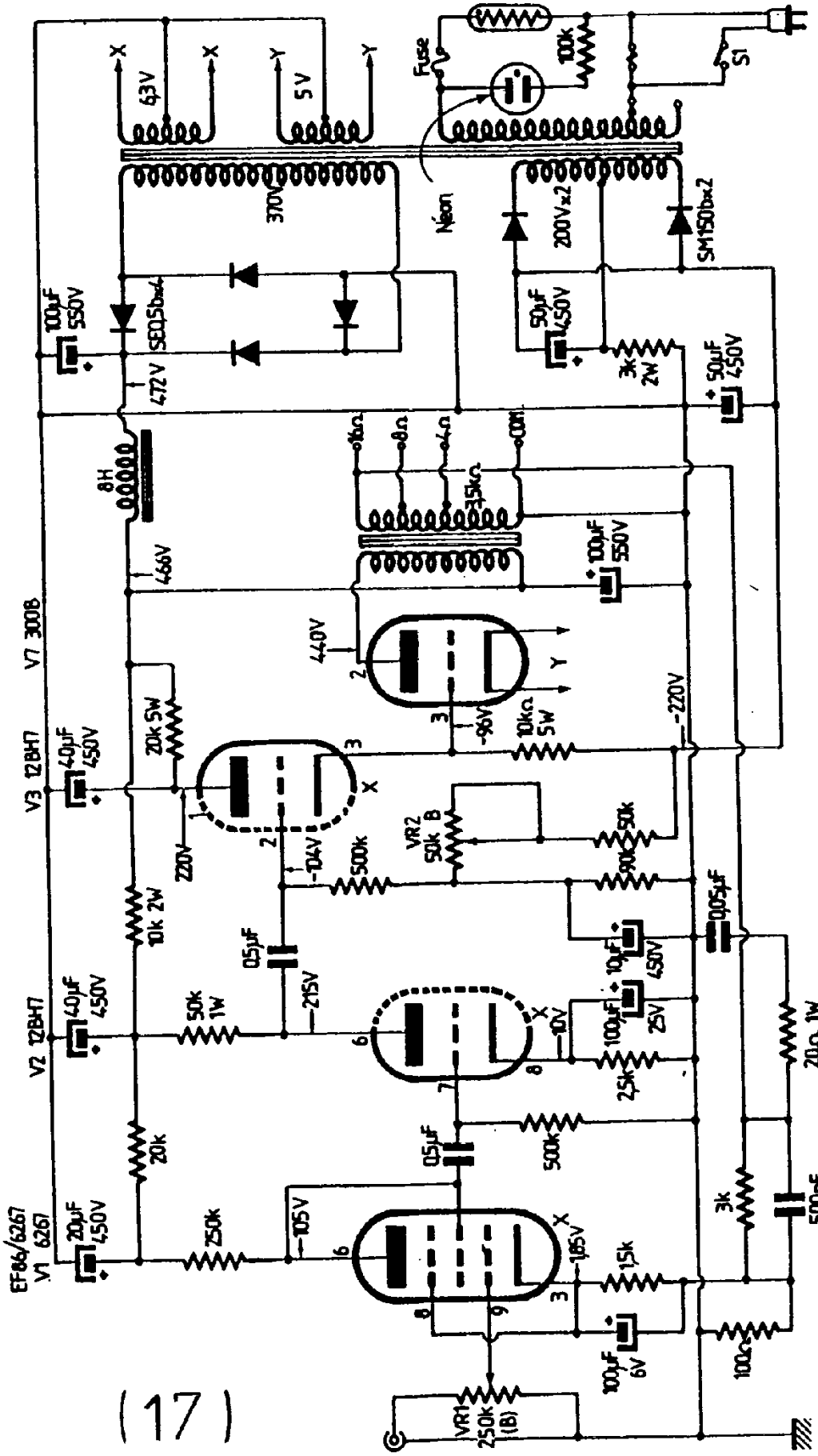

6SL7(½)
6SL7(½)
300B
410V
144V
IN
0.1μ 630V
270K
3.3K
16V 470μ
270K
150K
390K
50Ω
70V
30W 1K
100V 470μ
3K
16Ω
8Ω
4Ω
OUT
288V
416V
CH.2
CH.2
P.S
110V
FUSE 3A
5U4GB
5H 180MA
5V 3.3A
400V
360V
500V 47μ
3W
39K
100μ×2
500V
100μ×2
500V
1W
1M
GBPC
2502
16V
10000μ
5V
3.3A
6.3V
300B
GBPC
2502
16V
10000μ
10V
6.3V
6SL7
3.3A
100V
360V
400V
0

(14)

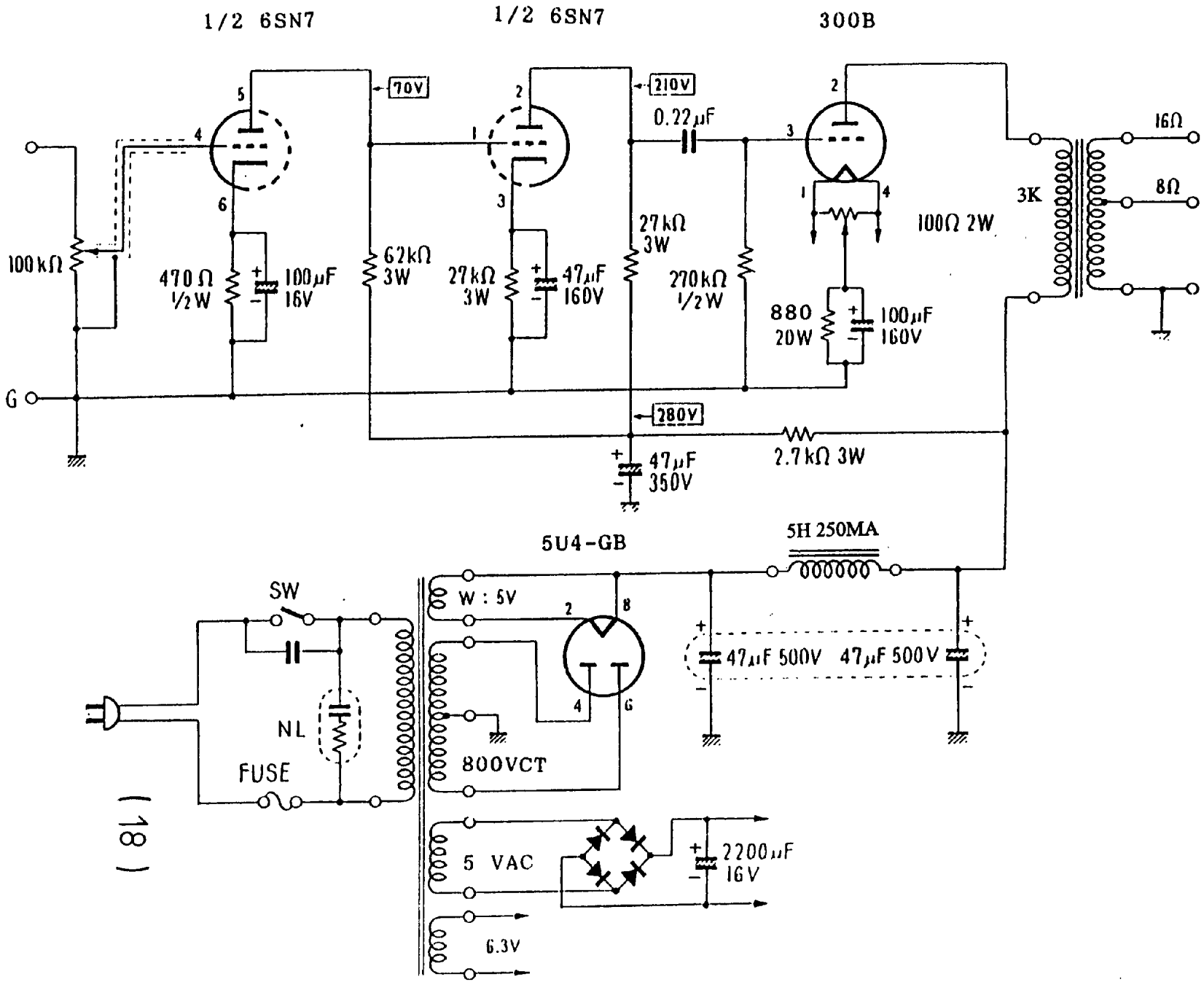

6SL7
IG IP
2K 1K
2P H
2G H
300B
P G
F F
5U4GB
IP
2P
F
NC F

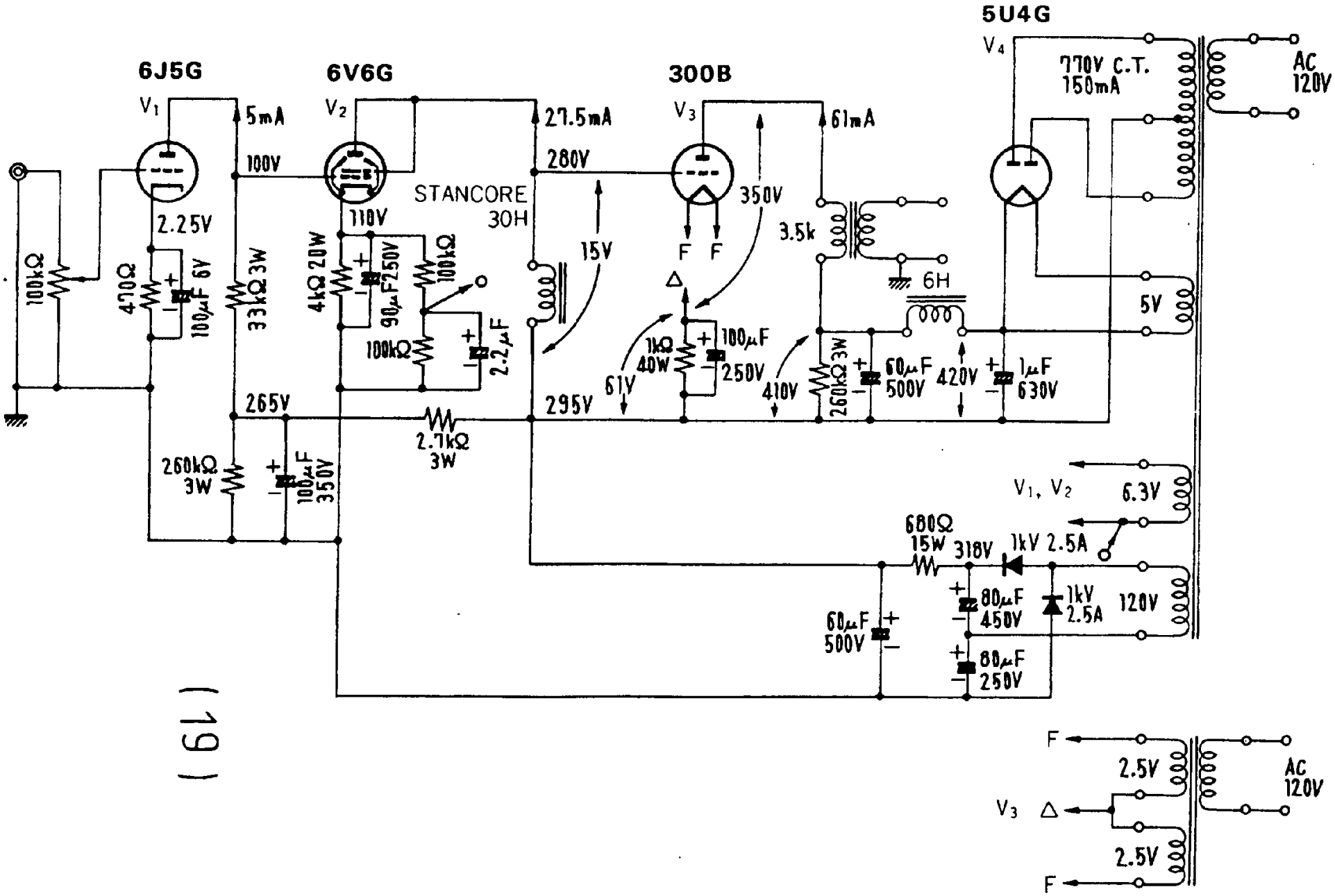

V1 WE-310A
V2 WE-300B
INPUT
140V
385V
C2 0.15μF
300V
VR1
200kΩ(B)
2.8V
C1
470μF
6.3V
R1
1.1kΩ
MF7C
R2 100kΩ 2W
R3
1MΩ
RN-65
R4 240kΩ
1W
R5
R6
27Ω
1W
F
64V
R7
880Ω
C3
210μF
200V
P
3.5K
16
8
4
0
OUT
PUT
B
84.5V
R9
39kΩ
4W
1N9738
(33V)
RD51F
(51V)
C4
100μF
150V
(T)
333V
R8
6.8kΩ 2W
392V
C6b
47μF
300V
(L)
C6a
47μF
500V
(L)
C12
3600pF 1.5kV
V3
WE-274B/5U4G
15H 150MA
F.H.
R16
100kΩ
1/4W
N.L.
AC
110V
50/60Hz
C11
3600pF
1.5kV
400V
R10
100Ω
3W
360V
0
360V
R11
100Ω 3W
400V
5V 3.3A
0
R12
100Ω
6W
403V
C5a
47μF
500V
(L)
C5b
47μF
500V
(L)
C9
3.3μF
16V
78H05SC
10V
3.3A
6.3V
0
R15 0.47Ω
5W
C11
4,700μF
16V
R13 0.47Ω
5W
1
2
C10
3.3μF
16V
5.0V
F
F'
R14
0.47Ω
5W
C8 4,700μF 16V
KBPC802
10.2V
310A

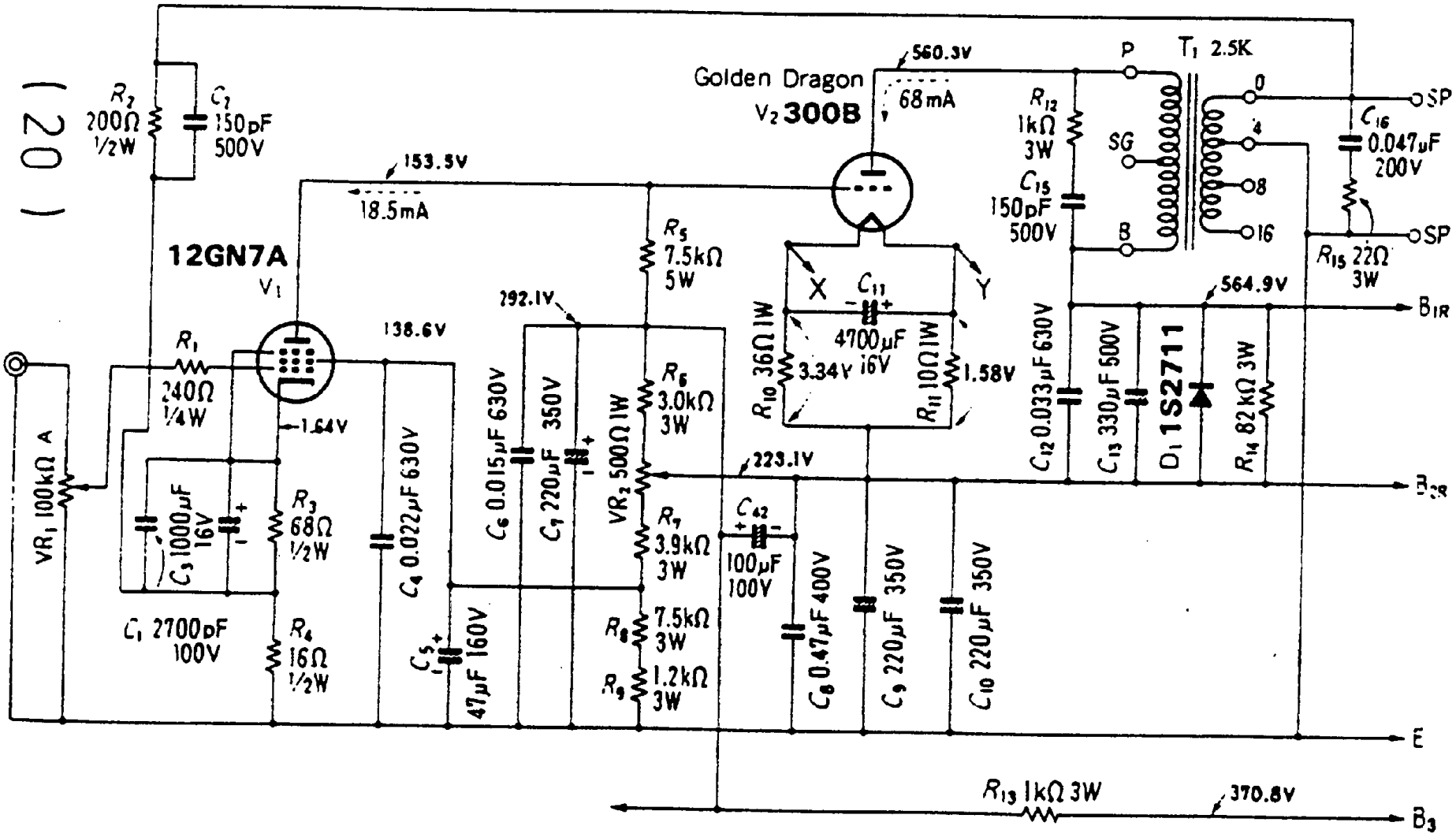

WE-417A
156V(180V)
4.5.7.8
100kΩ
1kΩ
2.7V(2.9V)
100μF 35V
1:2
51Ω
100Ω
WE-300B(AT-20)
415V(476V)
50Ω
67V
100μF 150V
800Ω 50W
3.5K
16
8
4
2
SP 8Ω
47μF 500V
82kΩ 5W
S15VB20
0.47Ω 5W
6.3V
F
V2
F
0
10V
H
6.3V
V1
6.3V
H
0
WE-274B/5U4
10H 200MA
5V
2
8
6
4
400V
0
400V
22μF 500V
47μF 500V
0.47μF 600V
SW
P.L
K
G
G
G
G
H
H
P
WE-417A

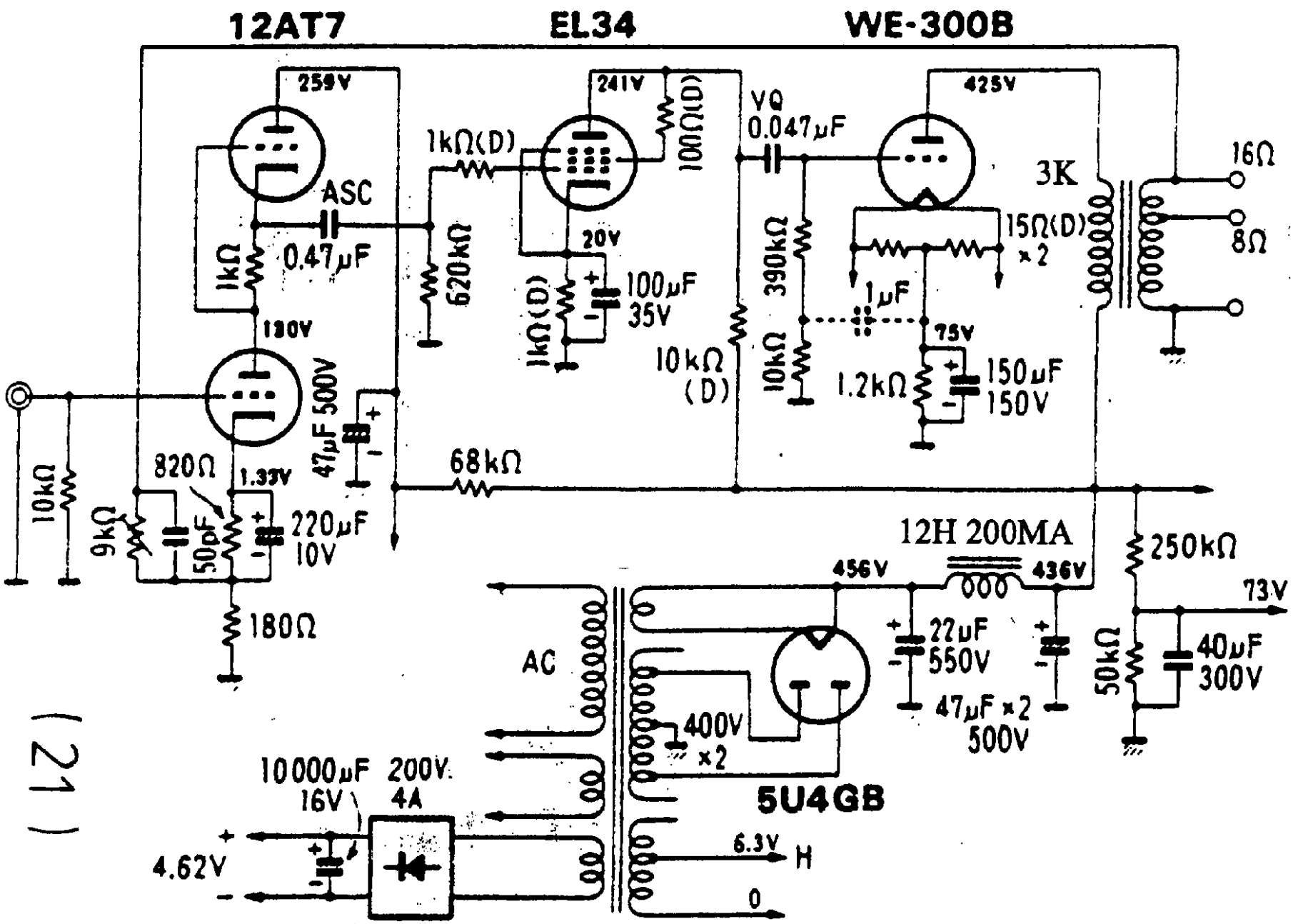

Fuse
100k
S1
X
X
Y
Y
6.3V
5V
370V
Neon
200V×2
SM1500×2
100μF 550V
SEC15×4
472V
50μF 450V
3k 2W
50μF 450V
8H
466V
8Ω
4Ω
COM
3.5kΩ
100μF 550V
V7 30C8
440V
Y
-96V
10kΩ 5W
-220V
V3 12BH7
40μF 450V
20k 5W
X
220V
-104V
VR2 50k B
500k
50k
90k
10k 2W
0.05μF
10μF 450V
V2 12BH7
40μF 450V
50k 1W
-215V
X
-10V
100μF 25V
25k
20Ω 1W
20k
500k
0.05μF
EF86/6267
V1 6267
20μF 450V
250k
-105V
X
-165V
15k
3k
500pF
100μF 6V
100Ω
VR1 250k (B)

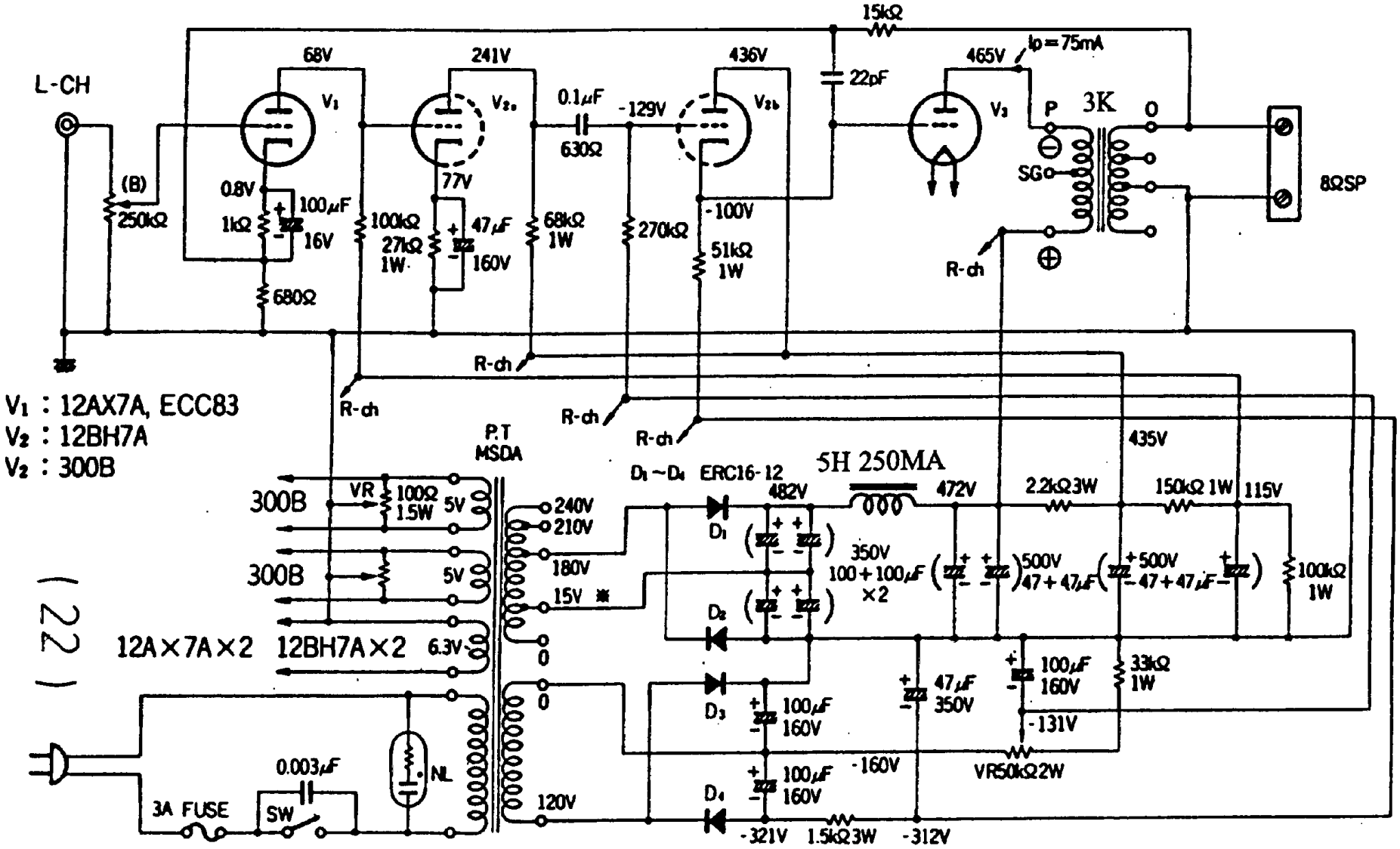
(17)

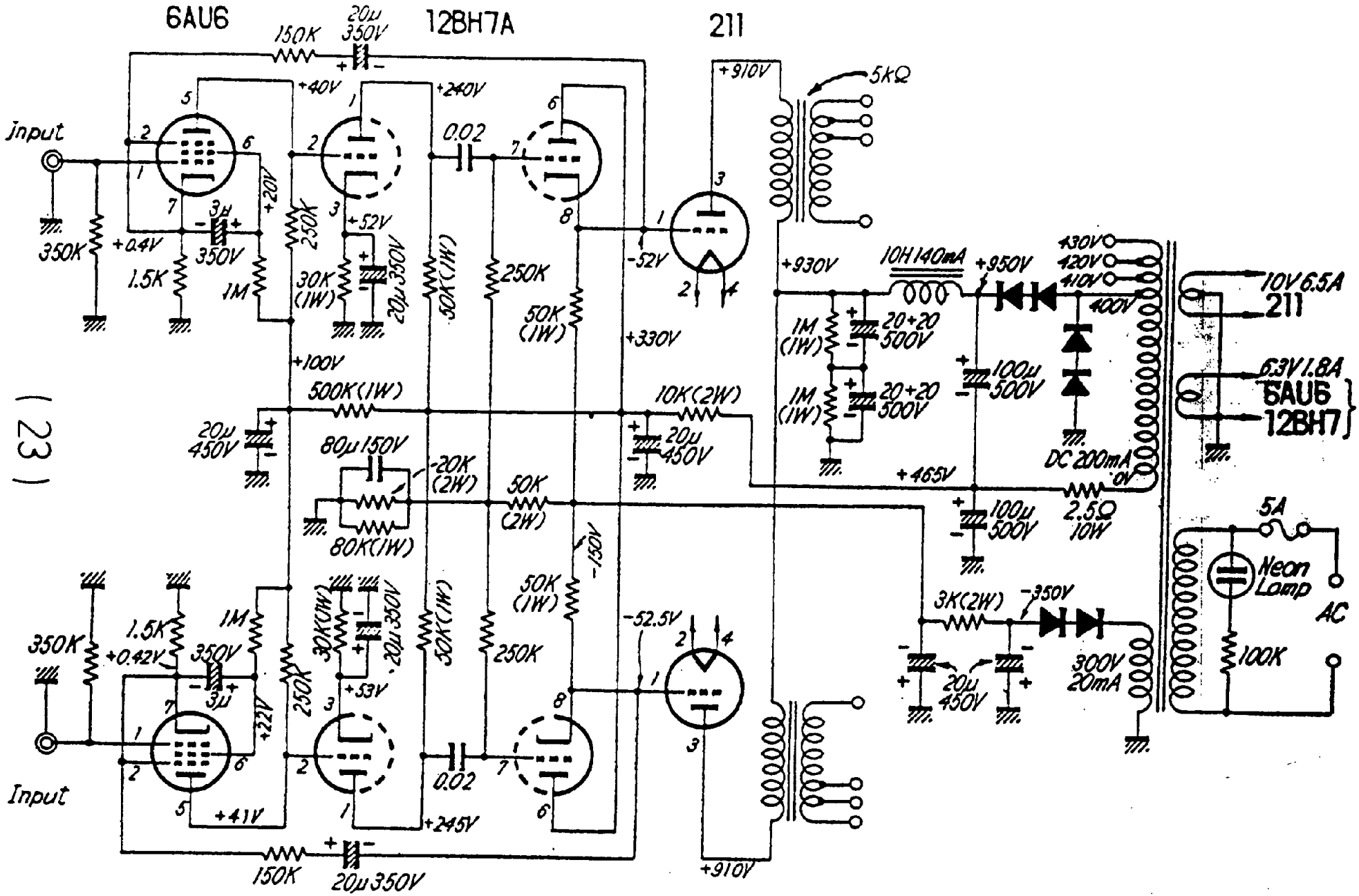

1/2 6SN7
1/2 6SN7
300B
70V
210V
0.22μF
16Ω
8Ω
3K
100Ω 2W
100kΩ
470Ω 1/2W
100μF 16V
62kΩ 3W
27kΩ 3W
47μF 160V
27kΩ 3W
270kΩ 1/2W
880 20W
100μF 160V
G
280V
47μF 350V
2.7kΩ 3W
5U4-GB
5H 250MA
SW
W : 5V
47μF 500V
47μF 500V
NL
FUSE
800VCT
5 VAC
2200μF 16V
6.3V

