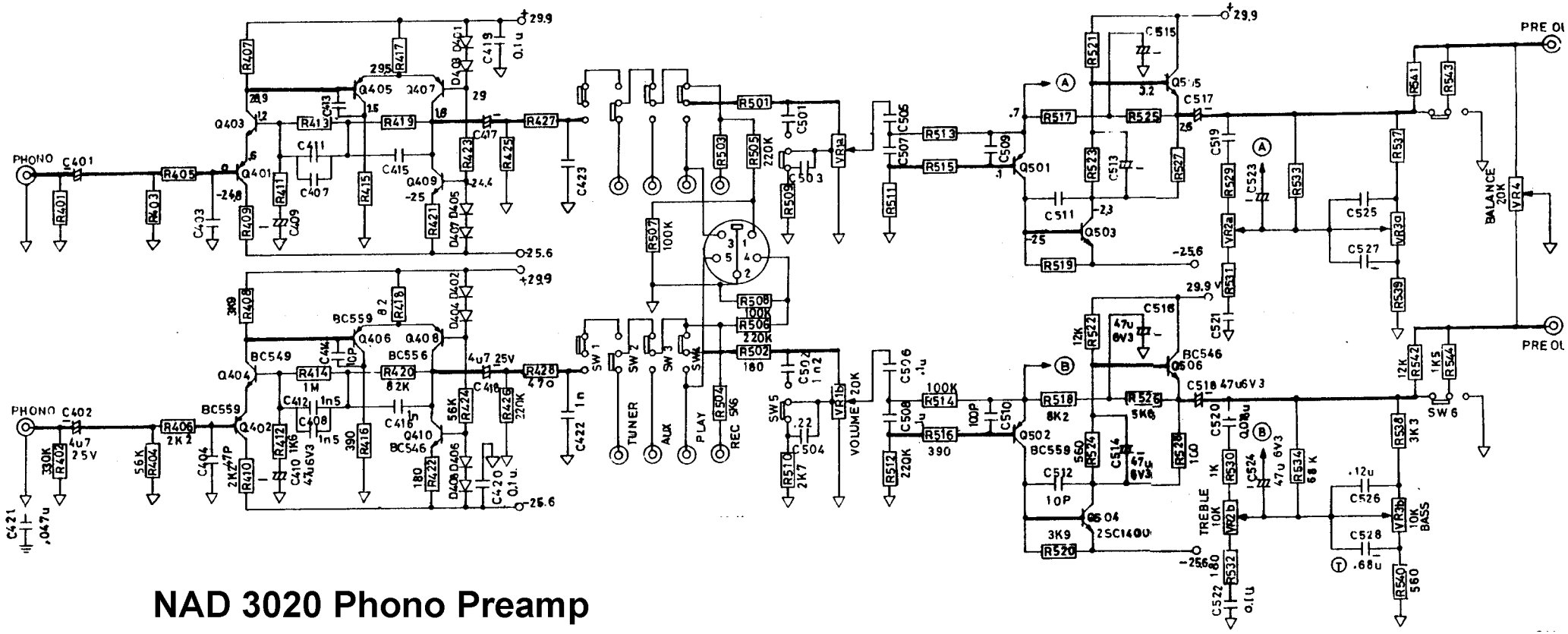