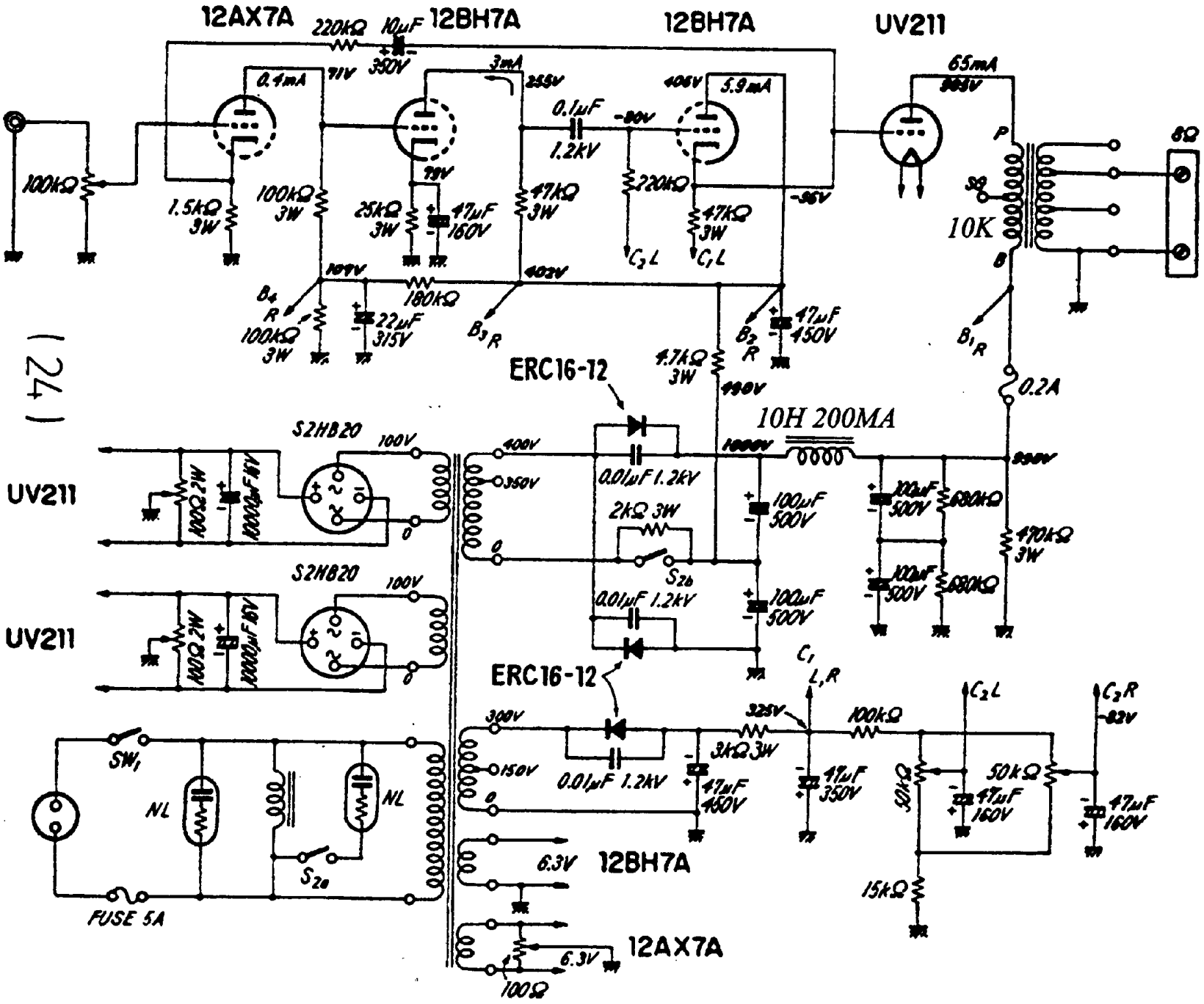

6J5G
6V6G
300B
5U4G
V1
V2
V3
V4
5mA
27.5mA
61mA
100V
280V
350V
770V C.T.
150mA
AC
120V
STANCORE
30H
110V
2.25V
15V
3.5k
6H
5V
100kΩ
470Ω
100μF 6V
33kΩ 3W
4kΩ 20W
90μF 250V
100kΩ
100kΩ
2.2μF
1kΩ
40W
100μF
250V
61V
410V
260kΩ 3W
60μF
500V
420V
1μF
630V
265V
295V
2.7kΩ
3W
260kΩ
3W
100μF
350V
V1, V2
6.3V
680Ω
15W
318V
1kV 2.5A
80μF
450V
1kV
2.5A
120V
60μF
500V
80μF
250V
F
2.5V
AC
120V
V3
2.5V
F

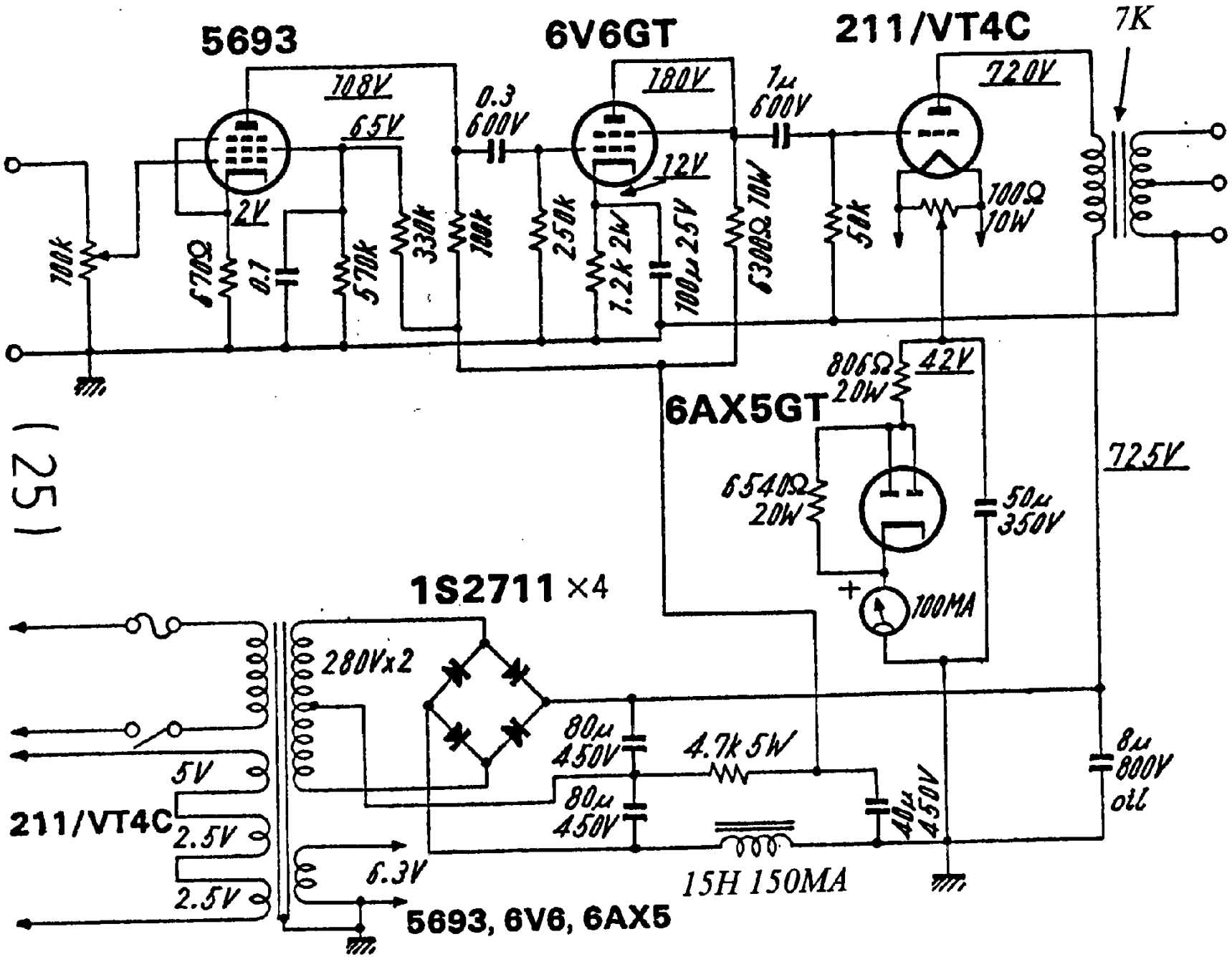

Golden Dragon
V2 300B
560.3V
68mA
P
T1 2.5K
0
4
8
16
SG
B
SP
SP
R12 1kΩ 3W
C15 150pF 500V
C16 0.047μF 200V
R15 22Ω 3W
564.9V
B1R
B2R
153.5V
18.5mA
12GN7A
V1
R5 7.5kΩ 5W
X
Y
C11 4700μF 16V
R10 36Ω 1W
3.34V
R11 10Ω 1W
1.58V
292.1V
138.6V
R1 240Ω 1/4W
1.64V
R6 3.0kΩ 3W
223.1V
C12 0.033μF 630V
C13 330μF 500V
D1 1S2711
R14 82kΩ 3W
VR1 100kΩ A
C3 1000μF 16V
R3 68Ω 1/2W
C1 2700pF 100V
R4 16Ω 1/2W
C4 0.022μF 630V
C5 47μF 160V
C6 0.015μF 630V
C7 220μF 350V
VR2 500Ω 1W
R7 3.9kΩ 3W
R8 7.5kΩ 3W
R9 1.2kΩ 3W
C42 100μF 100V
C8 0.47μF 400V
C9 220μF 350V
C10 220μF 350V
E
R13 1kΩ 3W
370.8V
B3


12AT7
EL34
WE-300B
259V
241V
425V
ASC
0.47μF
1kΩ
1kΩ(D)
620kΩ
100Ω(D)
VQ
0.047μF
20V
100μF
35V
1kΩ(D)
10kΩ
(D)
390kΩ
10kΩ
3K
15Ω(D)
×2
1μF
75V
1.2kΩ
150μF
150V
16Ω
8Ω
130V
47μF 500V
68kΩ
10kΩ
820Ω
1.35V
9kΩ
50pF
220μF
10V
180Ω
12H 200MA
456V
436V
250kΩ
73V
AC
22μF
550V
47μF ×2
500V
50kΩ
40μF
300V
400V
×2
5U4GB
10000μF 200V
16V
4A
4.62V
6.3V
H
0

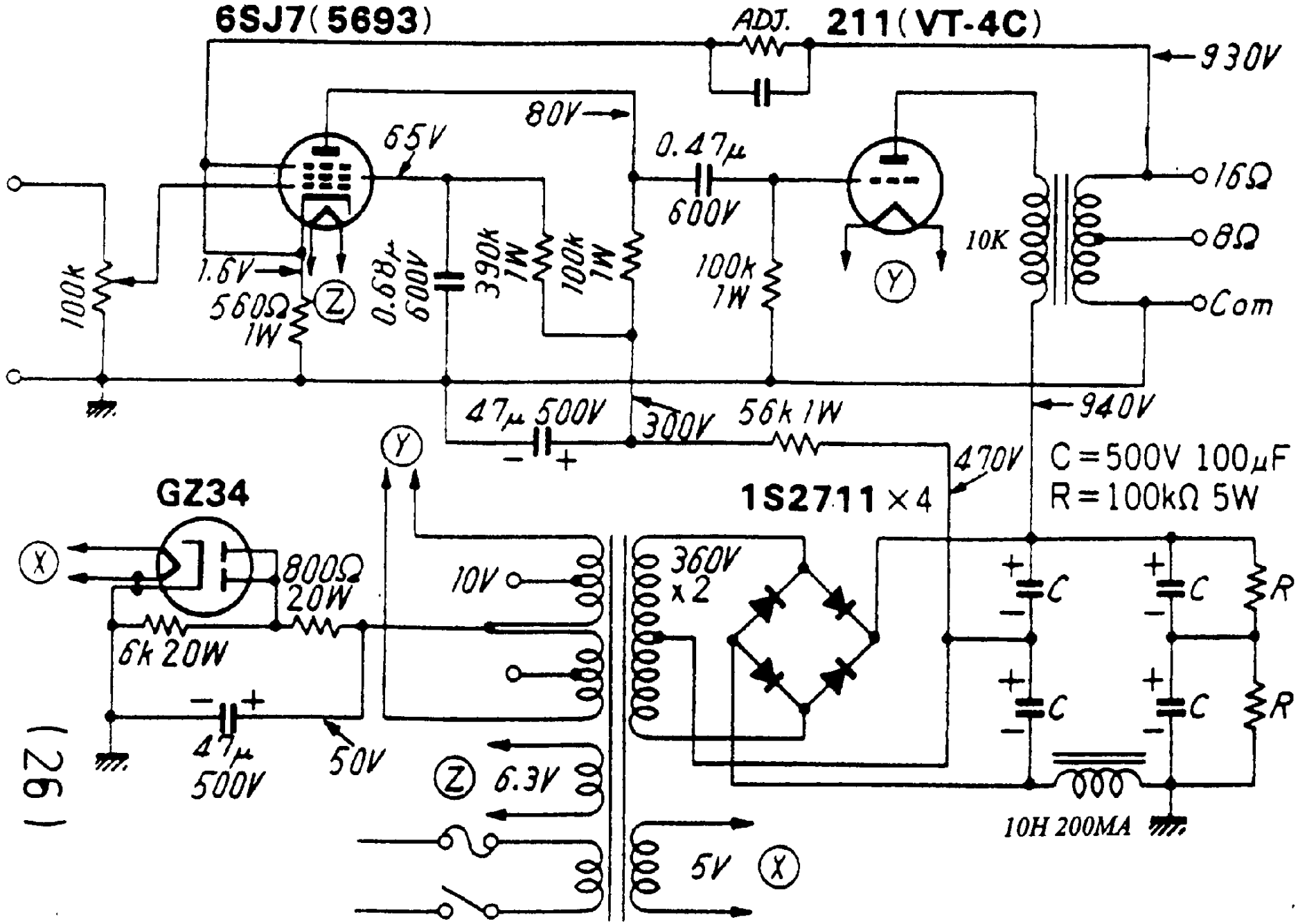

L-CH
R-ch
15kΩ
68V
241V
436V
465V
Ip=75mA
V1
V2a
V2b
V3
0.1μF
630Ω
-129V
22pF
P
3K
0
SG
8ΩSP
(B)
250kΩ
0.8V
1kΩ
100μF
16V
680Ω
100kΩ
27kΩ 1W
77V
47μF
160V
68kΩ 1W
270kΩ
-100V
51kΩ 1W
V1 : 12AX7A, ECC83
V2 : 12BH7A
V2 : 300B
P.T
MSOA
5H 250MA
D1~D4 ERC16-12
435V
482V
472V
2.2kΩ3W
150kΩ 1W
115V
300B
VR 100Ω 1.5W
5V
240V
210V
180V
15V ※
0
350V
100+100μF ×2
500V
47+47μF
100kΩ 1W
12A×7A×2
12BH7A×2
6.3V
47μF 350V
100μF 160V
33kΩ 1W
-131V
VR50kΩ2W
-160V
0.003μF
NL
3A FUSE
SW
120V
-321V
1.5kΩ3W
-312V

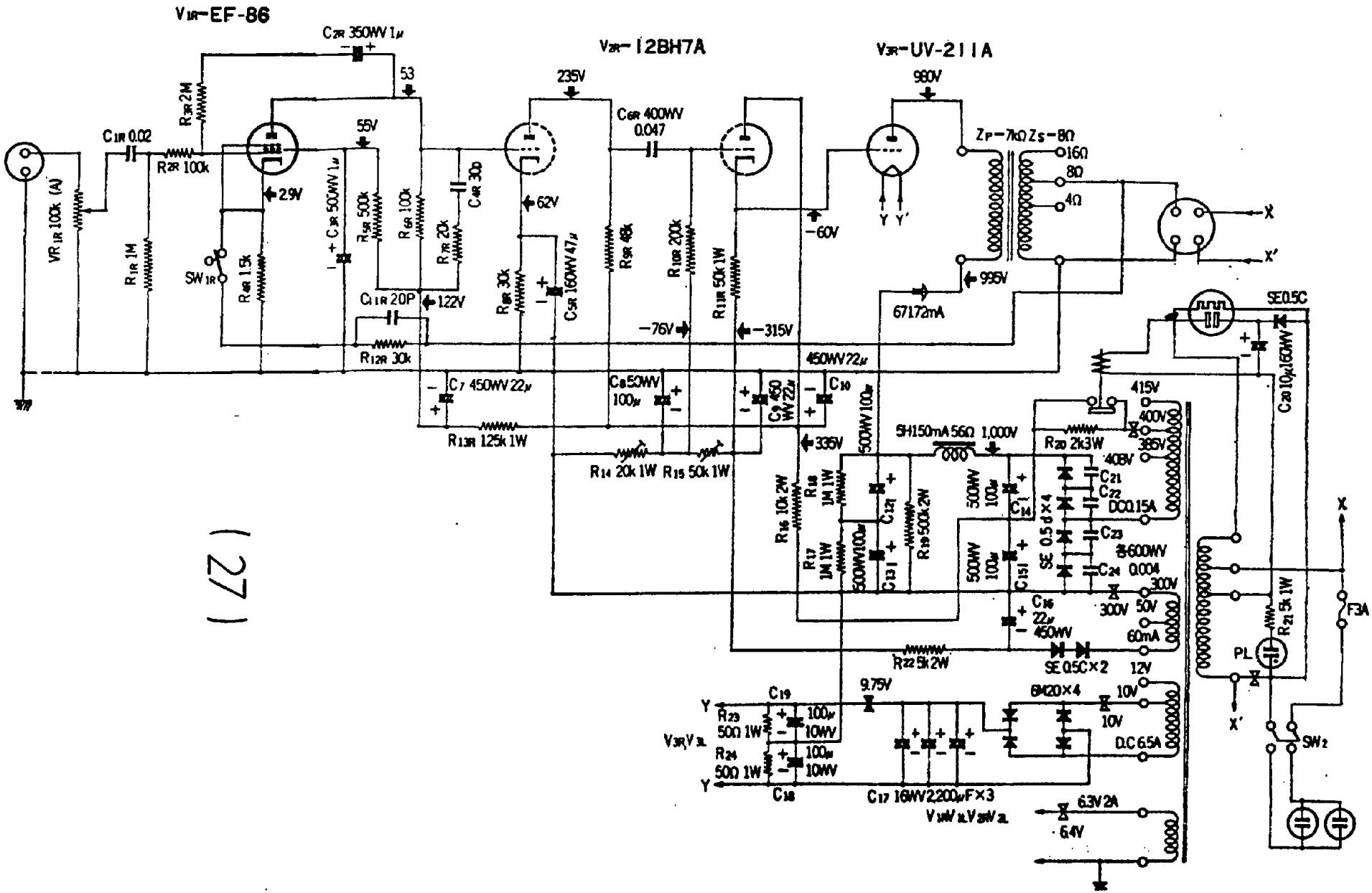

6AU6
12BH7A
211
150K
20μ 350V
+40V
+240V
Input
0.02
+910V
5KΩ
350K
+0.4V
1.5K
350V
3μ
1M
250K
+20V
+52V
30K (1W)
20μ 350V
50K (1W)
250K
50K (1W)
-52V
+930V
10H 140mA
+950V
430V
420V
410V
400V
10V 6.5A
211
6.3V 1.8A
6AU6
12BH7
+330V
+100V
500K (1W)
10K (2W)
20μ 450V
80μ 150V
-20K (2W)
50K (2W)
80K (1W)
-150V
-52.5V
+465V
100μ 500V
2.5Ω 10W
DC 200mA
0V
5A
Neon Lamp
AC
100K
3K (2W)
-350V
300V 20mA
+53V
+41V
+245V
+22V
+0.42V
Input
150K
20μ 350V
+910V

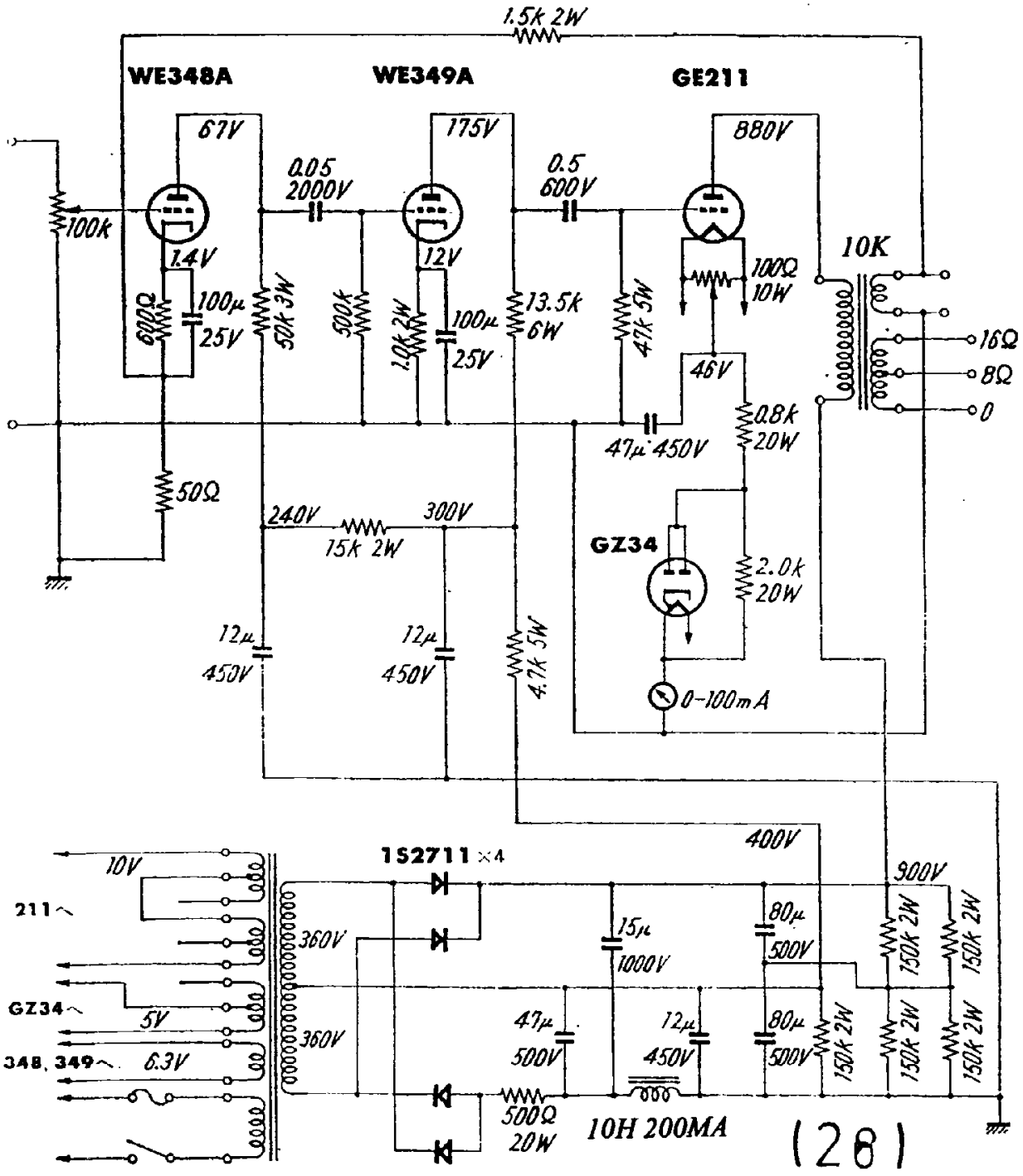

12AX7A
220kΩ
10μF
12BH7A
12BH7A
UV211
390V
0.4mA
71V
3mA
255V
405V
5.9mA
65mA
0.1μF
1.2kV
-80V
100kΩ
1.5kΩ 3W
100kΩ 3W
25kΩ 3W
47μF 160V
79V
47kΩ 3W
220kΩ
47kΩ 3W
-95V
C2L
C1L
10K
8Ω
P
SG
B
109V
402V
180kΩ
B4 R
100kΩ 3W
22μF 315V
B3R
B2 R
47μF 450V
4.7kΩ 3W
490V
B1R
0.2A
ERC16-12
10H 200MA
S2HB20
100V
UV211
400V
350V
0.01μF 1.2kV
2kΩ 3W
100μF 500V
S2b
1000V
930V
100μF 500V
680kΩ
470kΩ 3W
S2HB20
100V
UV211
ERC16-12
C1 L,R
C2L
C2R
-82V
300V
325V
100kΩ
150V
3kΩ 3W
0.01μF 1.2kV
47μF 450V
47μF 350V
50kΩ
47μF 160V
47μF 160V
15kΩ
SW1
NL
NL
S2a
FUSE 5A
6.3V
12BH7A
6.3V
12AX7A
100Ω

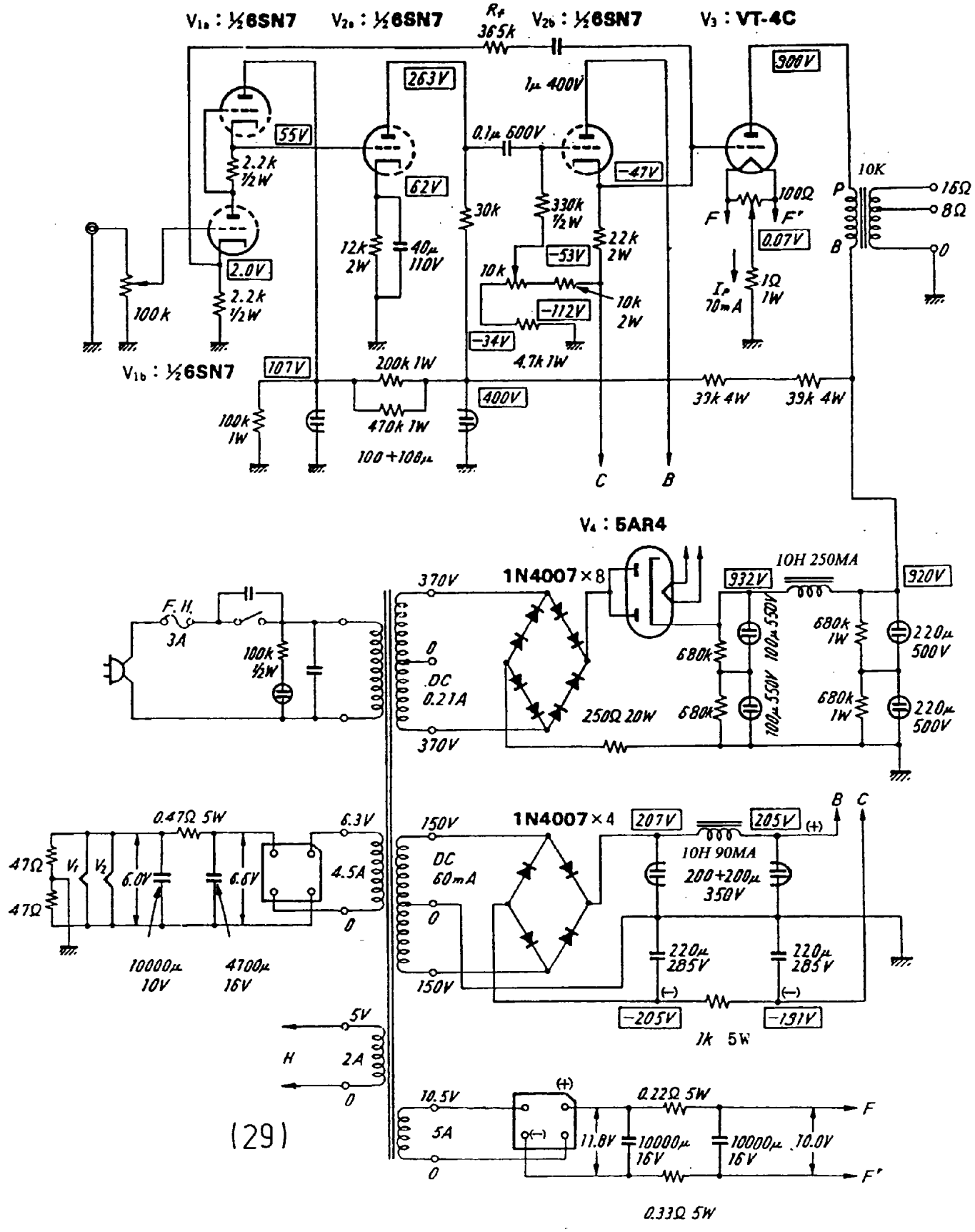

5693
6V6GT
211/VT4C
7K
108V
6.5V
0.3
600V
180V
1μ
600V
720V
12V
2V
100k
670Ω
0.1
570k
330k
100k
250k
1.2k 2W
100μ 25V
6300Ω 10W
51k
100Ω
10W
806Ω
20W
42V
6AX5GT
725V
6540Ω
20W
50μ
350V
100MA
1S2711 ×4
280Vx2
80μ
450V
4.7k 5W
80μ
450V
40μ
450V
8μ
800V
oil
5V
211/VT4C
2.5V
2.5V
6.3V
15H 150MA
5693, 6V6, 6AX5

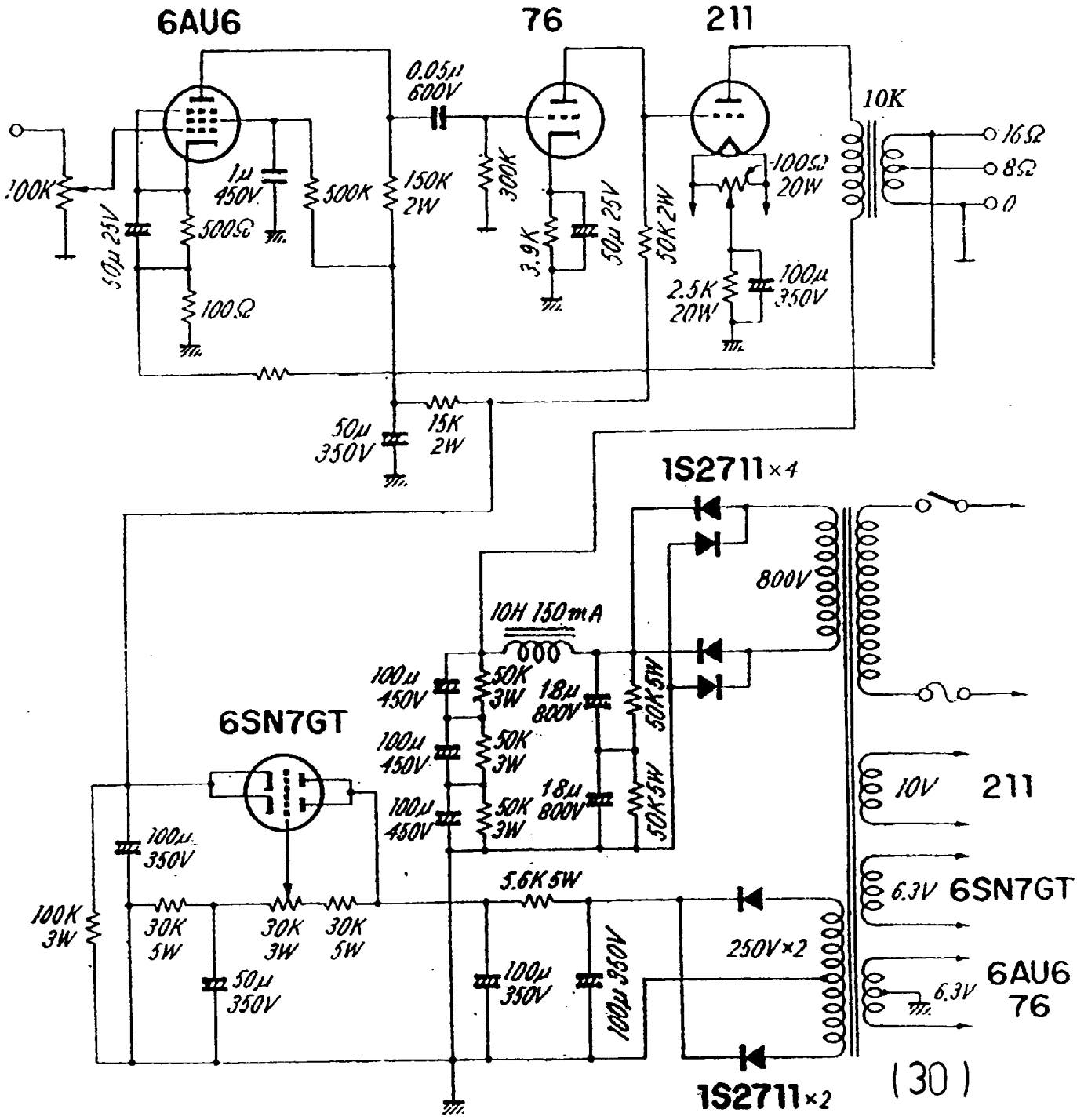
(25)

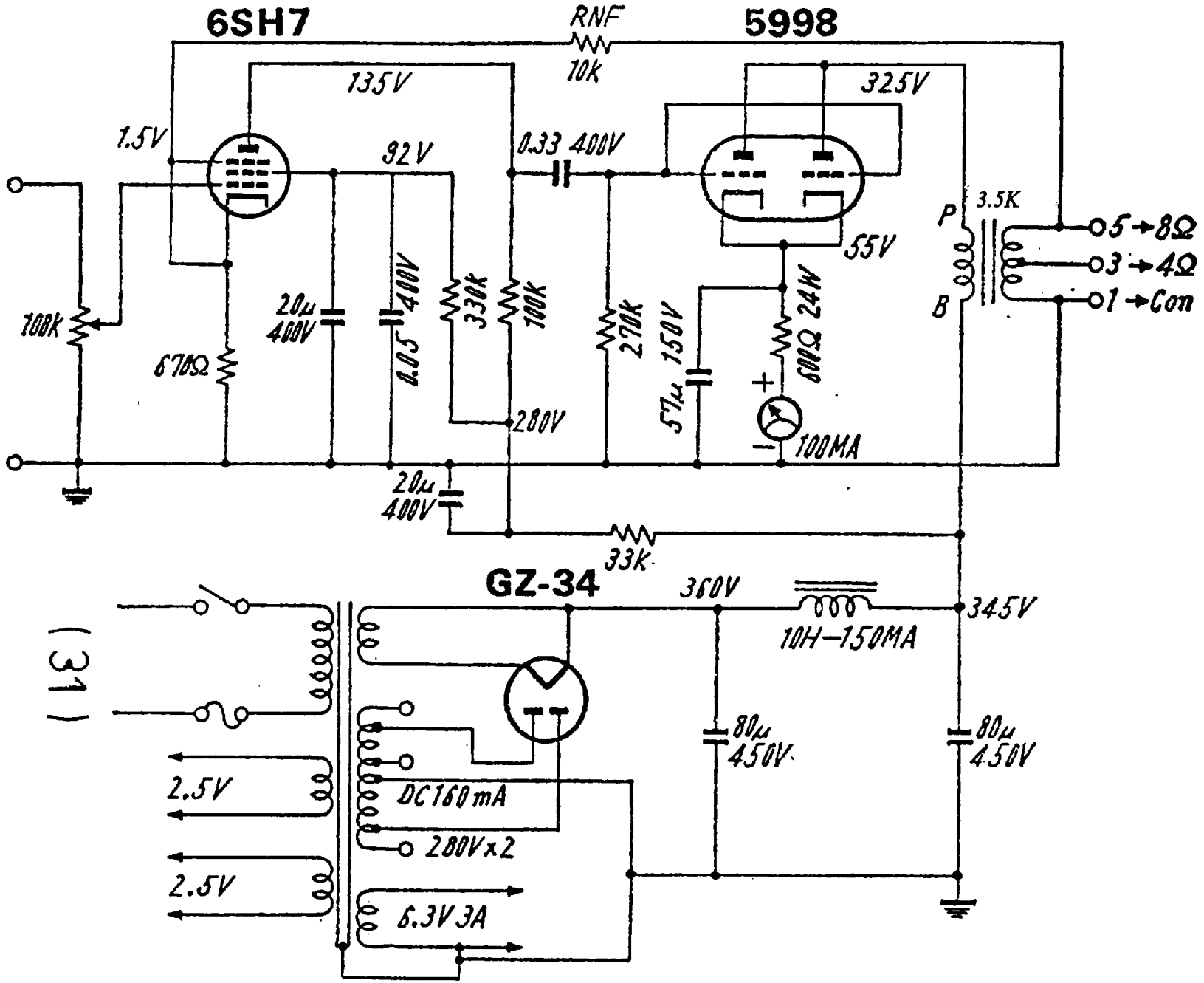

6SJ7(5693)
ADJ.
211(VT-4C)
930V
80V
65V
0.47μ
600V
16Ω
8Ω
Com
10K
100k
1.6V
560Ω 1W
0.68μ 600V
390k 1W
100k 1W
100k 1W
940V
47μ 500V
300V
56k 1W
470V
C=500V 100μF
R=100kΩ 5W
GZ34
1S2711×4
800Ω 20W
6k 20W
47μ 500V
50V
10V
360V ×2
6.3V
5V
10H 200MA

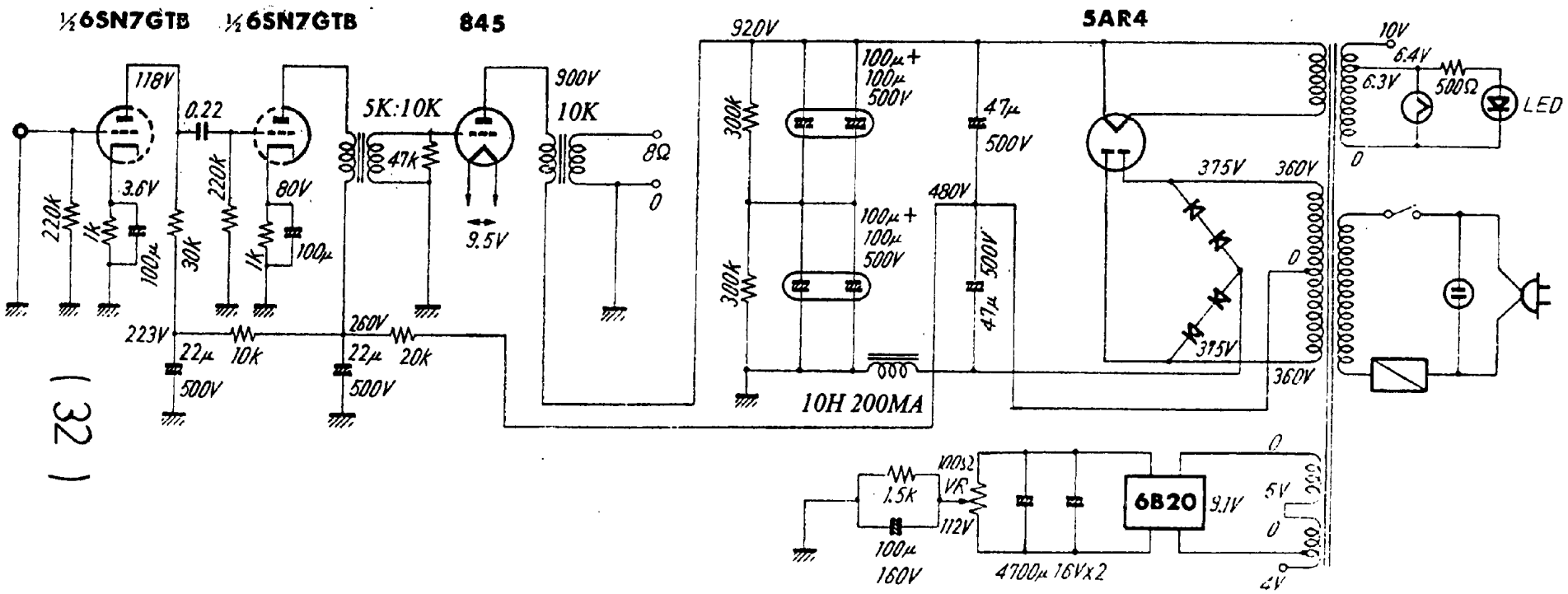

V1R-EF-86
V2R-12BH7A
V3R-UV-211A
C2R 350WV 1μ
R3R 2M
C1R 0.02
R2R 100k
VR1R 100k (A)
R1R 1M
SW1R
R4R 1.5k
C3R 500WV 1μ
R5R 500k
R6R 100k
R7R 20k
C4R 30p
C1R 20P
R12R 30k
R8R 30k
C5R 160WV 47μ
C6R 400WV 0.047
R9R 48k
R10R 200k
R11R 50k 1W
C7 450WV 22μ
R13R 125k 1W
C8 50WV 100μ
C9 450WV 22μ
C10 450WV 72μ
R14 20k 1W
R15 50k 1W
R16 10k 2W
R17 1M 1W
R18 1M 1W
C12 500WV 100μ
C13 500WV 100μ
R19 500k 2W
C14 500WV 100μ
C15 500WV 100μ
5H 150mA 56Ω
1,000V
R20 2k 3W
C21
C22
DC0.15A
C23
C24 0.004
SE 0.5d×4
SE 0.5C×2
C16 22μ 450WV
R22 5k 2W
C19
R23 50Ω 1W
R24 50Ω 1W
100μ 10WV
C18
C17 16WV 2200μF×3
6H20×4
D.C 6.5A
6.3V 2A
6.4V
SE0.5C
C20 10μ 160WV
R21 5k 1W
PL
F3A
SW2
X
X'
Y
Y'
67172mA
235V
980V
995V
415V
400V
385V
408V
300V
50V
60mA
12V
10V
9.75V
335V
-60V
-76V
-315V
122V
62V
55V
53
29V
Z_P-7kΩ Z_S-8Ω
16Ω
8Ω
4Ω

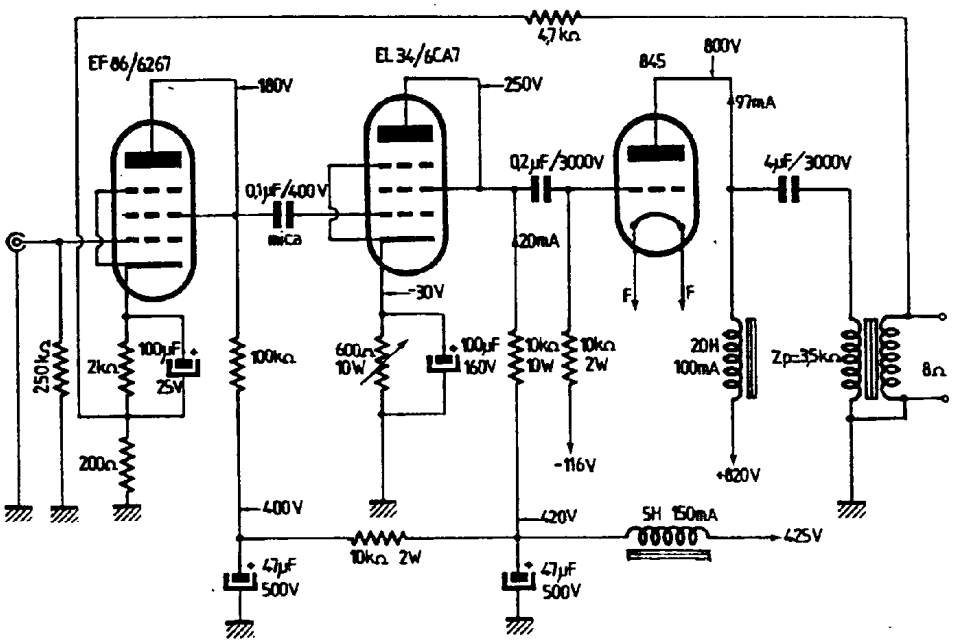

1.5k 2W
WE348A
WE349A
GE211
67V
175V
880V
0.05
2000V
0.5
600V
100k
1.4V
600Ω
100μ
25V
50k 3W
500k
12V
10k 2W
100μ
25V
13.5k
6W
47k 5W
100Ω
10W
10K
16Ω
8Ω
0
46V
47μ 450V
0.8k
20W
50Ω
240V
15k 2W
300V
GZ34
2.0k
20W
12μ
450V
12μ
450V
4.7k 5W
0-100mA
400V
1S2711 ×4
10V
211
360V
360V
GZ34
5V
348, 349
6.3V
15μ
1000V
80μ
500V
900V
150k 2W
150k 2W
47μ
500V
12μ
450V
80μ
500V
150k 2W
150k 2W
150k 2W
500Ω
20W
10H 200MA

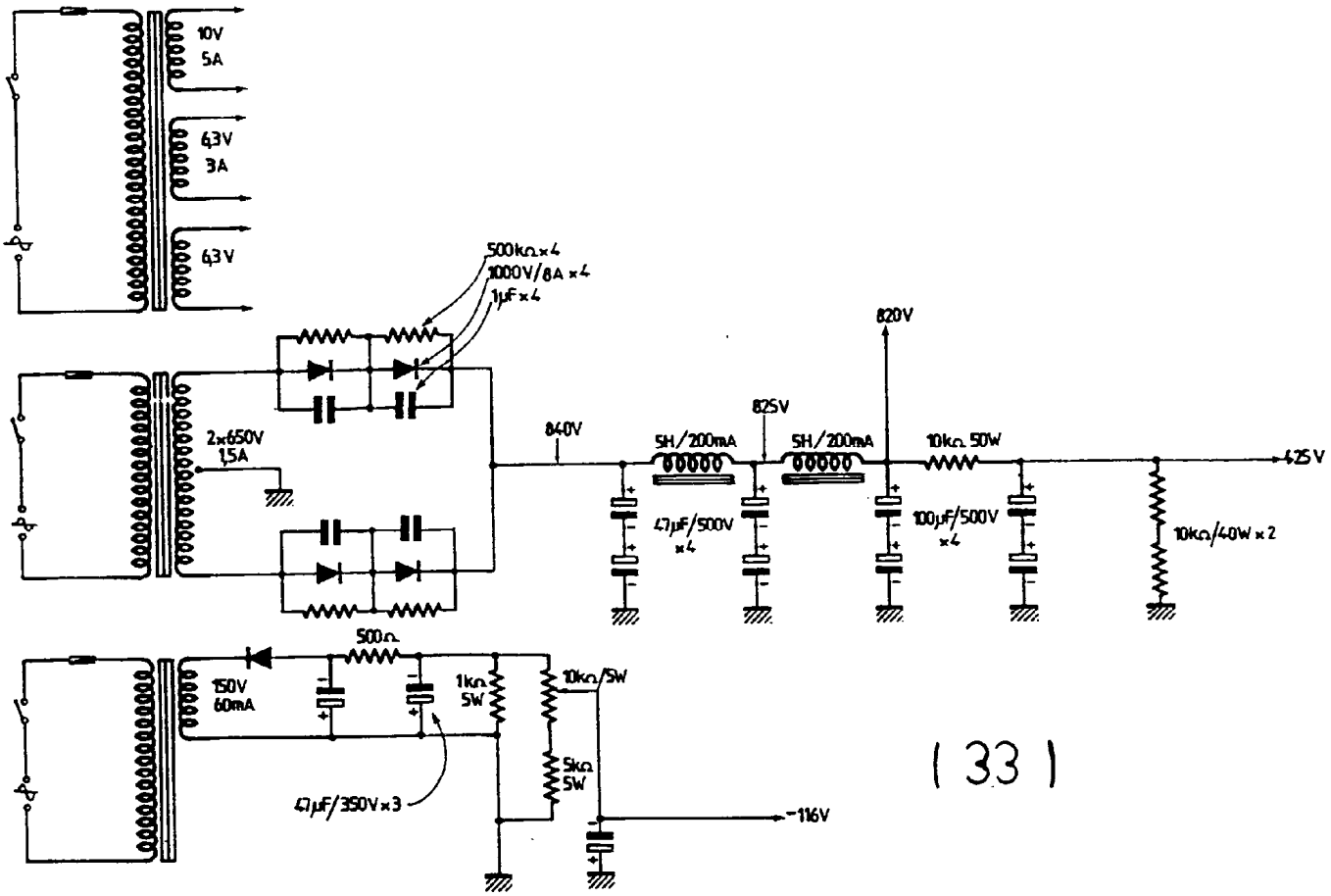

V1a : ½6SN7
V2a : ½6SN7
Rf 365k
V2b : ½6SN7
V3 : VT-4C
263V
1μ 400V
900V
55V
0.1μ 600V
2.2k ½W
62V
-47V
10K
100Ω
P
16Ω
8Ω
F
F'
0.07V
B
0
30k
330k ½W
12k 2W
40μ 110V
22k 2W
-53V
10k
2.0V
2.2k ½W
100k
10k 2W
-112V
Ip 70mA
1Ω 1W
-34V
4.7k 1W
V1b : ½6SN7
107V
200k 1W
400V
33k 4W
39k 4W
100k 1W
470k 1W
100+108μ
C
B
V4 : 5AR4
1N4007×8
10H 250MA
370V
932V
920V
F.H.
3A
100k ½W
0
DC 0.21A
370V
680k 1W
100μ 500V
220μ 500V
680k
250Ω 20W
0.47Ω 5W
6.3V
150V
1N4007×4
207V
205V
B
C
47Ω
V1
V2
6.0V
6.6V
4.5A
DC 60mA
10H 90MA
200+200μ 350V
47Ω
0
220μ 285V
10000μ 10V
4700μ 16V
150V
-205V
-191V
1k 5W
5V
H
2A
0
10.5V
5A
0.22Ω 5W
F
11.8V
10000μ 16V
10.0V
F'
0.33Ω 5W

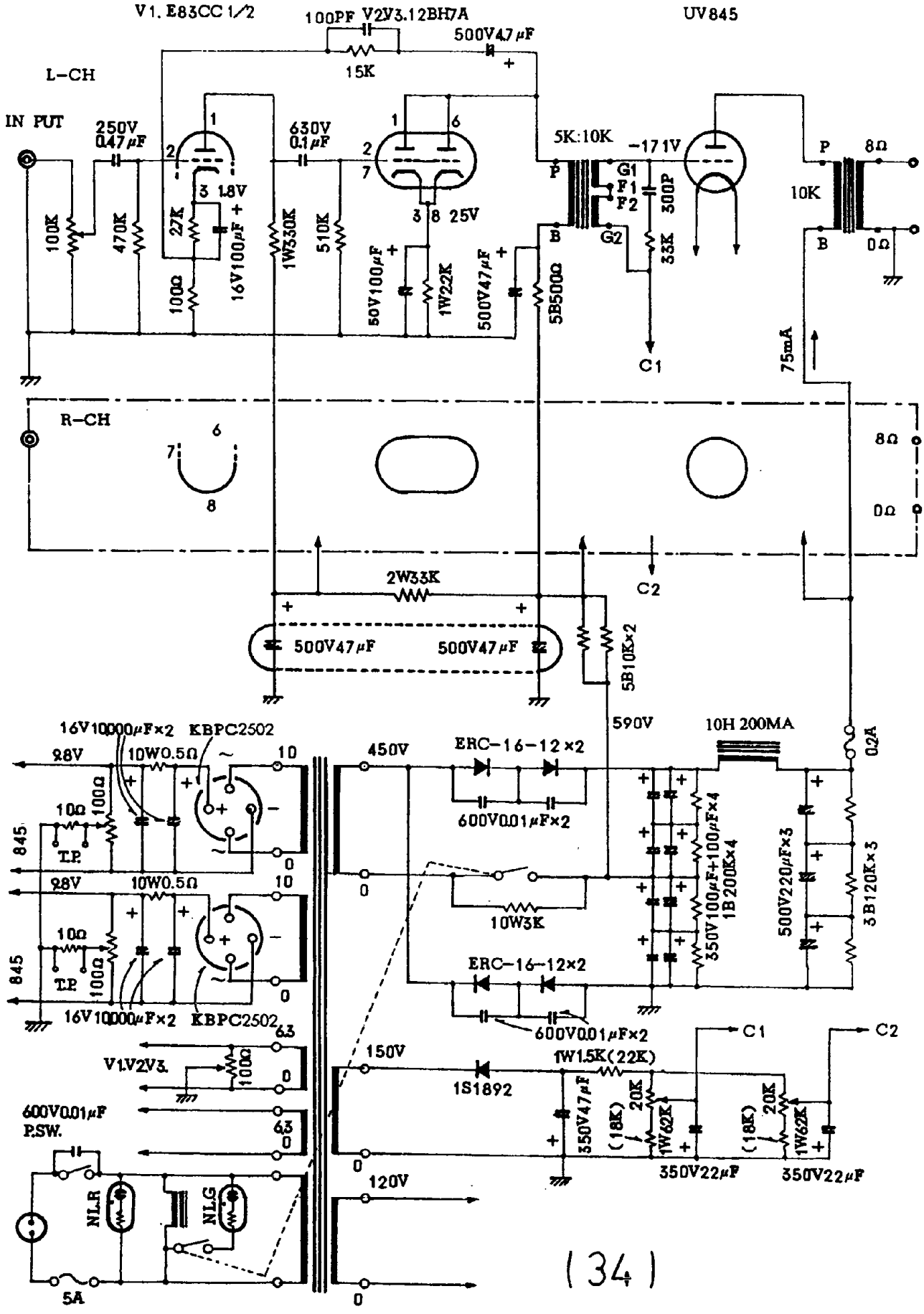

6AU6
76
211
0.05μ 600V
10K
16Ω
8Ω
0
100K
1μ 450V
500K
150K 2W
300K
50μ 25V
500Ω
100Ω
3.9K
50μ 25V
50K 2W
100Ω 20W
2.5K 20W
100μ 350V
50μ 350V
15K 2W
1S2711×4
800V
10H 150mA
100μ 450V
50K 3W
18μ 800V
50K 5W
6SN7GT
10V
211
100μ 350V
5.6K 5W
100K 3W
30K 5W
30K 3W
30K 5W
50μ 350V
100μ 350V
100μ 350V
250V×2
6.3V
6SN7GT
6AU6
76
1S2711×2

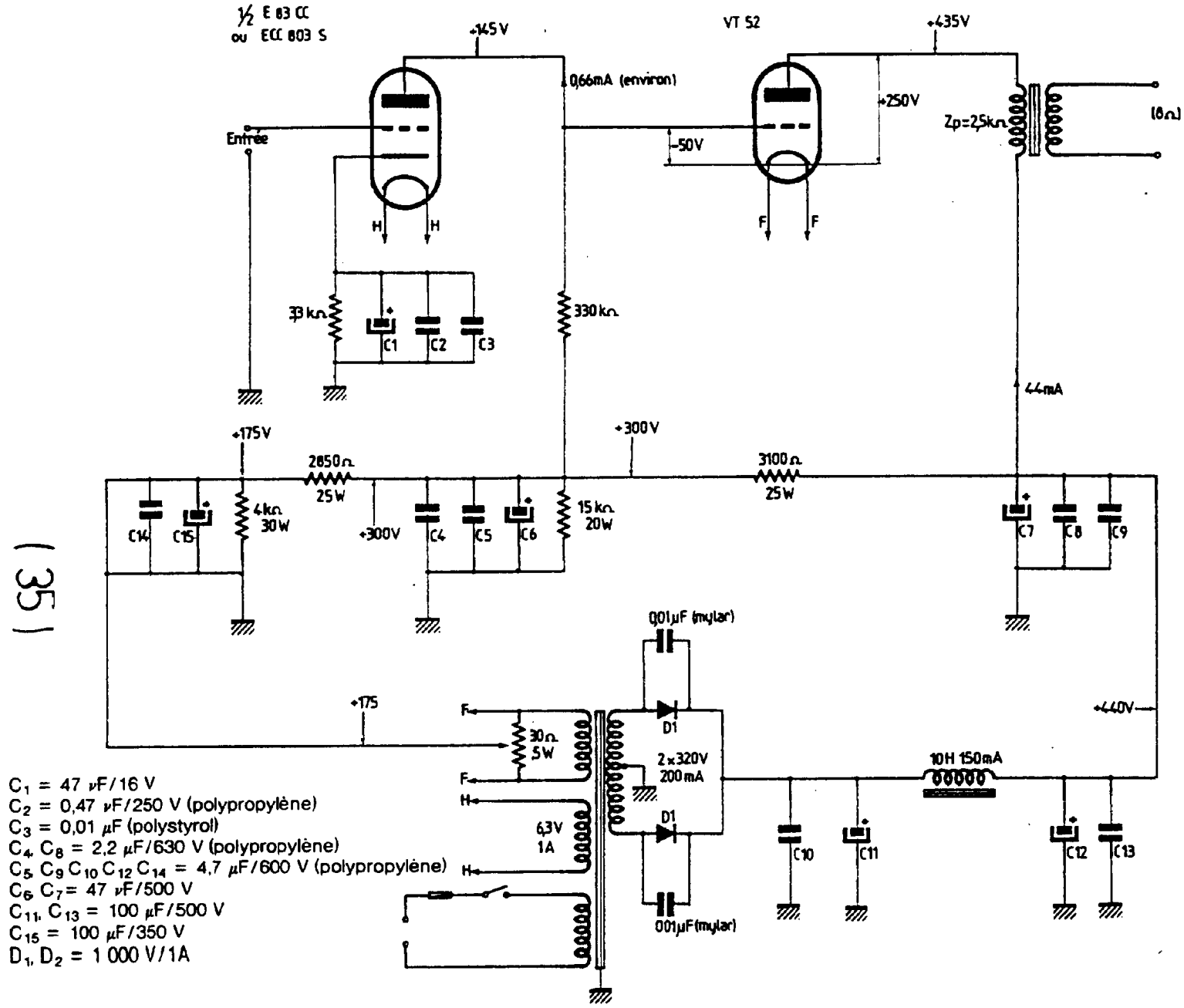

6SH7
RNF
10k
5998
135V
325V
1.5V
92V
0.33 400V
3.5K
P
B
5→8Ω
3→4Ω
1→Con
55V
100k
20μ 400V
0.05 400V
330k
100k
270k
57μ 150V
60Ω 24W
678Ω
280V
100MA
20μ 400V
33K
GZ-34
360V
345V
10H—150MA
(31)
2.5V
DC160mA
280V×2
2.5V
6.3V 3A
80μ 450V
80μ 450V


½6SN7GTB
½6SN7GTB
845
5AR4
118V
0.22
5K:10K
900V
10K
8Ω
0
3.6V
80V
9.5V
220K
1K
100μ
30K
47K
223V
260V
22μ
10K
20K
500V
920V
100μ+
100μ
500V
300K
47μ
480V
10H 200MA
375V
360V
315V
10V
6.4V
6.3V
500Ω
LED
1.5K
100μ
160V
112V
6B20
9.1V
5V
4700μ 16VX2
4V

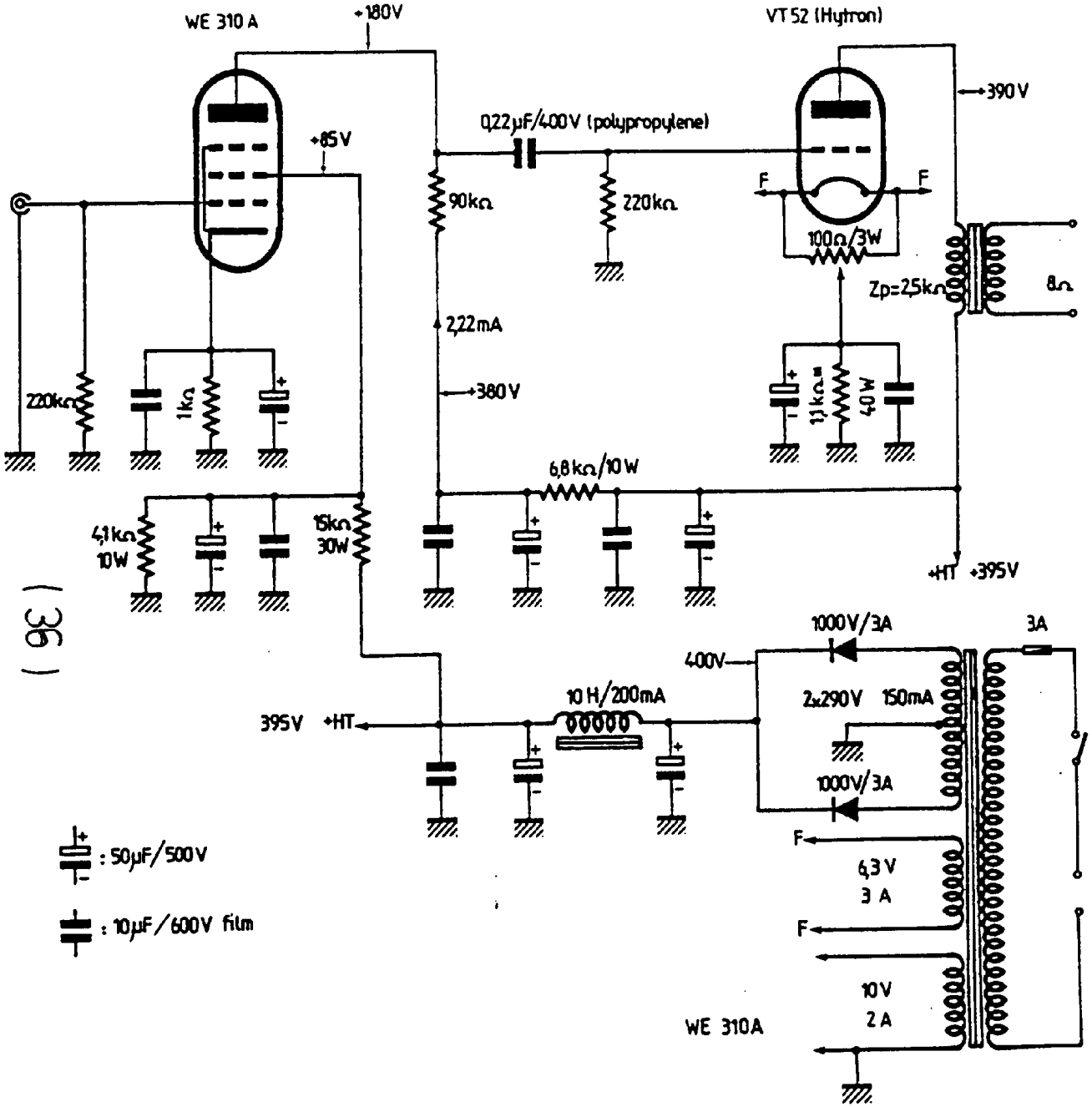

4,7kΩ
EF86/6267
EL34/6CA7
845
800V
180V
250V
97mA
0,1μF/400V
mica
0,2μF/3000V
4μF/3000V
420mA
-30V
F
F
250kΩ
2kΩ
100μF
25V
100kΩ
600Ω
10W
100μF
160V
10kΩ
10W
10kΩ
2W
20H
100mA
Zp=35kΩ
8Ω
200Ω
-116V
+820V
400V
420V
5H 150mA
425V
10kΩ 2W
47μF
500V
47μF
500V

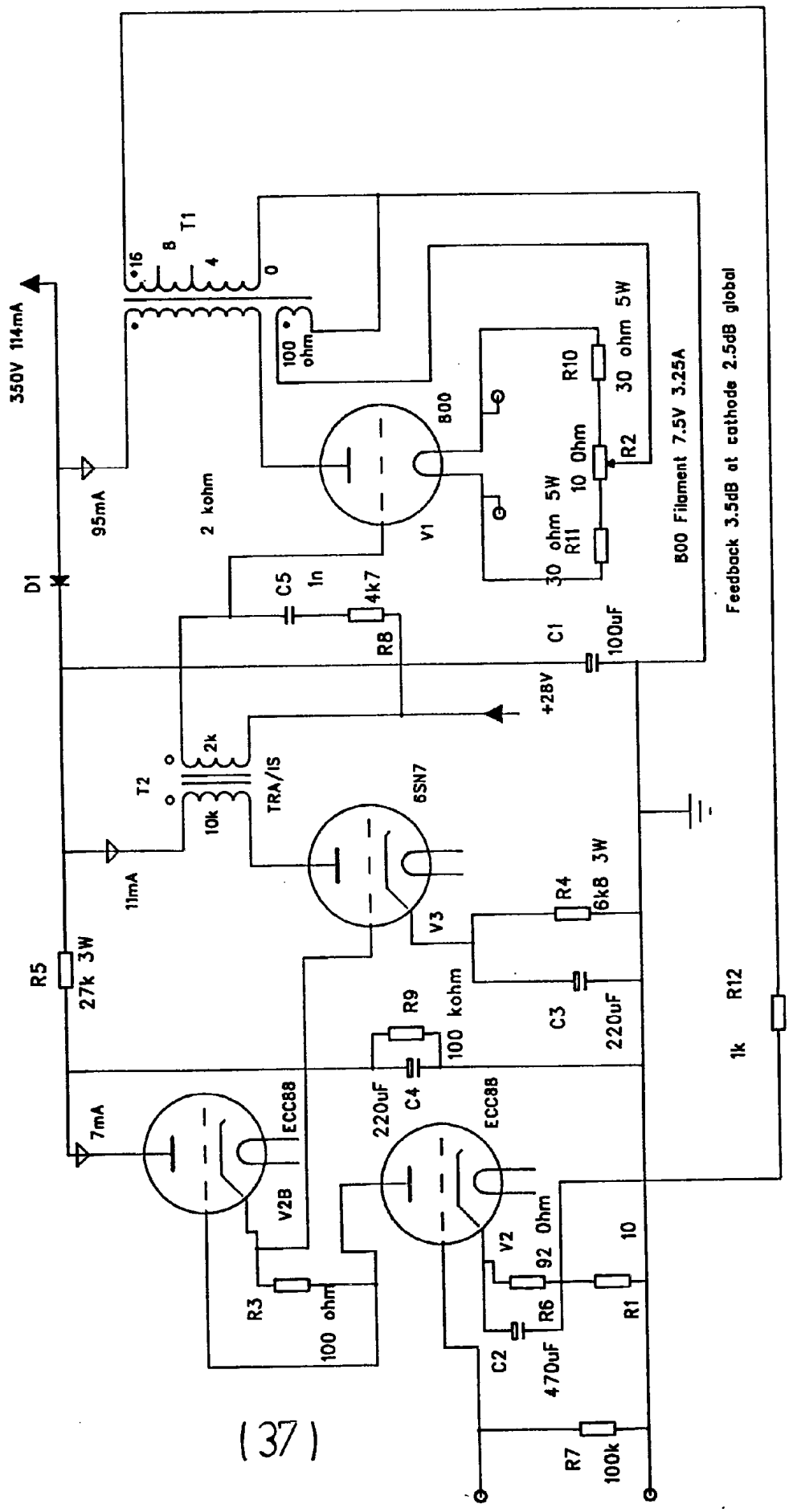

10V
5A
6,3V
3A
6,3V
500kΩ×4
1000V/8A×4
1μF×4
820V
2×650V
1,5A
840V
825V
5H/200mA
5H/200mA
10kΩ 50W
425V
47μF/500V
×4
100μF/500V
×4
10kΩ/40W×2
500Ω
150V
60mA
1kΩ
5W
10kΩ/5W
5kΩ
5W
47μF/350V×3
-116V

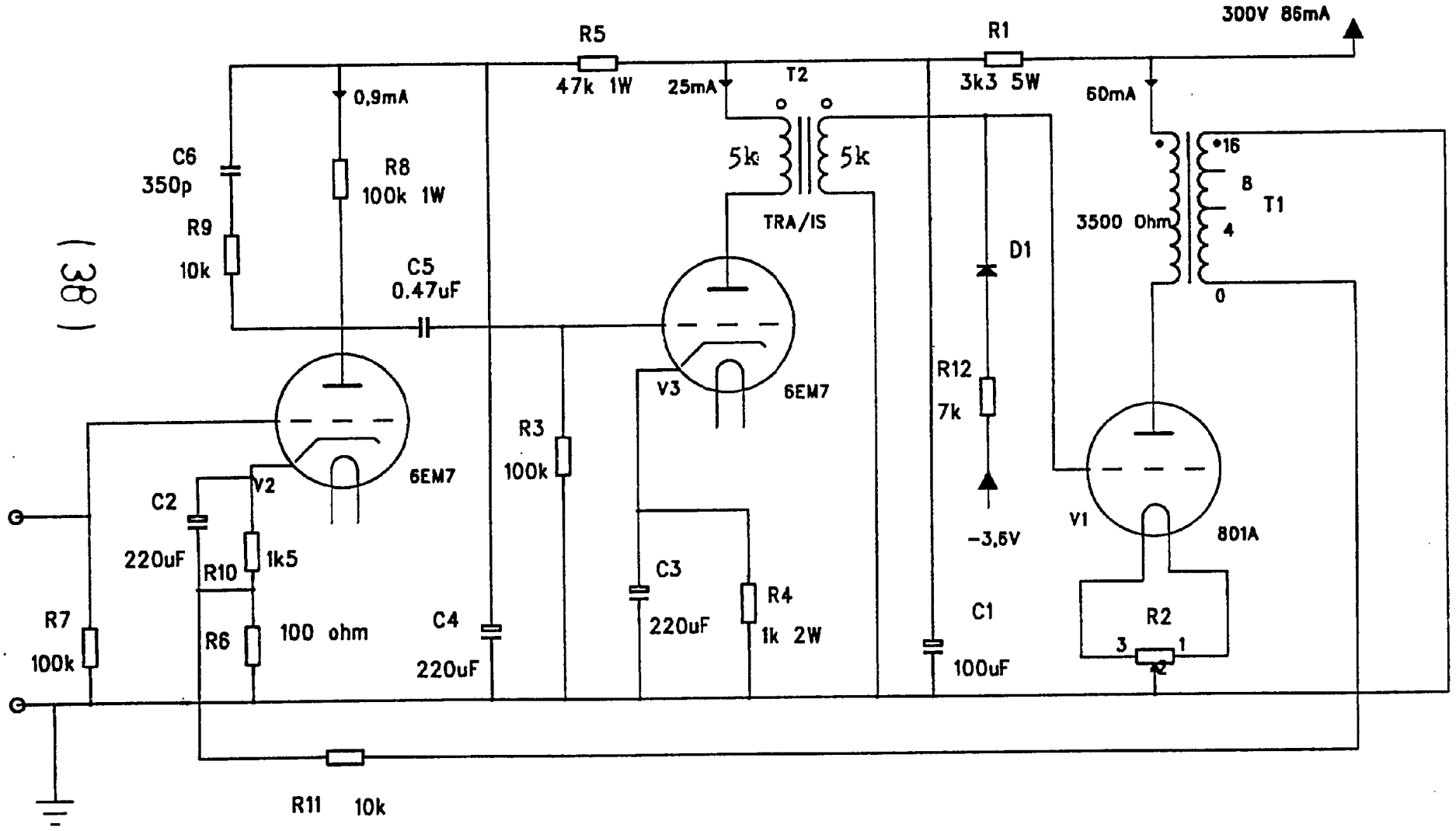

V1. E83CC 1/2
100PF V2V3.12BH7A
UV845
500V4.7μF
15K
L-CH
IN PUT
250V
0.47μF
630V
0.1μF
5K:10K
-171V
8Ω
10K
0Ω
100K
470K
27K
1.8V
16V100μF
100Ω
1W330K
510K
3 8 25V
50V100μF
1W22K
500V47μF
5B500Ω
G1
F1
F2
G2
300P
33K
C1
75mA
R-CH
2W33K
C2
500V47μF
500V47μF
5B10K×2
590V
10H 200MA
0.2A
16V10000μF×2
KBPC2502
9.8V
10W0.5Ω
10
10Ω
100Ω
T.P
845
0
450V
ERC-16-12×2
600V0.01μF×2
10W3K
350V100μF+100μF×4
1B200K×4
500V220μF×3
3B120K×3
63
V1.V2V3.
600V0.01μF
P.SW.
NLR
NLG
5A
150V
1S1892
1W1.5K(22K)
350V47μF
(18K)
20K
1W62K
350V22μF
120V
(34)

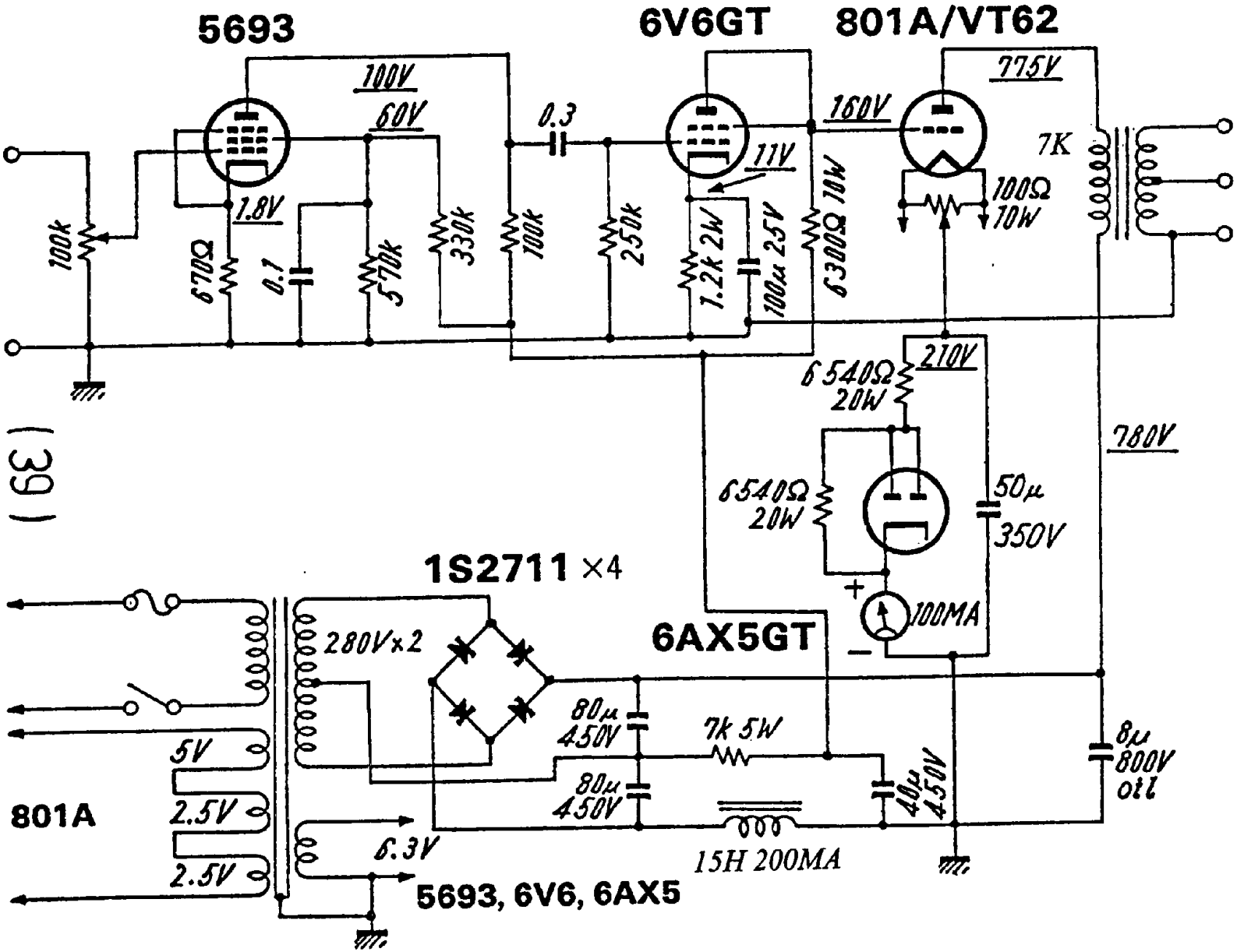


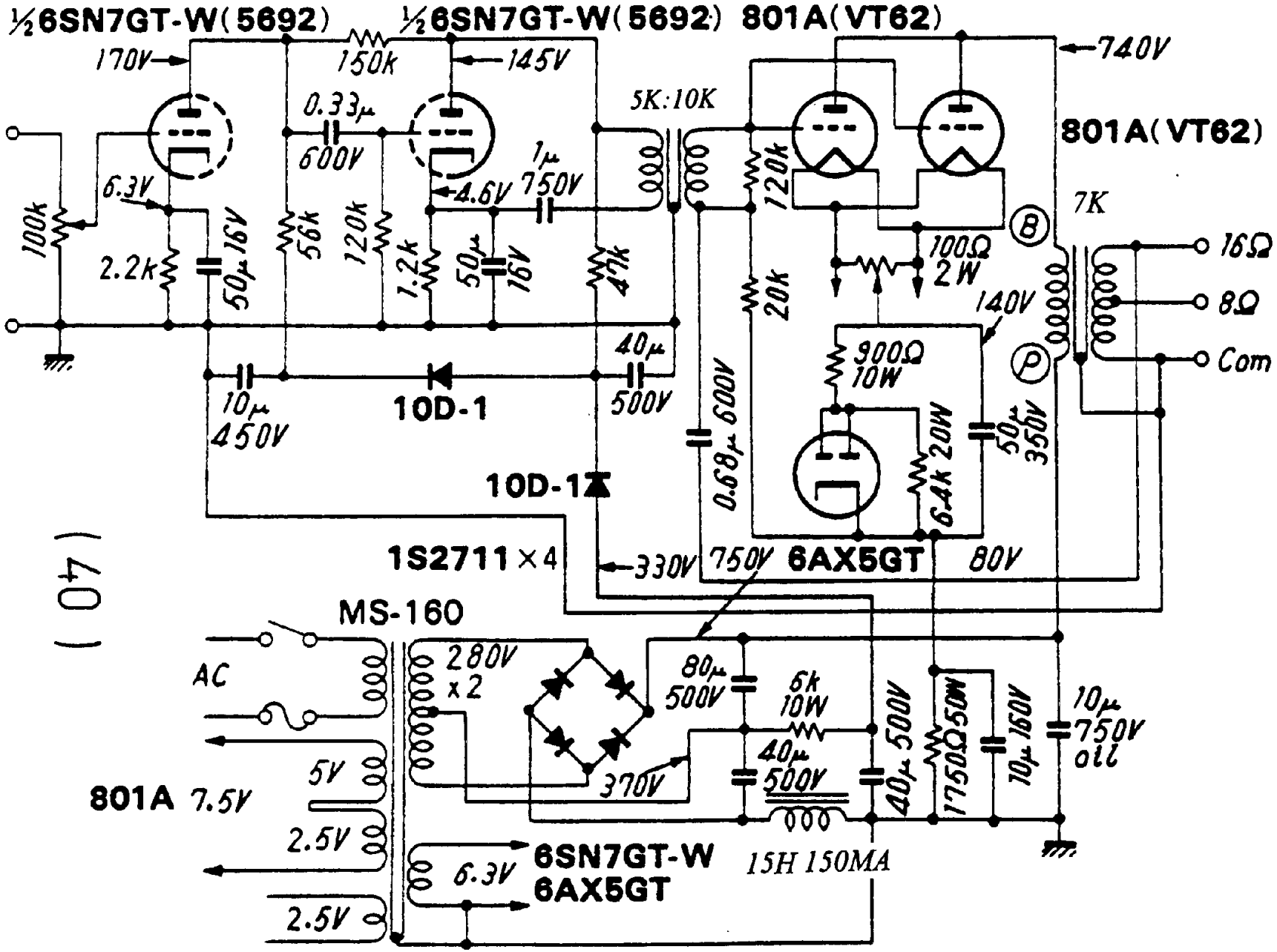
C_1 = 47 nF/16 V
C_2 = 0,47 nF/250 V (polypropylène)
C_3 = 0,01 µF (polystyrol)
C_4, C_8 = 2,2 µF/630 V (polypropylène)
C_5, C_9 C_{10} C_{12} C_{14} = 4,7 µF/600 V (polypropylène)
C_6, C_7 = 47 nF/500 V
C_{11}, C_{13} = 100 µF/500 V
C_{15} = 100 µF/350 V
D_1, D_2 = 1 000 V/1A

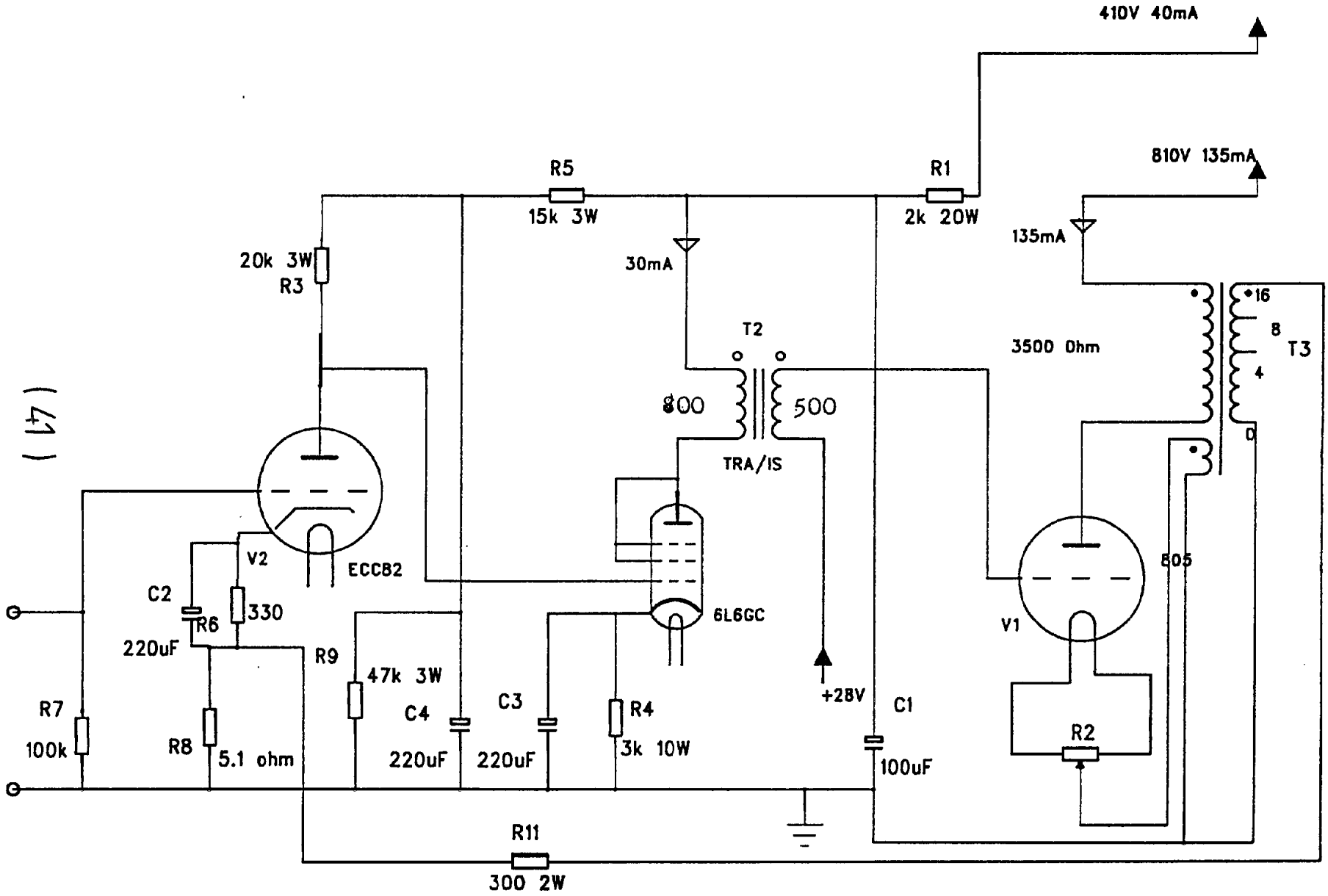

WE 310 A
+180V
VT 52 (Hytron)
+390V
0,22µF/400V (polypropylene)
+85V
90kΩ
220kΩ
F
F
100Ω/3W
Zp=2,5kΩ
8Ω
2,22mA
+380V
220kΩ
1kΩ
11kΩ
40W
6,8kΩ/10W
4,1kΩ
10W
15kΩ
30W
+HT +395V
1000V/3A
3A
400V
10H/200mA
2x290V 150mA
395V +HT
1000V/3A
F
6,3V
3A
F
10V
2A
WE 310A
: 50µF/500V
: 10µF/600V film

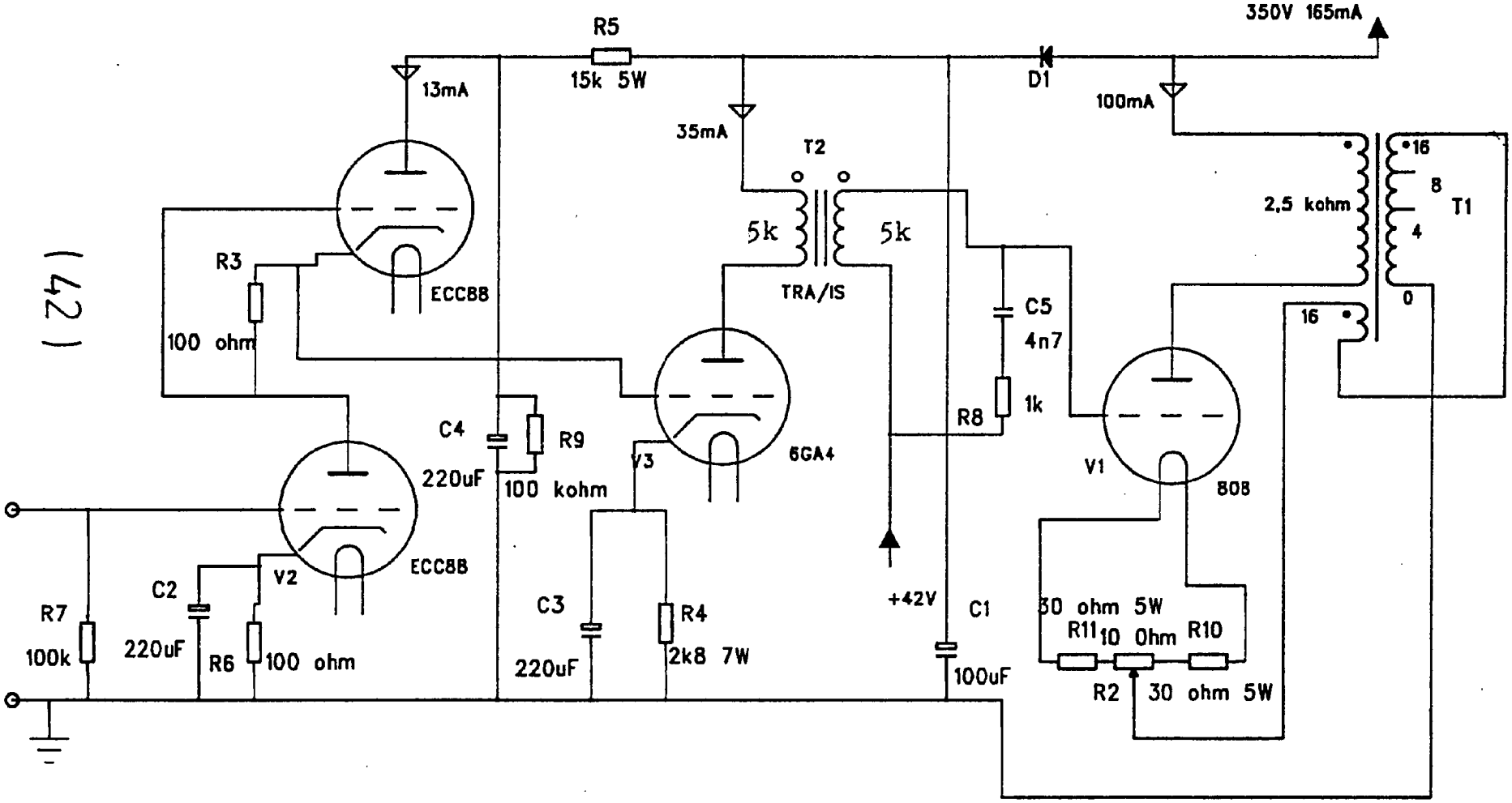

350V 114mA
T1
16
8
4
0
100 ohm
800
R10
30 ohm 5W
R2
10 Ohm
R11
30 ohm 5W
800 Filament 7.5V 3.25A
Feedback 3.5dB at cathode 2.5dB global
95mA
2 kohm
V1
D1
C5
1n
4k7
R8
C1
100uF
+28V
T2
2k
10k
TRA/IS
6SN7
11mA
V3
R4
6k8 3W
R5
27k 3W
R9
100 kohm
C3
220uF
1k
R12
7mA
ECC88
V2B
220uF
C4
ECC88
V2
92 Ohm
R6
10
R1
R3
100 ohm
C2
470uF
R7
100k

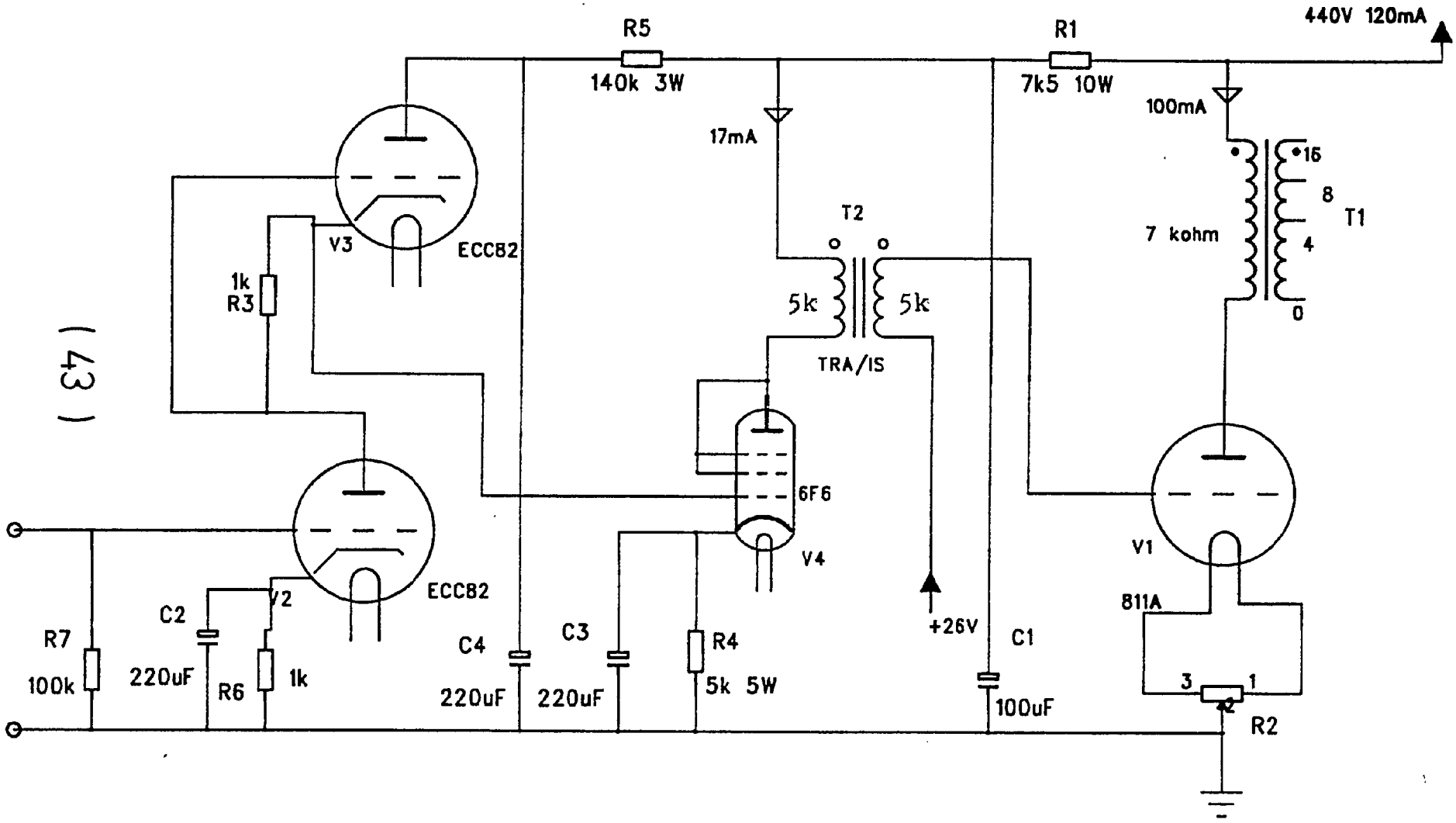

300V 86mA
R5
47k 1W
25mA
T2
R1
3k3 5W
60mA
0,9mA
C6
350p
R8
100k 1W
R9
10k
C5
0.47uF
5k
5k
TRA/IS
3500 Ohm
16
8
4
0
T1
D1
R12
7k
-3,5V
V3
6EM7
V2
6EM7
V1
801A
R3
100k
C2
220uF
R10
1k5
R6
100 ohm
R7
100k
C4
220uF
C3
220uF
R4
1k 2W
C1
100uF
R2
3
1
2
R11 10k

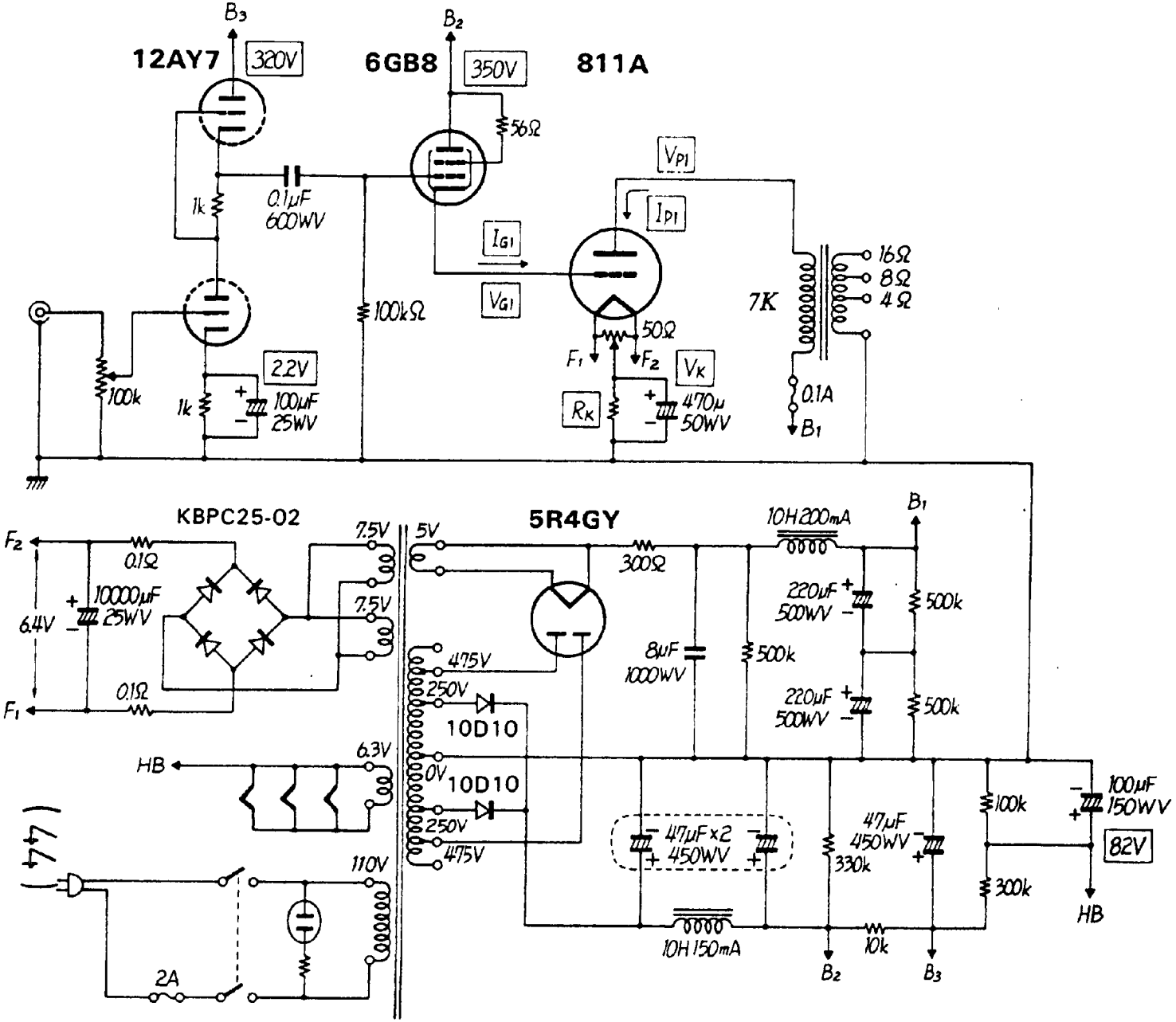

5693
6V6GT
801A/VT62
100V
60V
0.3
160V
775V
7K
1.8V
11V
100k
670Ω
0.1
570k
330k
100k
250k
1.2k 2W
100µ 25V
6300Ω 10W
100Ω 10W
210V
6540Ω 20W
780V
6540Ω 20W
50µ 350V
100MA
1S2711 ×4
6AX5GT
280V×2
80µ 450V
7k 5W
80µ 450V
40µ 450V
8µ 800V oil
5V
2.5V
2.5V
801A
6.3V
15H 200MA
5693, 6V6, 6AX5
(39)

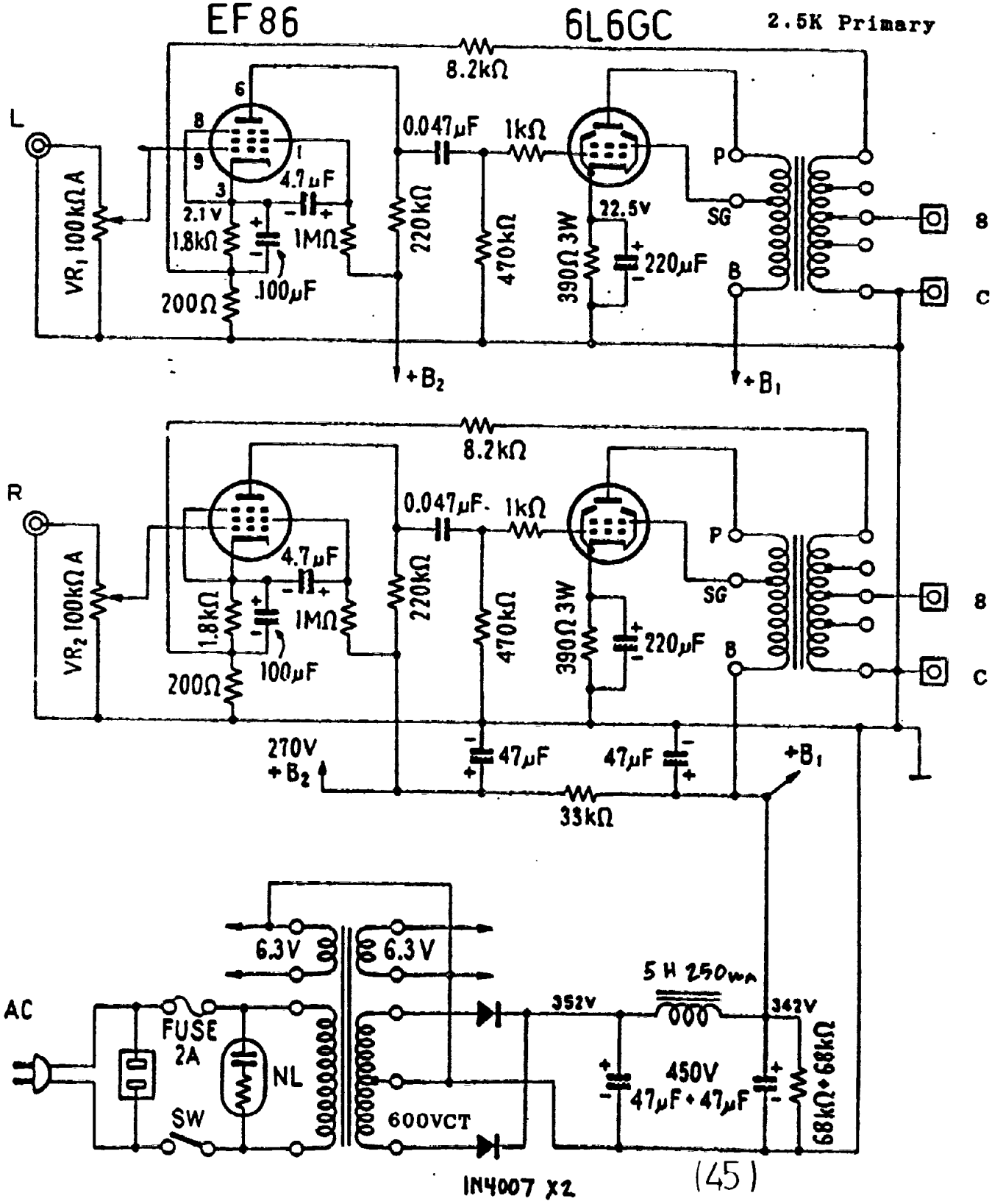

½6SN7GT-W(5692)
½6SN7GT-W(5692)
801A(VT62)
801A(VT62)
170V
150k
145V
740V
0.33μ
600V
5K:10K
1μ
750V
4.6V
6.3V
100k
2.2k
50μ 16V
56k
120k
1.2k
50μ
16V
47k
120k
100Ω
2W
7K
16Ω
8Ω
Com
140V
20k
900Ω
10W
40μ
500V
10μ
450V
10D-1
0.68μ 600V
10D-1
6.4k 20W
50μ
350V
1S2711×4
330V
750V
6AX5GT
80V
MS-160
AC
280V
×2
80μ
500V
6k
10W
40μ
500V
40μ 500V
175Ω 50W
10μ 160V
10μ
750V
oil
370V
801A 7.5V
5V
2.5V
6.3V
6SN7GT-W
6AX5GT
15H 150MA
2.5V
(40)

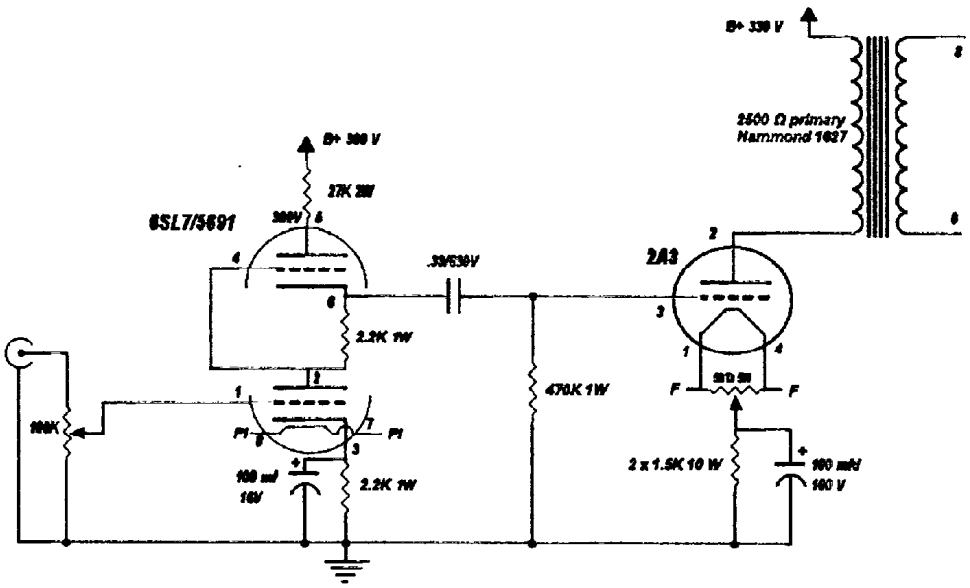

410V 40mA
810V 135mA
135mA
R5
15k 3W
R1
2k 20W
20k 3W
R3
30mA
T2
800
500
TRA/IS
3500 Ohm
16
8
4
0
T3
ECC82
V2
6L6GC
805
V1
C2
R6
330
220uF
R9
47k 3W
C4
220uF
C3
220uF
R4
3k 10W
+28V
C1
100uF
R7
100k
R8
5.1 ohm
R2
R11
300 2W


350V 165mA
R5
15k 5W
D1
13mA
35mA
100mA
T2
5k
5k
TRA/IS
2,5 kohm
16
8
4
0
T1
R3
100 ohm
ECC88
C5
4n7
R8
1k
C4
220uF
R9
100 kohm
V3
6GA4
V1
808
ECC88
V2
C2
220uF
R6
100 ohm
C3
220uF
R4
2k8 7W
+42V
C1
100uF
R7
100k
30 ohm 5W
R11
10 Ohm
R10
R2
30 ohm 5W

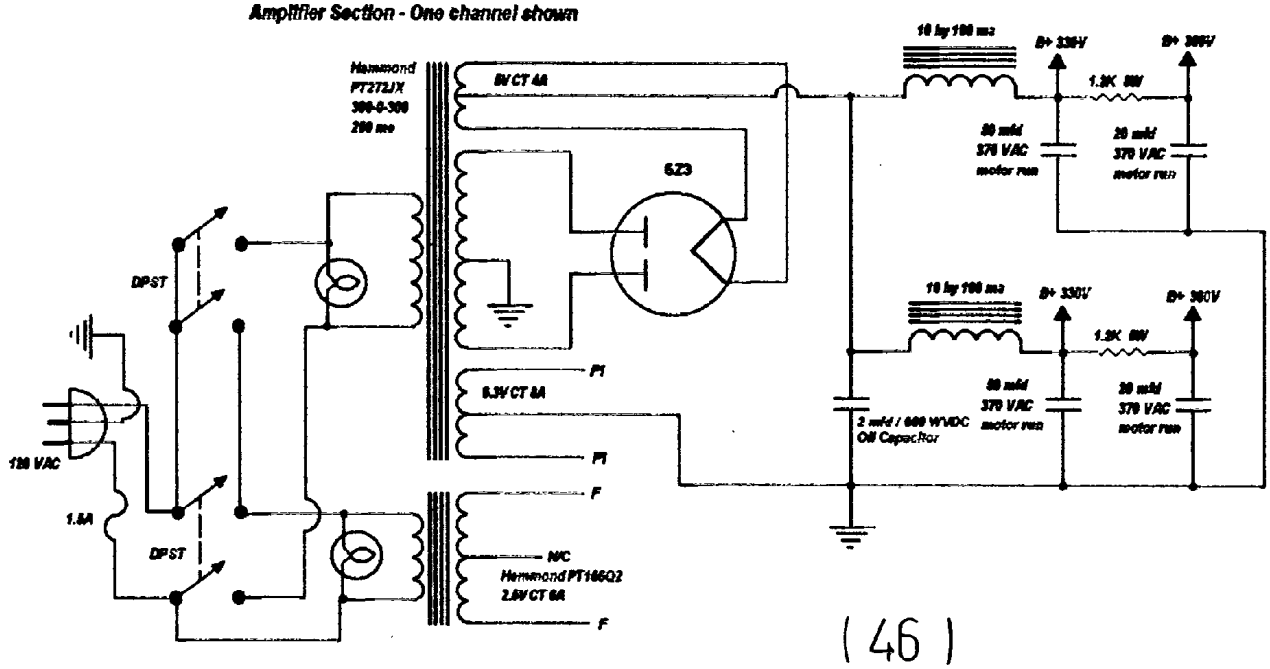

(43)
R5
140k 3W
R1
7k5 10W
440V 120mA
100mA
17mA
T2
5k
5k
TRA/IS
7 kohm
16
8
4
0
T1
V3
ECC82
1k
R3
6F6
V4
V1
811A
ECC82
V2
C2
220uF
R6
1k
R7
100k
C4
220uF
C3
220uF
R4
5k 5W
+26V
C1
100uF
3
1
R2


12AY7
6GB8
811A
B3
B2
B1
320V
350V
56Ω
1k
0.1μF
600WV
100kΩ
100k
2.2V
100μF
25WV
VP1
IP1
IG1
VG1
50Ω
F1
F2
VK
RK
470μ
50WV
7K
16Ω
8Ω
4Ω
0.1A
KBPC25-02
5R4GY
0.1Ω
10000μF
25WV
6.4V
7.5V
5V
300Ω
10H 200mA
220μF
500WV
500k
8μF
1000WV
475V
250V
10D10
6.3V
HB
0V
110V
2A
47μF x2
450WV
330k
47μF
450WV
100k
100μF
150WV
82V
300k
10H 150mA
10k

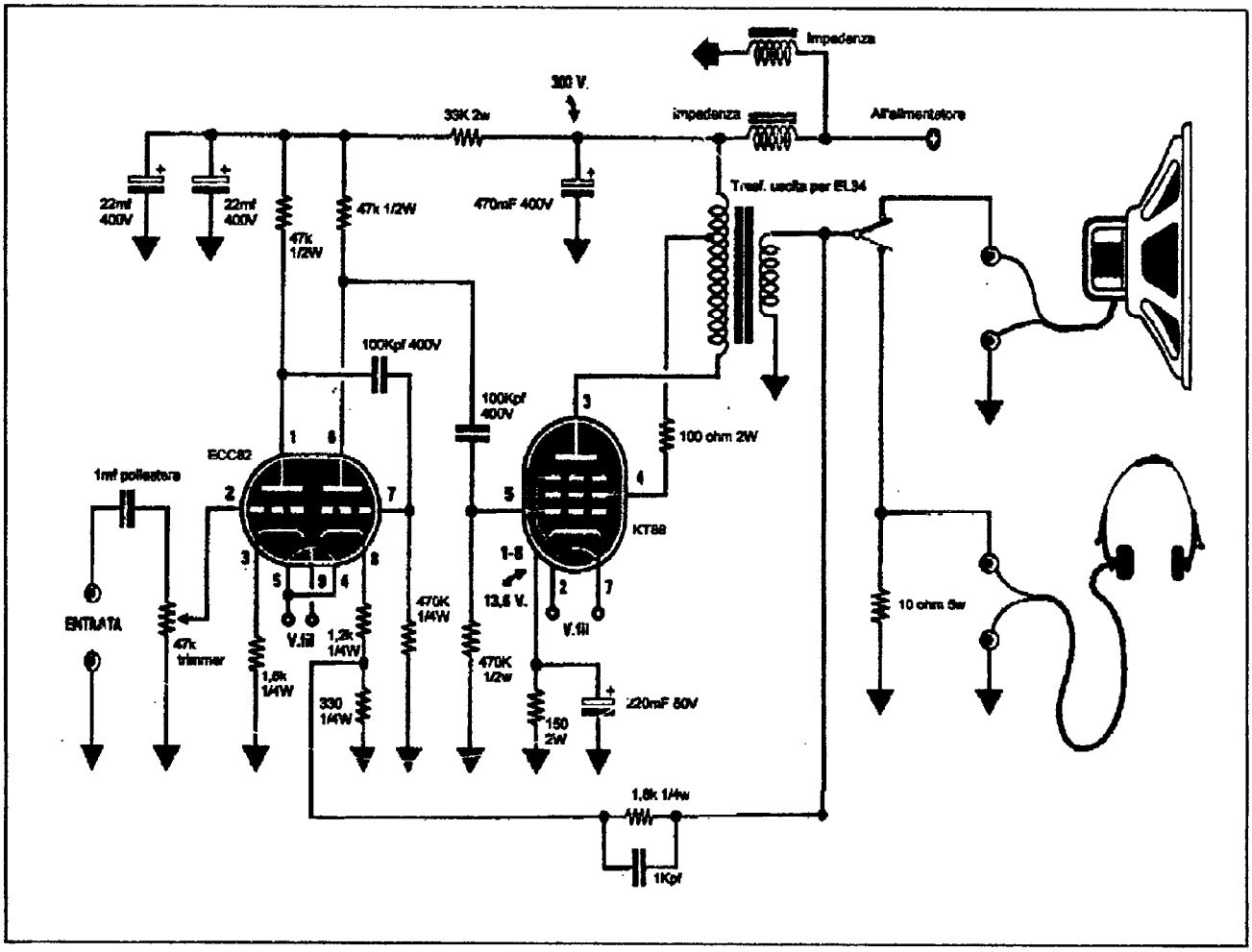

EF86
6L6GC
2.5K Primary
8.2kΩ
L
R
VR1 100kΩA
VR2 100kΩA
0.047μF
1kΩ
4.7μF
1MΩ
220kΩ
470kΩ
1.8kΩ
200Ω
100μF
390Ω 3W
220μF
2.1V
22.5V
P
SG
B
8
C
+B2
+B1
270V
+B2
47μF
47μF
33kΩ
6.3V
6.3V
5H 250mA
352V
342V
450V
47μF+47μF
68kΩ+68kΩ
AC
FUSE
2A
NL
SW
600VCT
IN4007 X2

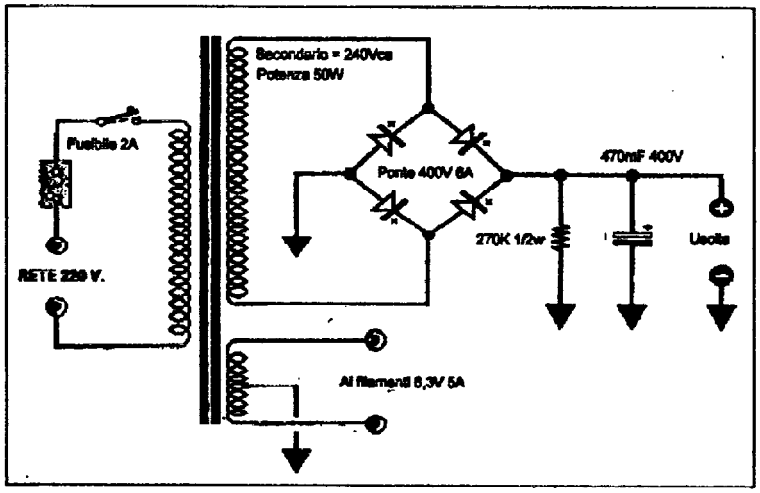


Amplifier Section - One channel shown

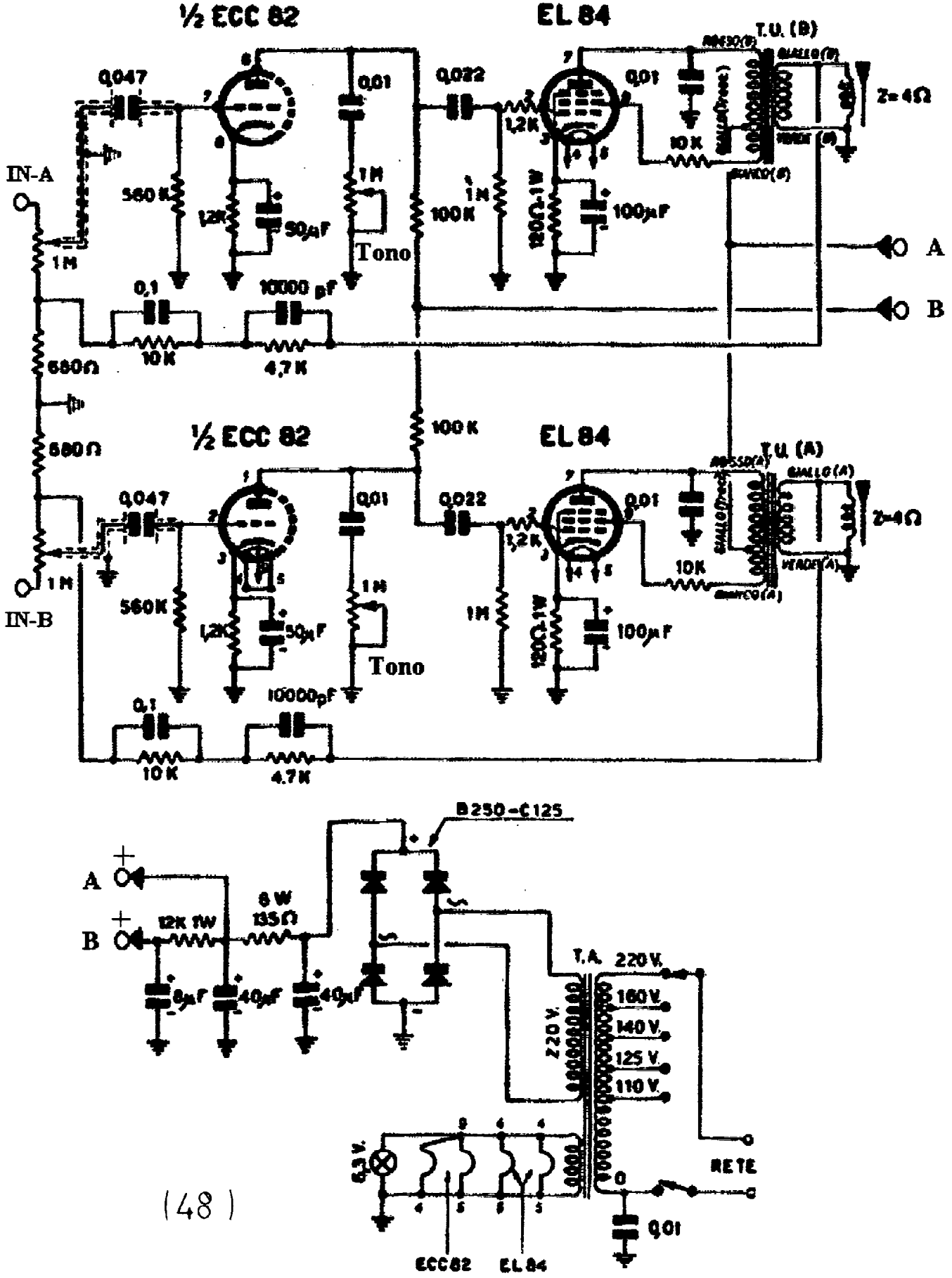


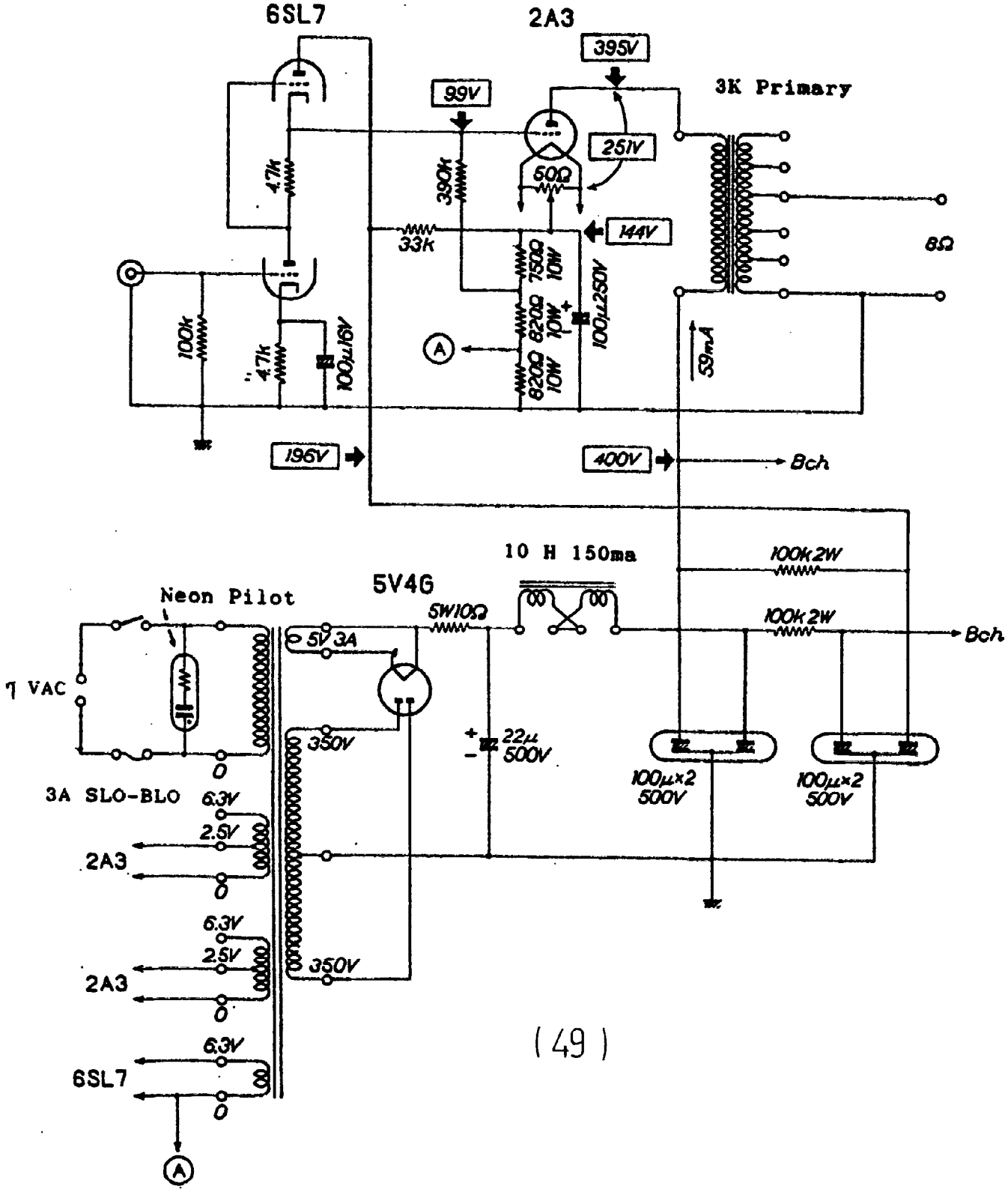
Power Supply - Both Channels

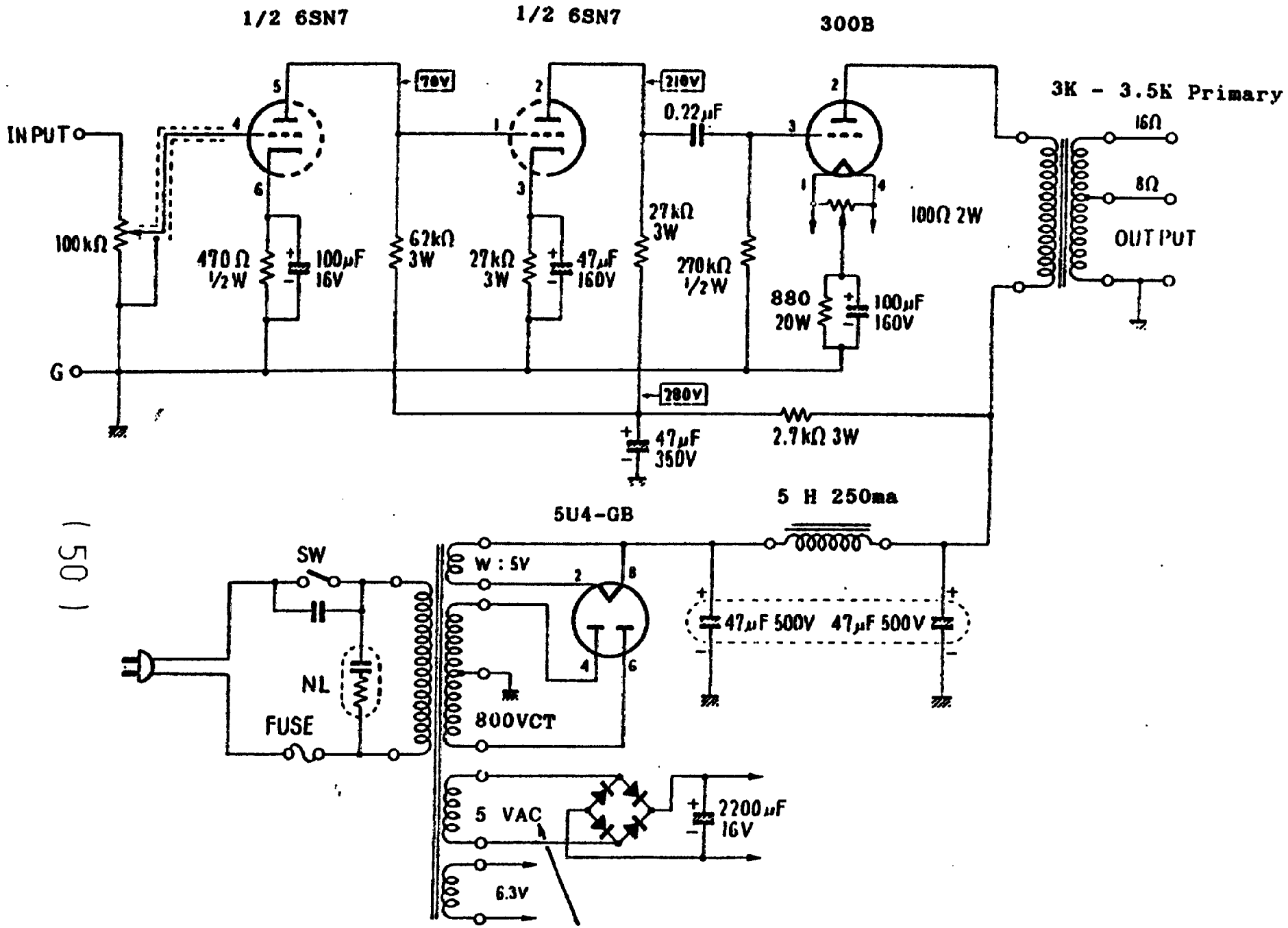


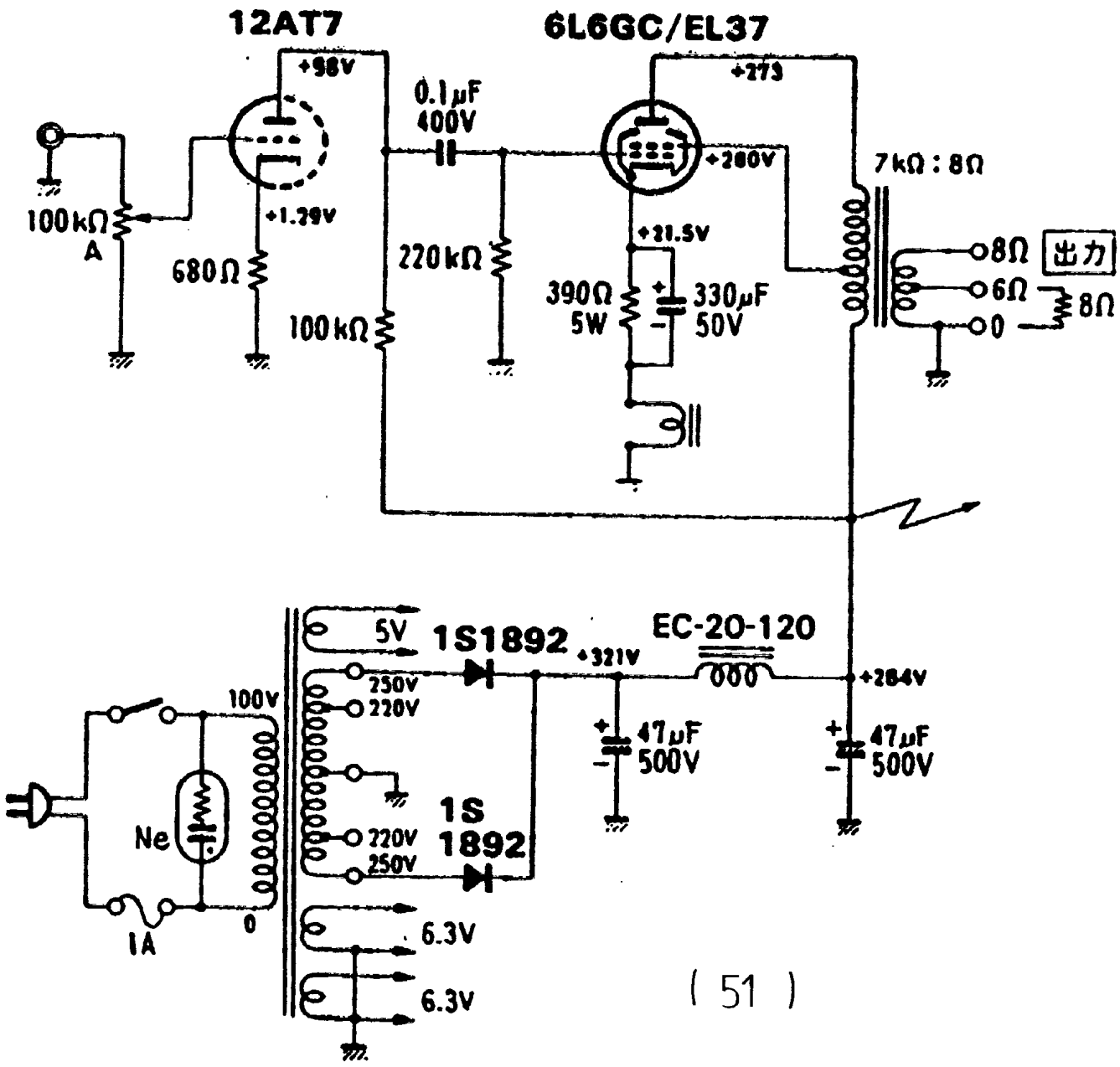


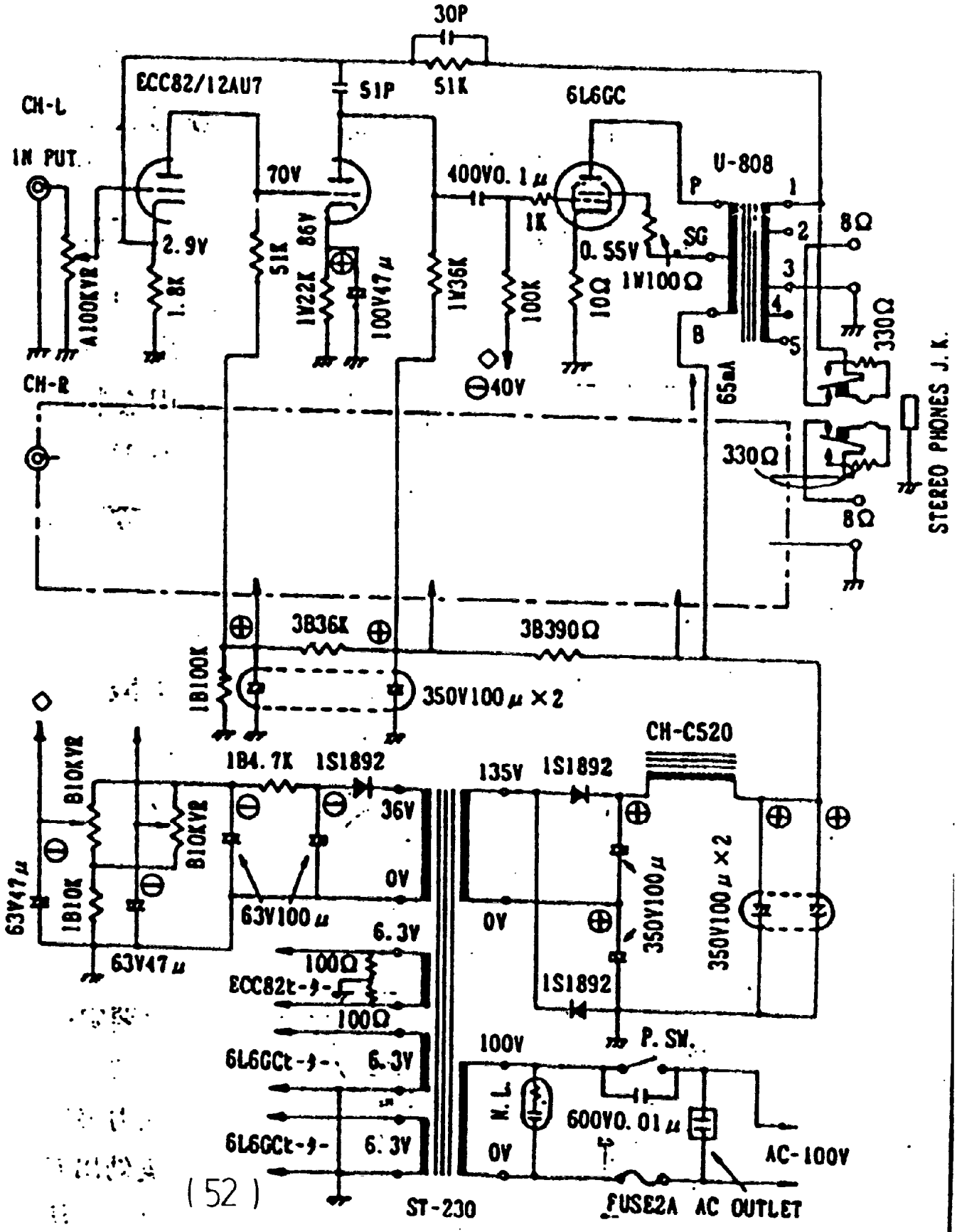
Schema dell'Alimentatore

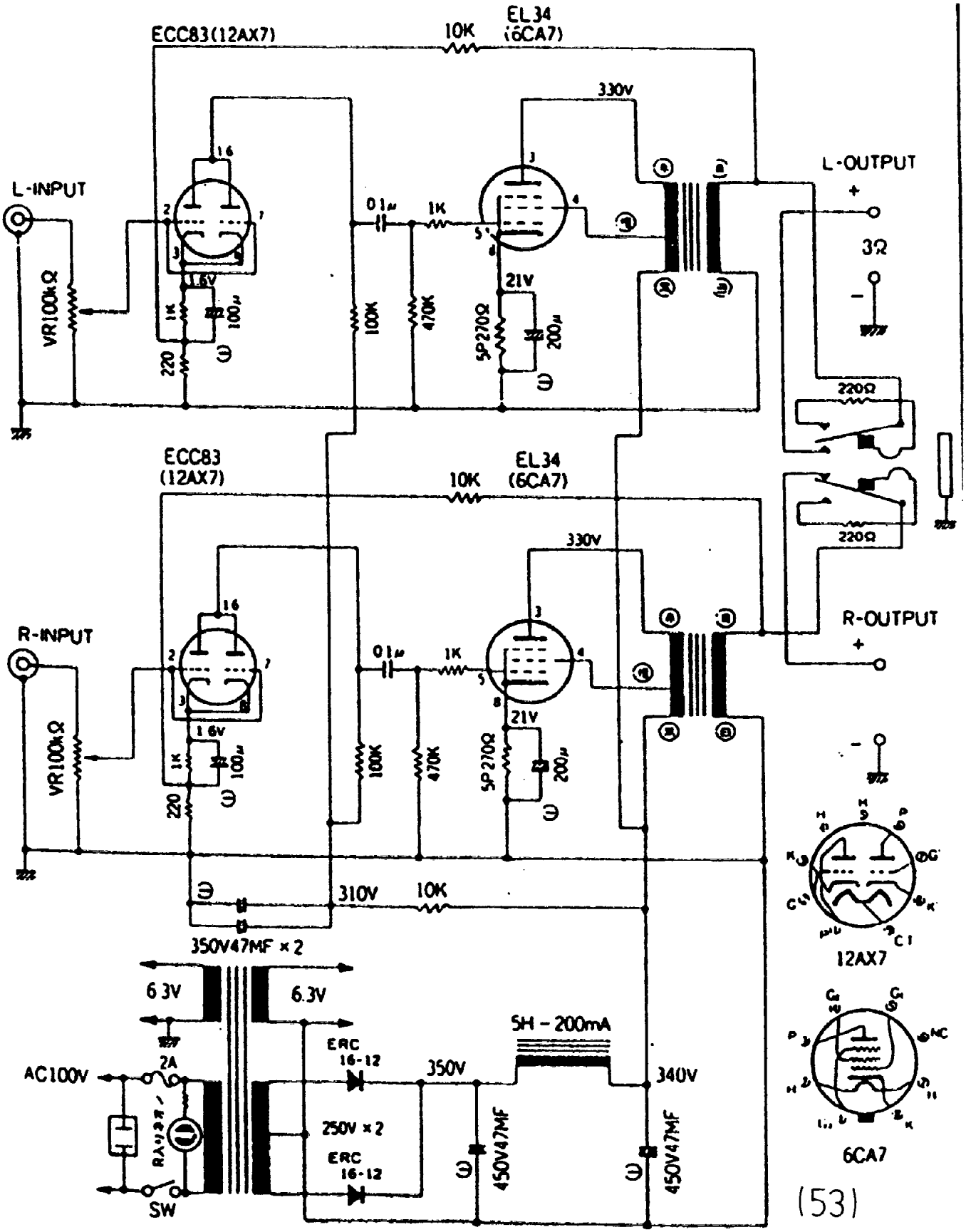

½ ECC 82
EL 84
T.U. (B)
IN-A
IN-B
Tono
½ ECC 82
EL 84
T.U. (A)
Tono
A
B
B250-C125
T.A. 220 V.
160 V.
140 V.
125 V.
110 V.
RETE
ECC82
EL84

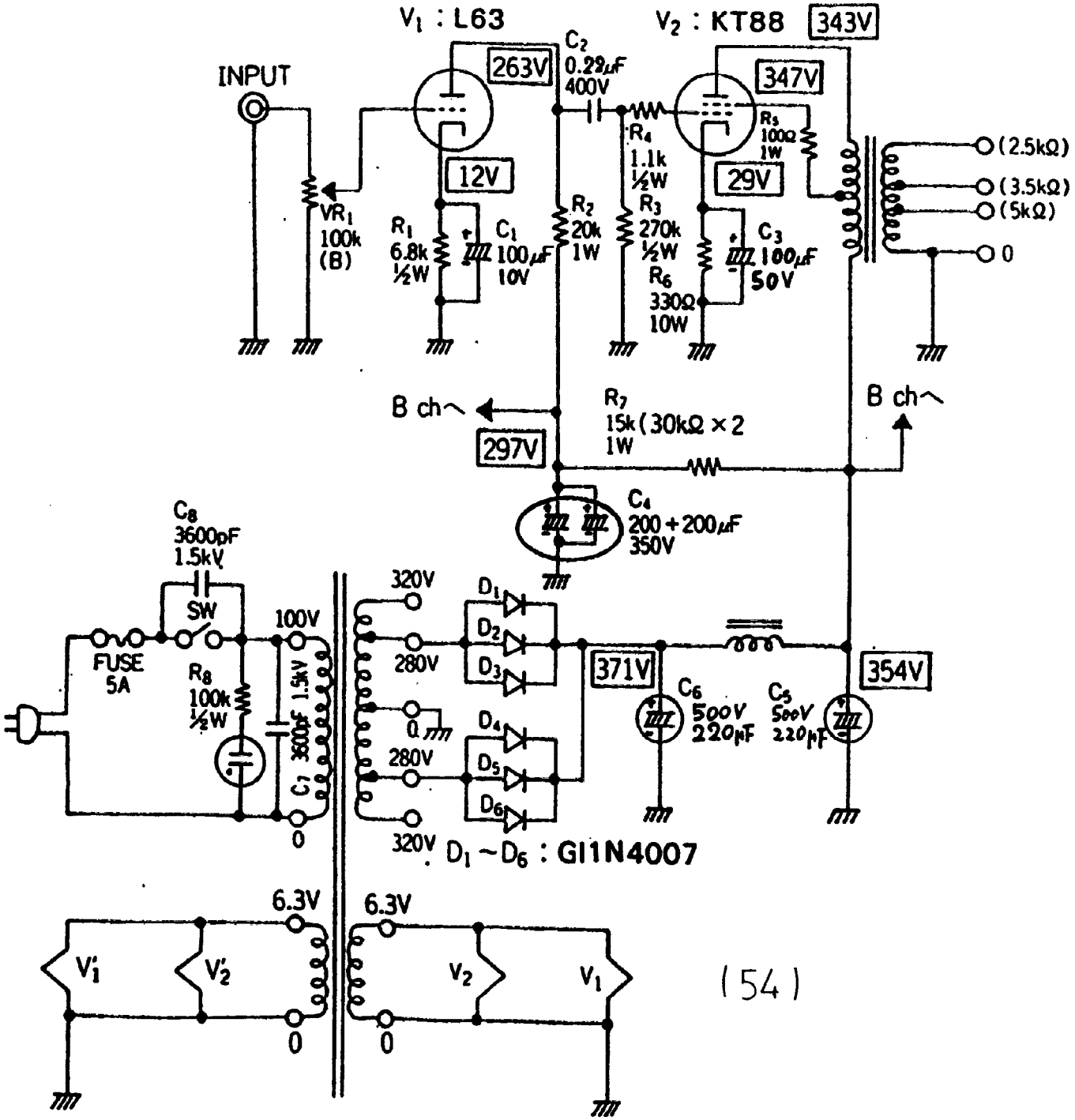

6SL7
2A3
395V
3K Primary
99V
251V
50Ω
390K
4.7K
33K
144V
8Ω
750Ω 10W
820Ω 10W
820Ω 10W
100μ250V
100K
4.7K
100μ16V
59mA
A
196V
400V
Bch
10 H 150ma
100K2W
5V4G
Neon Pilot
5W10Ω
100K2W
Bch
5V 3A
7 VAC
350V
22μ 500V
100μ×2 500V
100μ×2 500V
0
3A SLO-BLO
6.3V
2.5V
2A3
0
6.3V
2.5V
2A3
350V
0
6.3V
6SL7
0
A


1/2 6SN7
1/2 6SN7
300B
3K - 3.5K Primary
INPUT
G
100kΩ
470Ω 1/2W
100μF 16V
62kΩ 3W
27kΩ 3W
47μF 160V
0.22μF
27kΩ 3W
270kΩ 1/2W
100Ω 2W
880 20W
100μF 160V
16Ω
8Ω
OUT PUT
78V
210V
280V
47μF 350V
2.7kΩ 3W
5 H 250ma
5U4-GB
SW
NL
FUSE
W : 5V
800VCT
47μF 500V
47μF 500V
5 VAC
2200μF 16V
6.3V

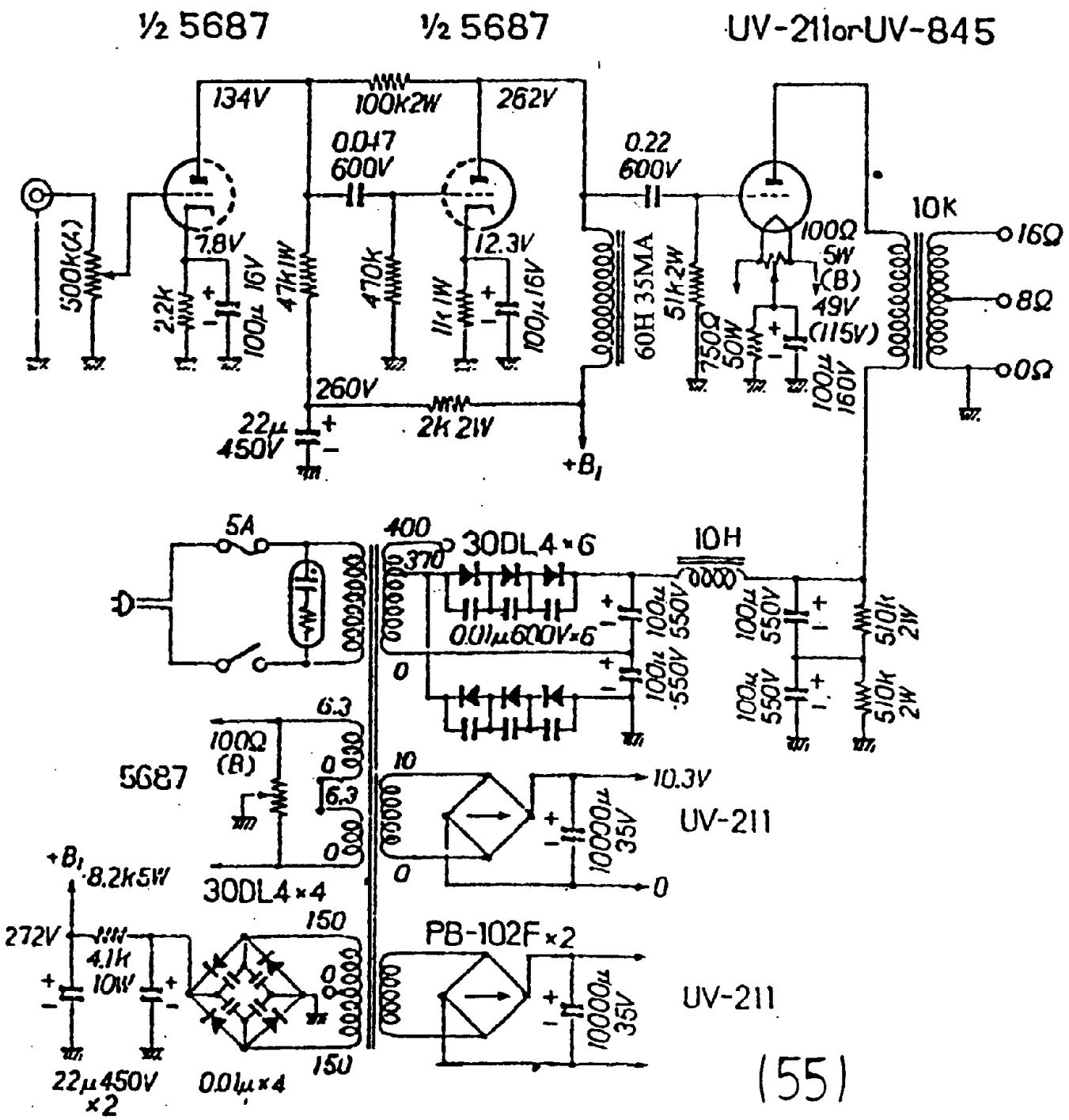

12AT7
6L6GC/EL37
+98V
+273
0.1μF
400V
+280V
7kΩ : 8Ω
100kΩ
A
+1.29V
680Ω
220kΩ
+21.5V
390Ω
5W
330μF
50V
100kΩ
8Ω
出力
6Ω
8Ω
0
5V
1S1892
EC-20-120
+321V
+284V
250V
220V
100V
47μF
500V
47μF
500V
Ne
1S
1892
220V
250V
0
1A
6.3V
6.3V

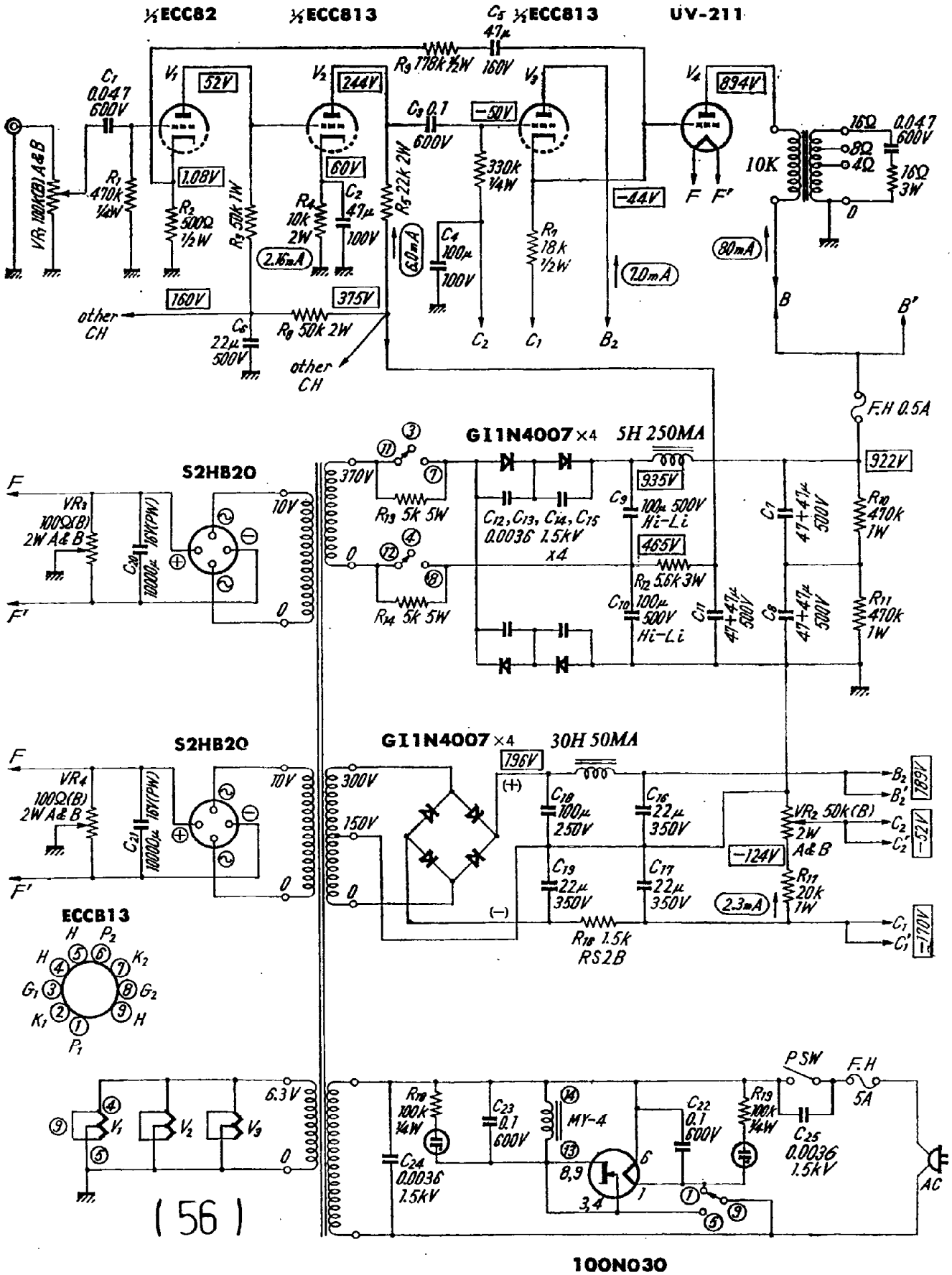

30P
ECC82/12AU7
S1P
51K
6L6GC
CH-L
IN PUT
70V
400V0.1μ
U-808
P
1K
2.9V
0.55V
SG
1W100Ω
8Ω
A100KVR
1.8K
51K
1W22K 86V
100V47μ
1W36K
100K
10Ω
330Ω
B
65mA
CH-R
⊖40V
STEREO PHONES J.K.
3836K
3B390Ω
1B100K
350V100μ×2
CH-C520
1B4.7K 1S1892
135V 1S1892
B10KVR
B10KVR
63V47μ
1B10K
36V
0V
63V100μ
6.3V
63V47μ
100Ω
ECC82ヒータ
100Ω
6L6GCヒータ 6.3V
6L6GCヒータ 6.3V
350V100μ
350V100μ×2
0V
1S1892
100V
P.SW.
N.L.
600V0.01μ
0V
AC-100V
ST-230
FUSE2A AC OUTLET

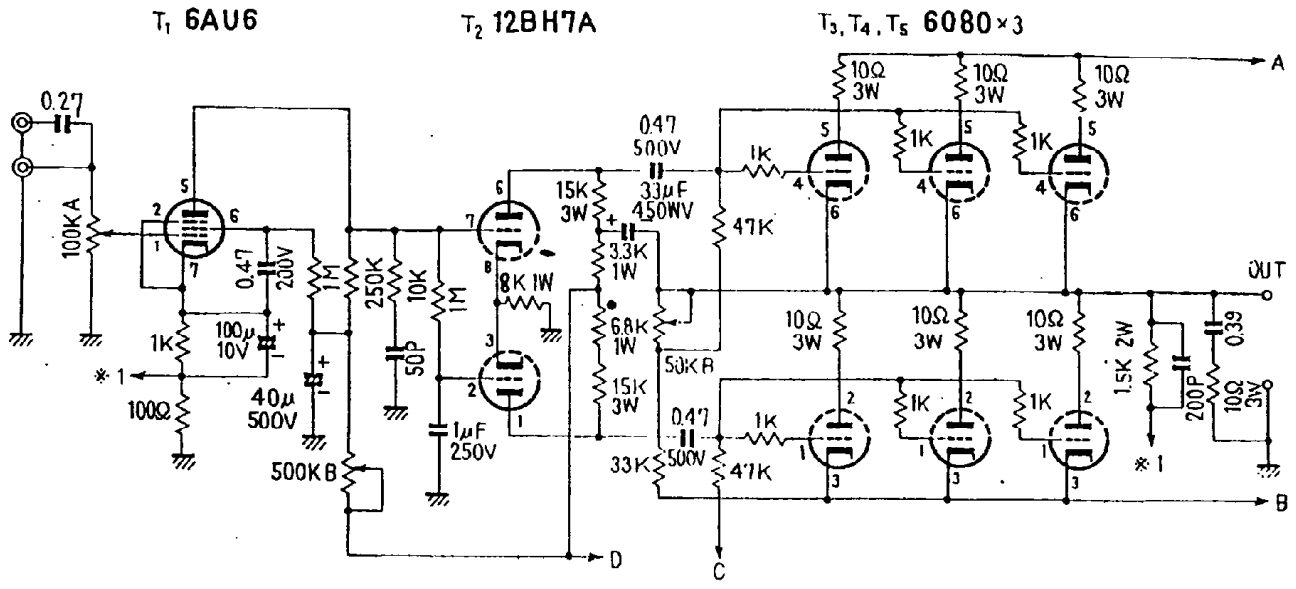

ECC83(12AX7)
10K
EL34
(6CA7)
330V
L-INPUT
L-OUTPUT
+
3Ω
−
VR100kΩ
0.1μ
1K
100K
470K
5P270Ω
220Ω
1.6V
21V
100μ
200μ
220
ECC83
(12AX7)
10K
EL34
(6CA7)
330V
R-INPUT
R-OUTPUT
+
VR100kΩ
0.1μ
1K
100K
470K
5P270Ω
220Ω
1.6V
21V
100μ
200μ
220
310V
10K
350V47MF × 2
6.3V
6.3V
5H − 200mA
AC100V
2A
ERC
16-12
350V
340V
250V × 2
ERC
16-12
450V47MF
450V47MF
SW
12AX7
6CA7

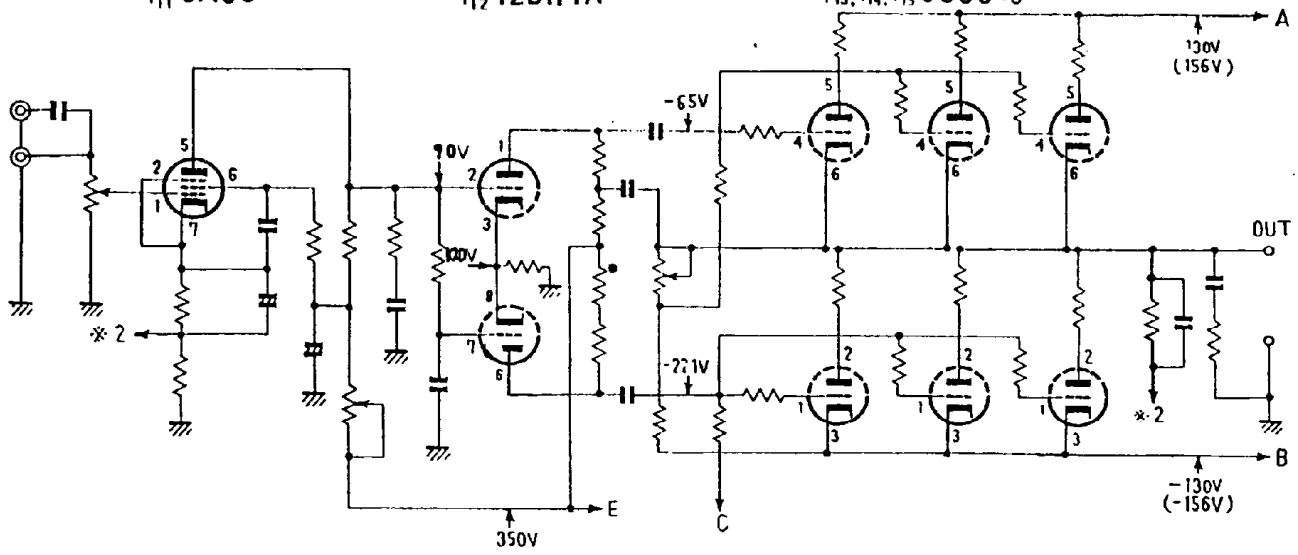

V1 : L63
V2 : KT88
343V
INPUT
263V
347V
C2
0.29μF
400V
R4
1.1k
½W
R5
100Ω
1W
29V
12V
VR1
100k
(B)
R1
6.8k
½W
C1
100μF
10V
R2
20k
1W
R3
270k
½W
R6
330Ω
10W
C3
100μF
50V
(2.5kΩ)
(3.5kΩ)
(5kΩ)
0
B ch
297V
R7
15k(30kΩ×2
1W
B ch
C4
200+200μF
350V
C8
3600pF
1.5kV
SW
FUSE
5A
R8
100k
½W
100V
C7 3600pF 1.5kV
0
320V
280V
0
280V
320V
D1
D2
D3
D4
D5
D6
371V
354V
C6
500V
220μF
C5
500V
220μF
D1~D6 : GI1N4007
6.3V
6.3V
V1'
V2'
0
V2
V1
0

(54)

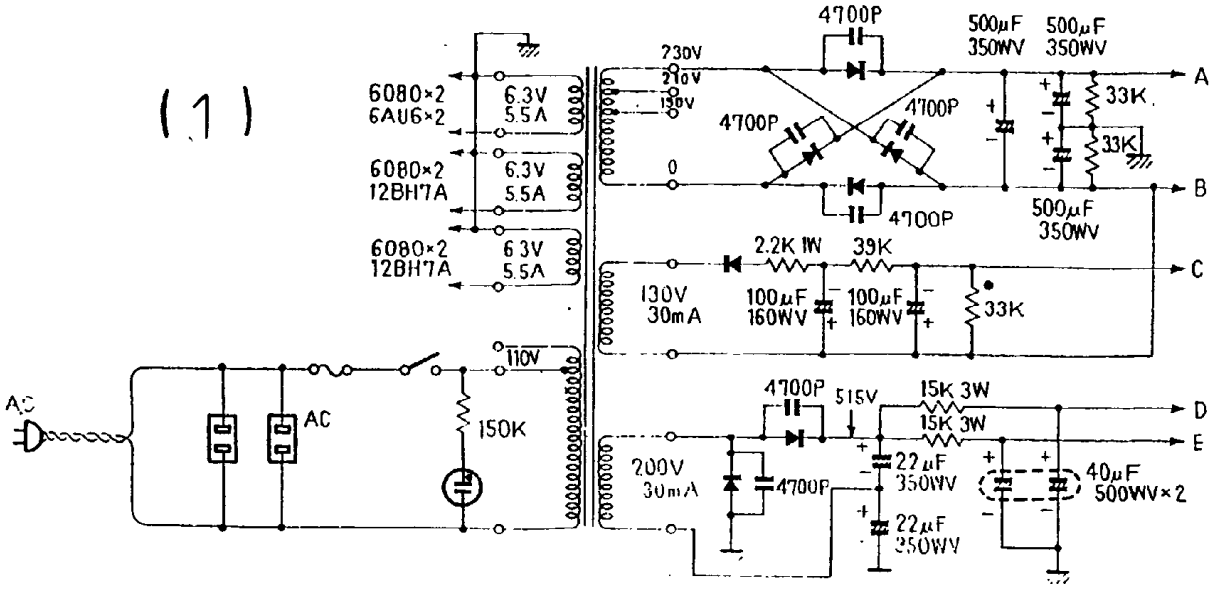

½ 5687
½ 5687
UV-211 or UV-845
134V
100K2W
262V
0.047
600V
0.22
600V
500K(A)
7.8V
12.3V
2.2K
100μ 16V
47K1W
470K
11K1W
100μ16V
60H 35MA
51K2W
750Ω 50W
100Ω 5W (B)
49V (115V)
10K
16Ω
8Ω
0Ω
100μ 160V
260V
22μ 450V
2K 21W
+B1
5A
400
370
30DL4×6
0.01μ600V×6
100μ 550V
10H
510K 2W
6.3
100Ω (B)
5687
10
10.3V
UV-211
10000μ 35V
0
+B1
8.2K5W
30DL4×4
272V
4.1K 10W
150
PB-102F×2
22μ450V ×2
0.01μ×4
(55)

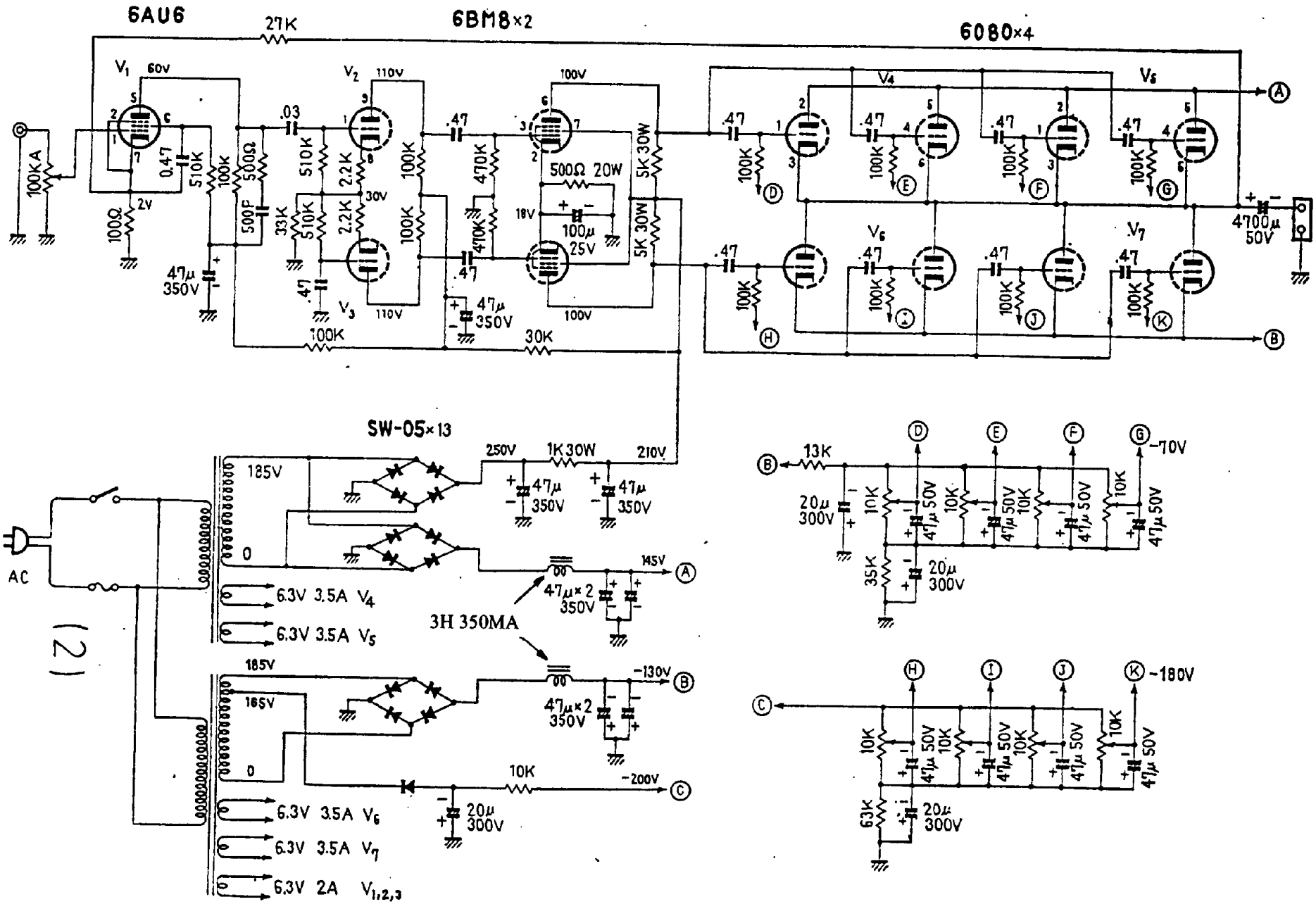

½ECC82
½ECC813
C5 ½ECC813
UV-211
47μ
R9 178K ½W
160V
C1 0.047 600V
V1
52V
V2
244V
C3 0.1
600V
-50V
V3
V4
894V
16Ω
8Ω
4Ω
0.047 600V
16Ω 3W
10K
F
F'
0
R1 470K ½W
R2 500Ω ½W
R3 50K 1W
1.08V
R4 10K 2W
C2 47μ 100V
2.16mA
60V
R5 22K 2W
6.0mA
330K ¼W
C4 100μ 100V
R7 18K ½W
-44V
7.0mA
80mA
B
B'
160V
375V
other CH
C6 22μ 500V
R8 50K 2W
other CH
C2
C1
B2
F.H 0.5A
GI1N4007 ×4
5H 250MA
S2HB20
922V
935V
C9 100μ 500V Hi-Li
C12, C13, C14, C15 0.0036 1.5kV x4
465V
R12 5.6K 3W
C10 100μ 500V Hi-Li
C11 47+47μ 500V
C8 47+47μ 500V
C7 47+47μ 500V
R10 470K 1W
R11 470K 1W
R13 5K 5W
R14 5K 5W
370V
10V
VR3 100Ω(B) 2W A&B
C20 10000μ 16V(PW)
GI1N4007 ×4
30H 50MA
196V
S2HB20
300V
150V
VR4 100Ω(B) 2W A&B
C21 10000μ 16V(PW)
C18 100μ 250V
C16 22μ 350V
C19 22μ 350V
C17 22μ 350V
VR2 50K(B) 2W A&B
-124V
R17 20K 1W
2.3mA
R18 1.5K RS2B
B2
B2'
189V
C2
C2'
-52V
C1
C1'
-170V
ECC813
H
P2
K2
G1
G2
K1
P1
6.3V
V1
V2
V3
R20 100K ¼W
C24 0.0036 1.5kV
C23 0.1 600V
MY-4
C22 0.1 600V
R19 100K ¼W
C25 0.0036 1.5kV
P.SW
F.H 5A
AC
100N030

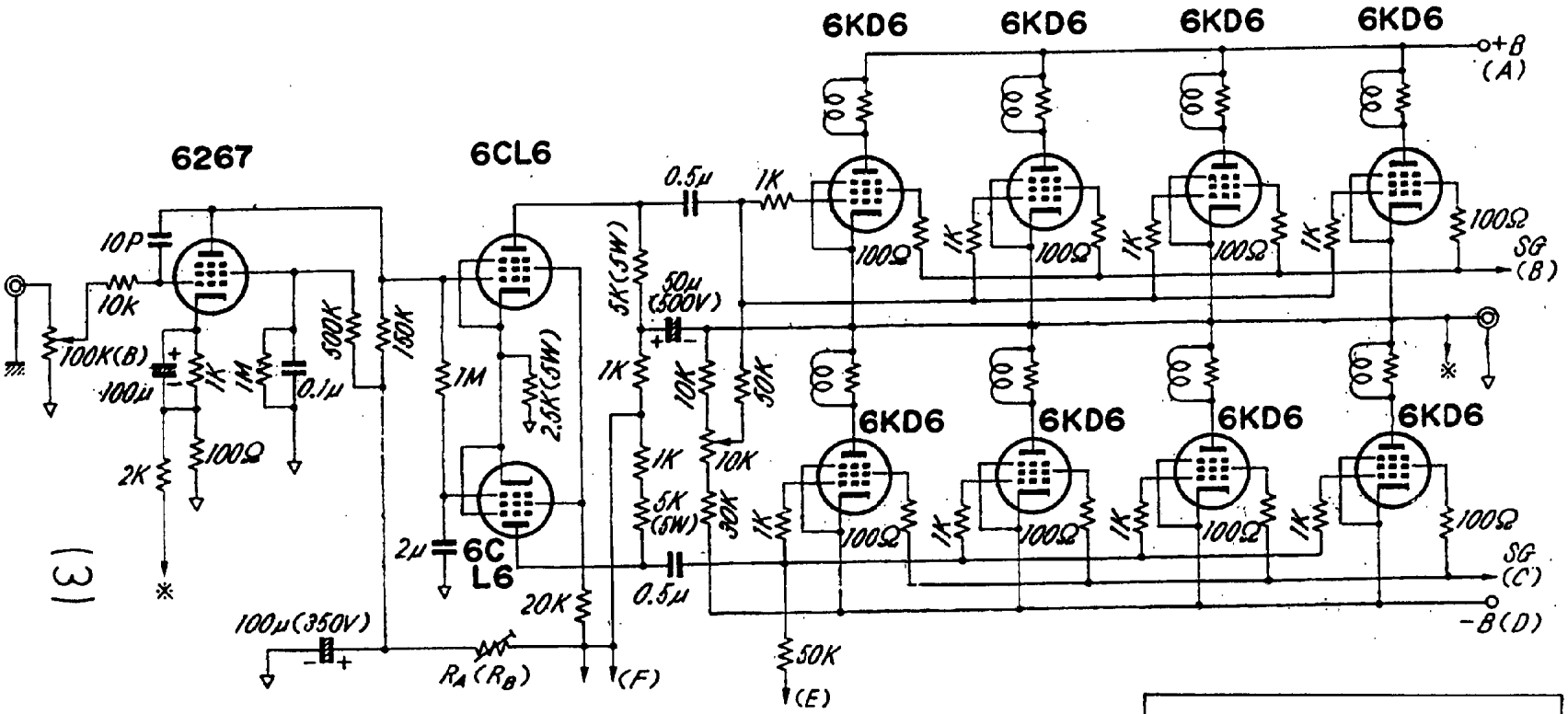

T1 6AU6
T2 12BH7A
T3, T4, T5 6080×3
0.27
100KA
1K
100Ω
100μ 10V
0.47 250V
1M
40μ 500V
500KB
250K
50P
10K
1M
1μF 250V
8K 1W
15K 3W
0.47 500V
33μF 450WV
3.3K 1W
6.8K 1W
15K 3W
50KB
33K
47K
1K
10Ω 3W
OUT
1.5K 2W
200P
0.39
10Ω 3W
※1
A
B
C
D


T11 6AU6
T12 12BH7A
T13, T14, T15 6080×3
-65V
90V
100V
-221V
130V (156V)
OUT
※2
A
B
C
E
350V
-130V (-156V)

(1)

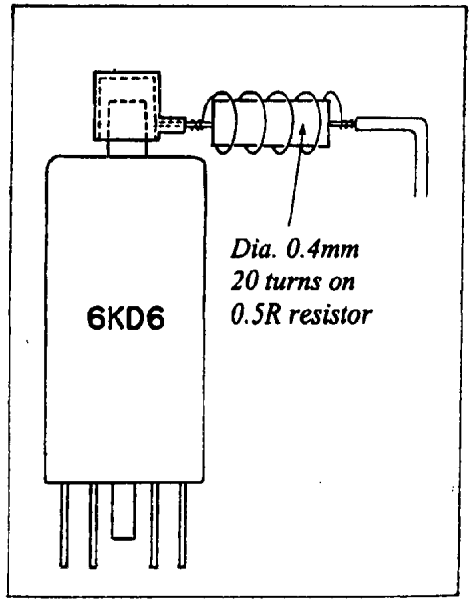

6080×2 6AU6×2
6080×2 12BH7A
6080×2 12BH7A
6.3V 5.5A
230V
210V
130V
0
110V
AC
150K
4700P
500μF 350WV
33K
2.2K 1W
39K
130V 30mA
100μF 160WV
200V 30mA
515V
15K 3W
22μF 350WV
40μF 500WV×2
A
B
C
D
E

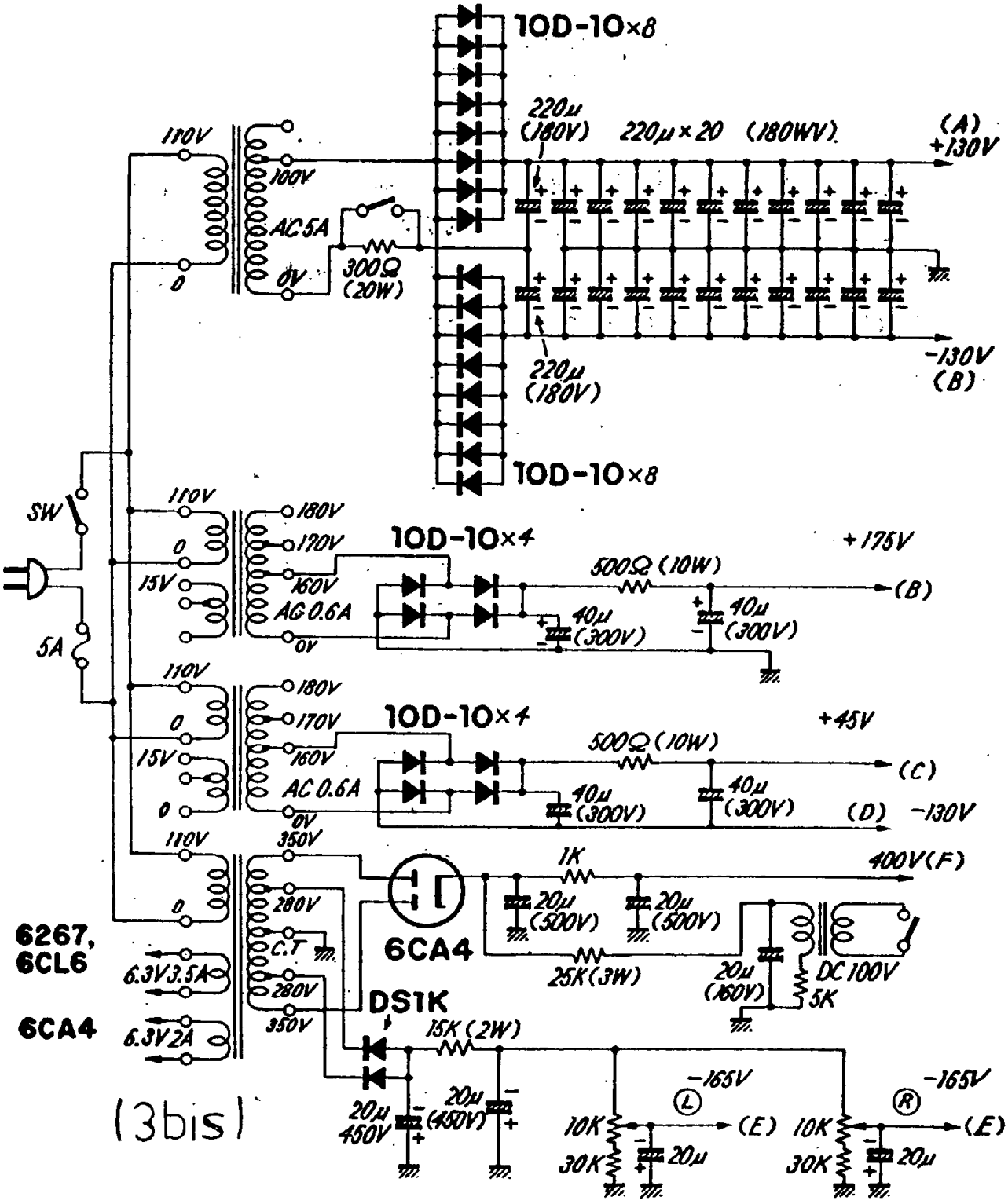

6AU6
27K
6BM8×2
6080×4
V1 60V
V2 110V
V3 110V
V4
V5
V6
V7
100V
100KA
100Ω 2V
0.47
510K
100K
500Ω
500P
.03
33K
2.2K
30V
18V
.47
470K
500Ω 20W
100μ 25V
5K 30W
47μ 350V
100K
30K
4700μ 50V
SW-05×13
AC
185V
250V
1K 30W
210V
47μ 350V
145V
47μ×2 350V
3H 350MA
6.3V 3.5A V4
6.3V 3.5A V5
165V
-130V
-200V
10K
20μ 300V
6.3V 3.5A V6
6.3V 3.5A V7
6.3V 2A V1,2,3
(2)
13K
-70V
10K
47μ 50V
35K
-180V
63K

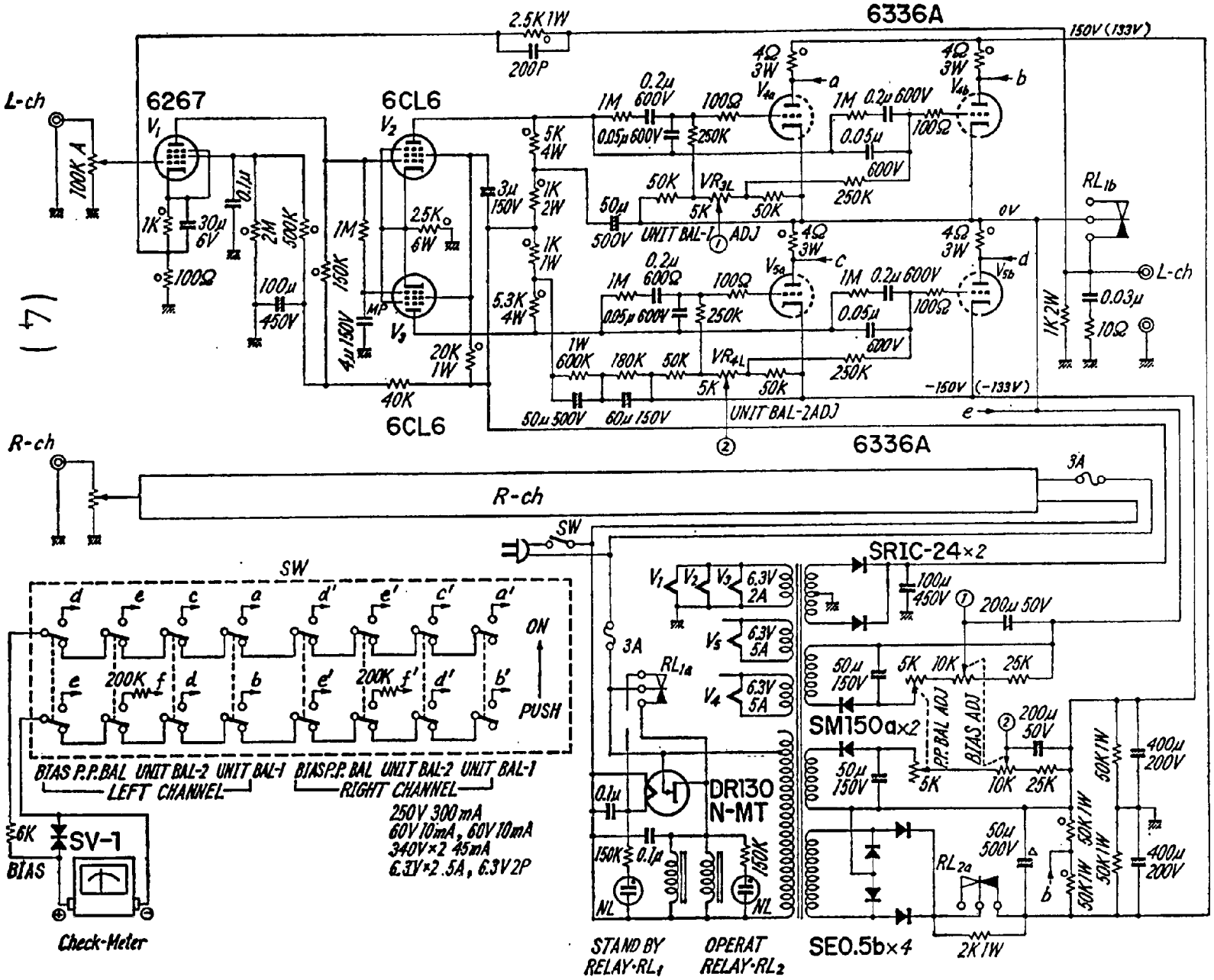


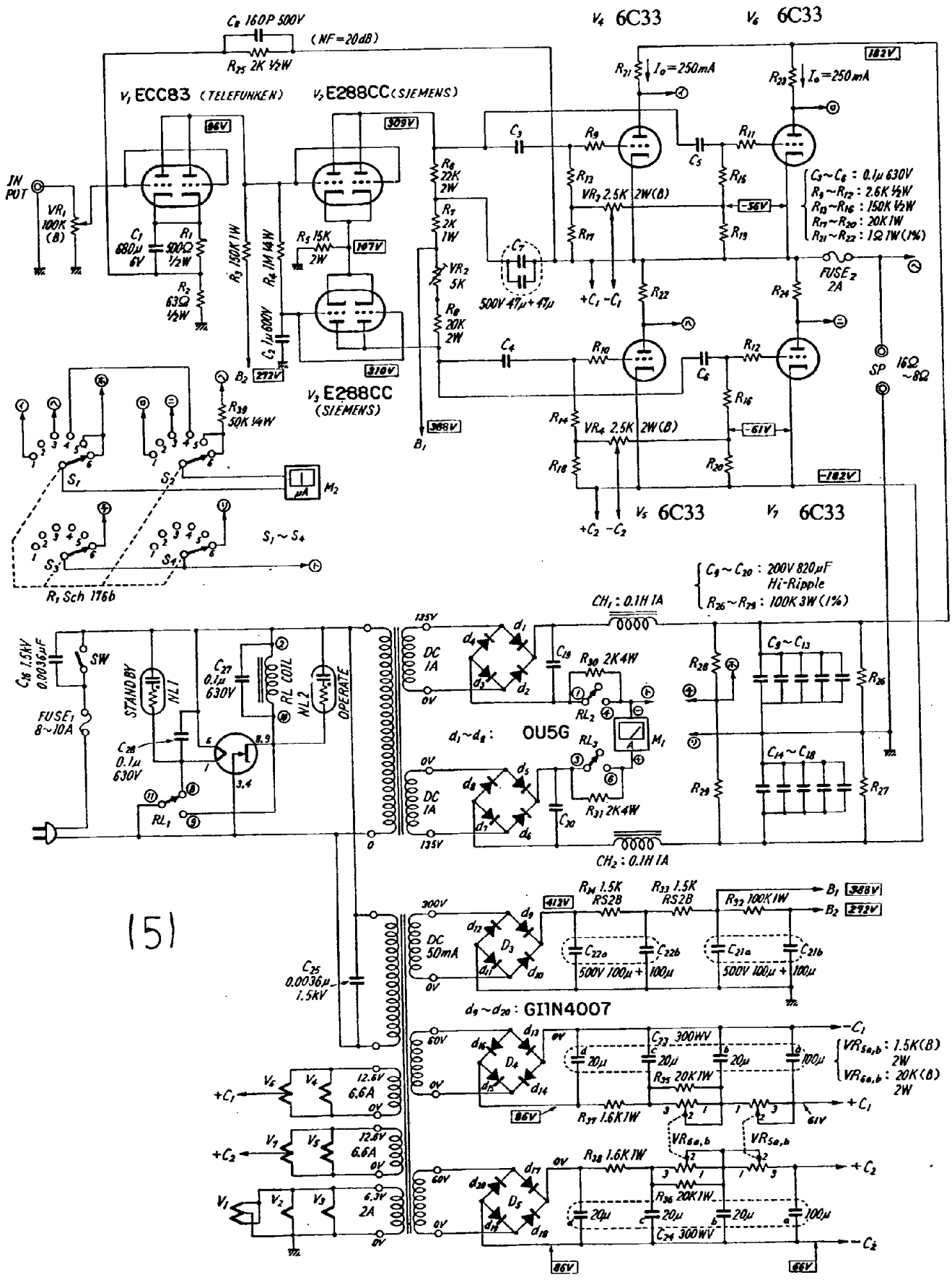
(A) ----- 130V/120V
(B) ----- 175V/150V
(C) ----- 175V/150V

(D) ----- ⊖130V/−120V
(E) ----- − 35V
(F) ----- 400V




10D-10×8
220μ (180V)
220μ×20 (180WV)
(A) +130V
110V
100V
AC 5A
0V
0
300Ω (20W)
220μ (180V)
-130V (B)
10D-10×8
SW
5A
110V
180V
170V
160V
AC 0.6A
0V
15V
0
10D-10×4
+175V
500Ω (10W)
(B)
40μ (300V)
40μ (300V)
10D-10×4
+45V
500Ω (10W)
(C)
40μ (300V)
40μ (300V)
(D) -130V
350V
280V
C.T
280V
350V
6.3V 3.5A
6.3V 2A
6267, 6CL6
6CA4
6CA4
1K
400V (F)
20μ (500V)
20μ (500V)
25K (3W)
20μ (160V)
DC 100V
5K
DS1K
15K (2W)
20μ 450V
20μ (450V)
-165V
(L)
10K
30K
20μ
(E)
-165V
(R)
10K
30K
20μ
(E)
(3bis)

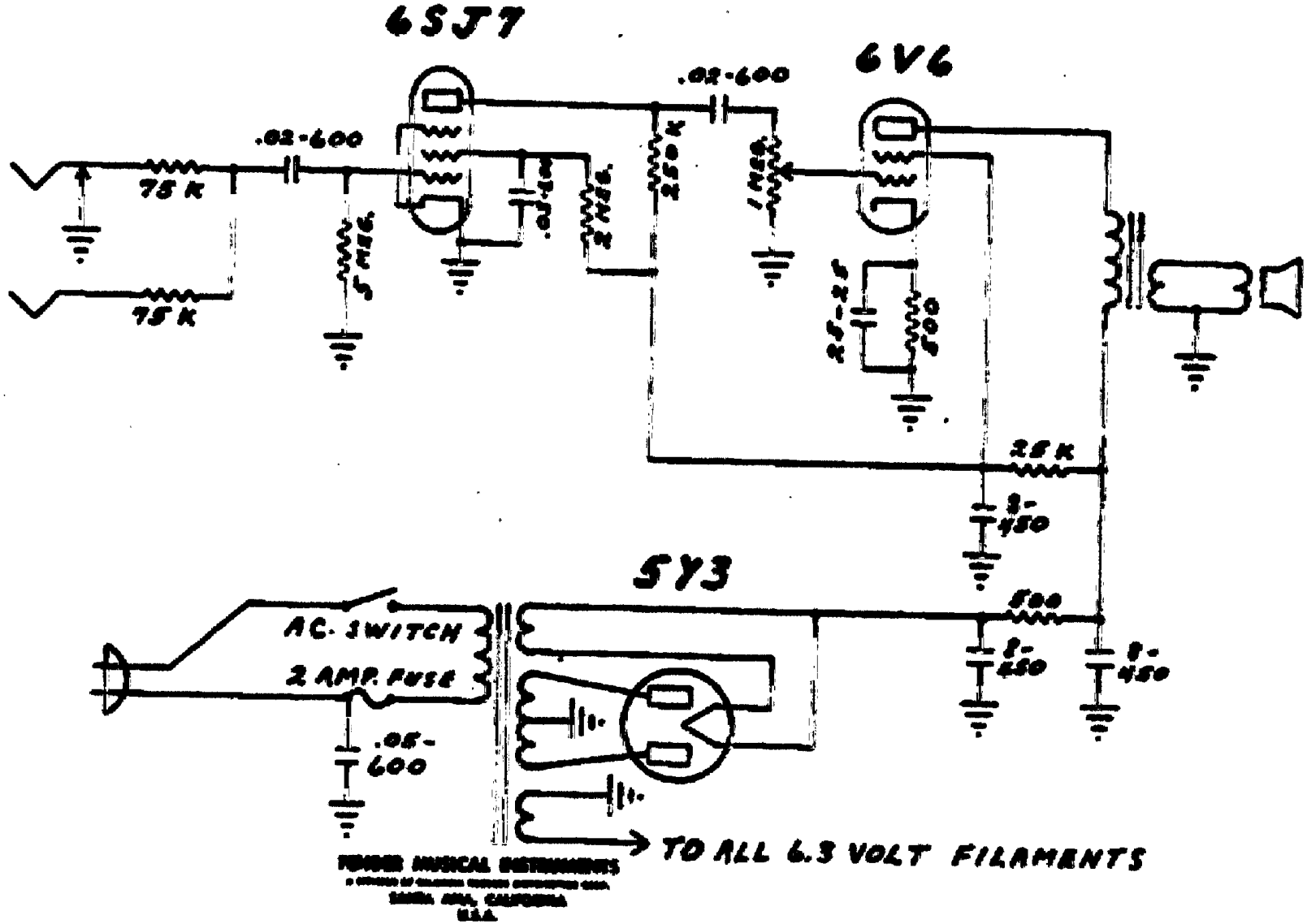

6336A
6267
6CL6
6CL6
6336A
L-ch
R-ch
R-ch
2.5K 1W
200P
150V (133V)
100K A
1K
30μ 6V
100Ω
0.1μ
2M
500K
100μ 450V
150K
1M
MP
4μ 150V
2.5K 6W
3μ 150V
5K 4W
1K 2W
1K 1W
5.3K 4W
20K 1W
40K
50μ 500V
60μ 150V
0.2μ 600V
1M
100Ω
0.05μ 600V
250K
50K
5K
VR3L
UNIT BAL-1 ADJ
0V
4Ω 3W
a
b
c
d
0.05μ
600V
250K
1K 2W
0.03μ
10Ω
RL1b
1W 600K
180K
VR4L
UNIT BAL-2ADJ
-150V (-133V)
e
3A
SW
SRIC-24×2
100μ 450V
200μ 50V
6.3V 2A
6.3V 5A
50μ 150V
5K
10K
25K
SM150a×2
P.P. BAL ADJ
BIAS ADJ
RL1a
RL2a
DR130 N-MT
0.1μ
150K
NL
50K 1W
400μ 200V
SE0.5b×4
2K 1W
STAND BY RELAY·RL1
OPERAT RELAY·RL2
ON
PUSH
200K
BIAS P.P.BAL UNIT BAL-2 UNIT BAL-1 BIASP.P.BAL UNIT BAL-2 UNIT BAL-1
LEFT CHANNEL
RIGHT CHANNEL
250V 300mA
60V 10mA, 60V 10mA
340V×2 45mA
6.3V×2 5A, 6.3V 2P
6K
SV-1
BIAS
Check-Meter


V1 ECC83 (TELEFUNKEN)
V2 E288CC (SIEMENS)
V3 E288CC (SIEMENS)
V4 6C33
V5 6C33
V6 6C33
V7 6C33
INPUT
C8 160P 500V
(NF=20dB)
R25 2K ½W
VR1 100K (B)
C1 680µ 6V
R1 500Ω ½W
R2 63Ω ½W
R3 150K 1W
R4 1M 1W
C3 1µ 600V
R5 15K 2W
R6 22K 2W
R7 2K 1W
VR2 5K
R8 20K 2W
C7 500V 47µ+47µ
R39 50K 1W
S1 S2 S3 S4
M2
R, Sch 176b
R21 Io=250mA
R23 Io=250mA
182V
C3~C6 : 0.1µ 630V
R9~R12 : 2.6K ½W
R13~R16 : 150K ½W
R17~R20 : 20K 1W
R21~R22 : 1Ω 1W(1%)
VR3 2.5K 2W(B)
VR4 2.5K 2W(B)
R22 R24
FUSE2 2A
SP 16Ω ~8Ω
+C1 -C1
+C2 -C2
C9~C20 : 200V 820µF Hi-Ripple
R26~R29 : 100K 3W(1%)
CH1 : 0.1H 1A
CH2 : 0.1H 1A
C16 1.5KV 0.0036µF
SW
FUSE1 8~10A
STAND BY
HL1
RL COIL
HL2
OPERATE
C27 0.1µ 630V
C28 0.1µ 630V
RL1
RL2
RL3
DC 1A
DC 50mA
d1~d8 : OU5G
d9~d20 : GI1N4007
R30 2K 4W
R31 2K 4W
R34 1.5K RS2B
R33 1.5K RS2B
R32 100K 1W
C22a C22b 500V 100µ+100µ
C21a C21b 500V 100µ+100µ
C25 0.0036µ 1.5KV
C23 300WV
C24 300WV
20µ
100µ
R35 20K 1W
R36 20K 1W
R37 1.6K 1W
R38 1.6K 1W
VR5a,b : 1.5K(B) 2W
VR6a,b : 20K(B) 2W
12.6V 6.6A
6.3V 2A
135V
300V
412V
388V
292V
86V
61V
(5)

FENDER "CHAMP-AMP"

MODEL 5C1

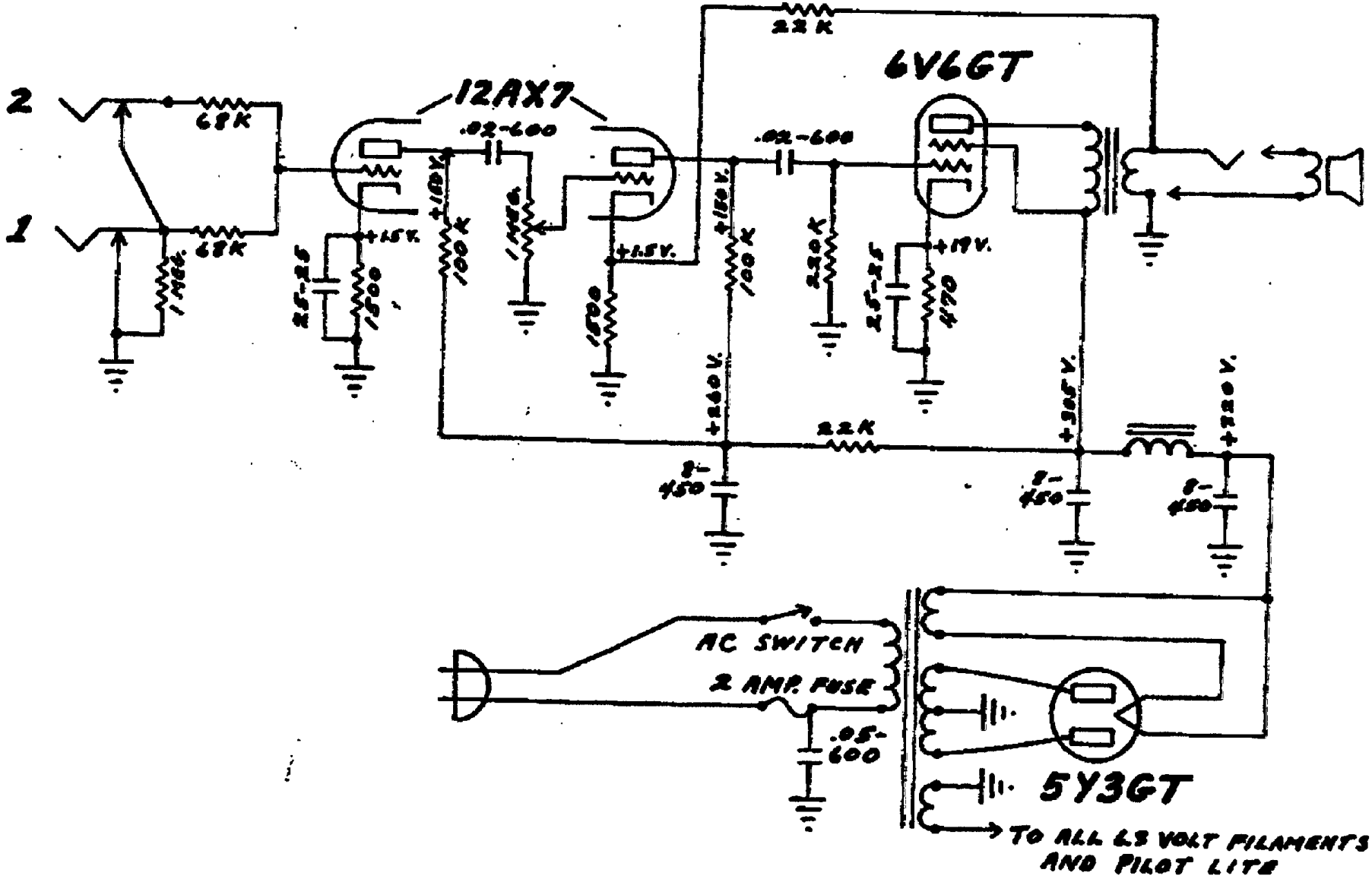
F-DH



FENDER "CHAMP-AMP" SCHEMATIC

MODEL 5E1

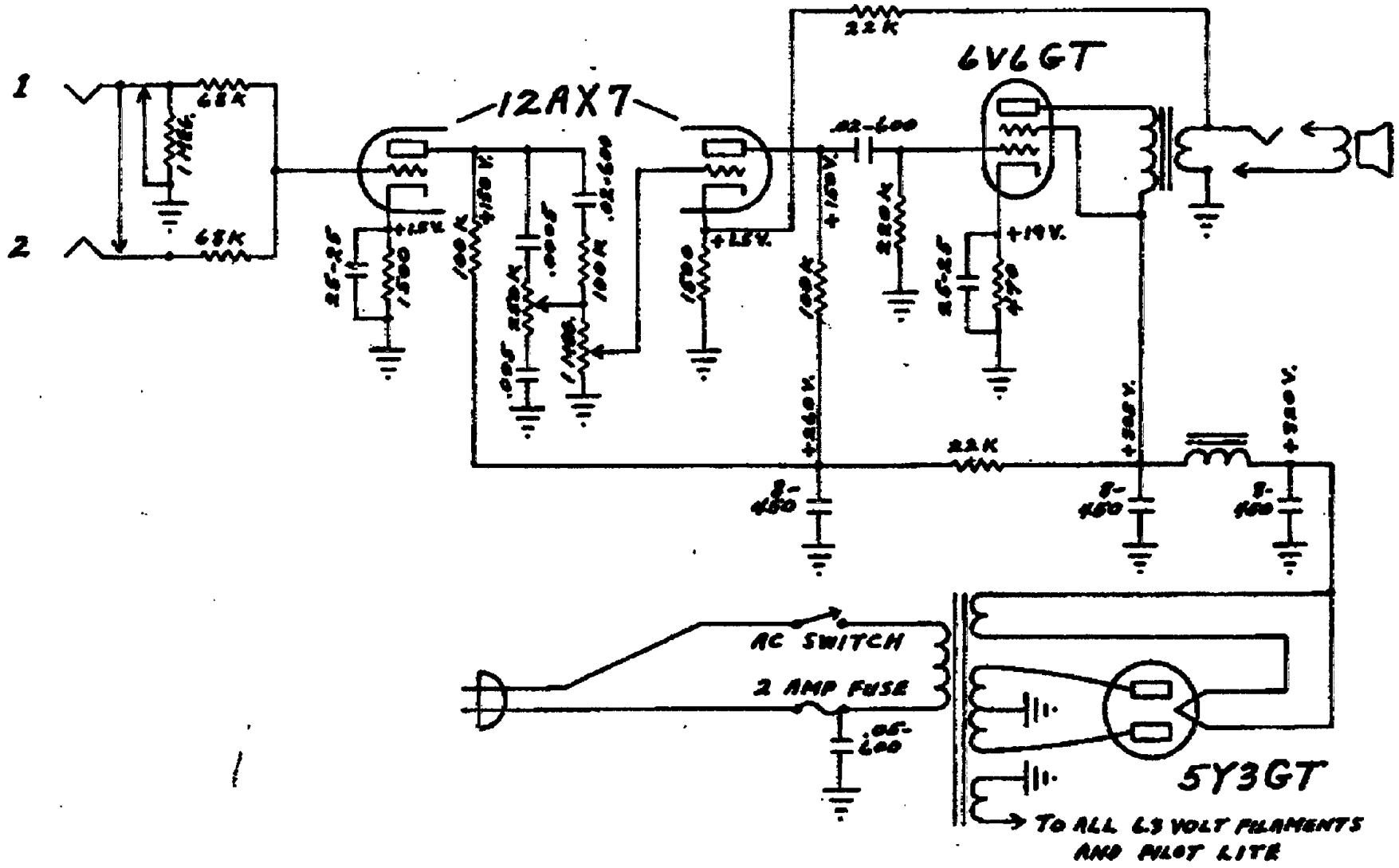
H-EE



FENDER "PRINCETON" SCHEMATIC

MODEL 5E2

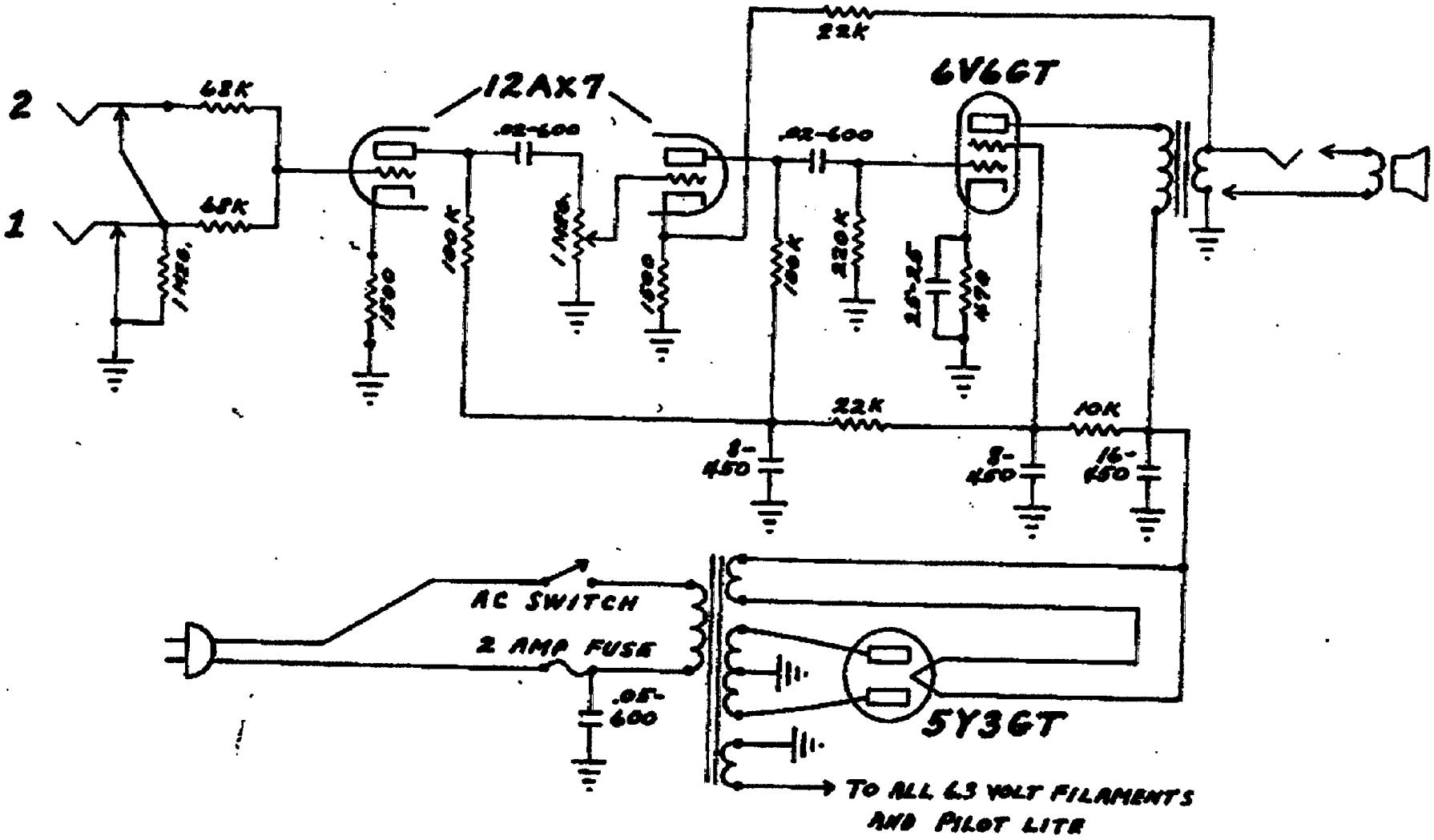
E-EE



FENDER "CHAMP-AMP" SCHEMATIC

MODEL 5F1

K-EE



FENDER MODEL

"CHAMP AMP AA764" SCHEMATIC

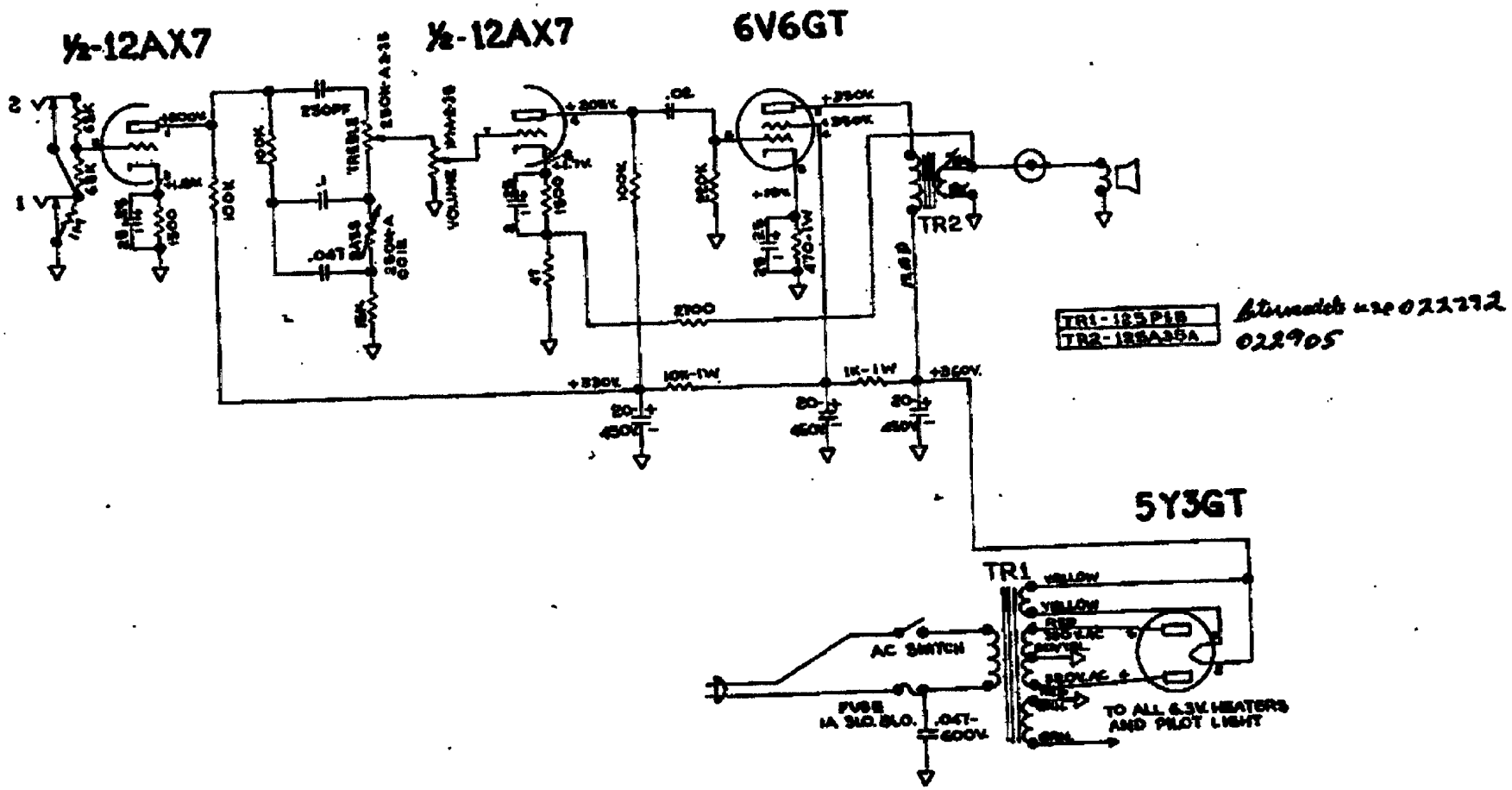
THIS PRODUCT MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS- #2817708, #2973681, 192089, / PATENTS PENDING

I-FD

NOTICE

1-VOLTAGES READ TO GROUND WITH ELECTRONIC VOLTMETER VALUES SHOWN +OR-20%.
2-ALL RESISTORS ½ WATT 10% TOLERANCE IF NOT SPECIFIED.
3-ALL CAPACITORS AT LEAST 400 VOLT RATING IF NOT SPECIFIED.

INSTRUMENTS



Litronix #2P022292
022905

FENDER ELECTRIC INSTRUMENT COMPANY
FULLERTON, CALIFORNIA
U.S.A.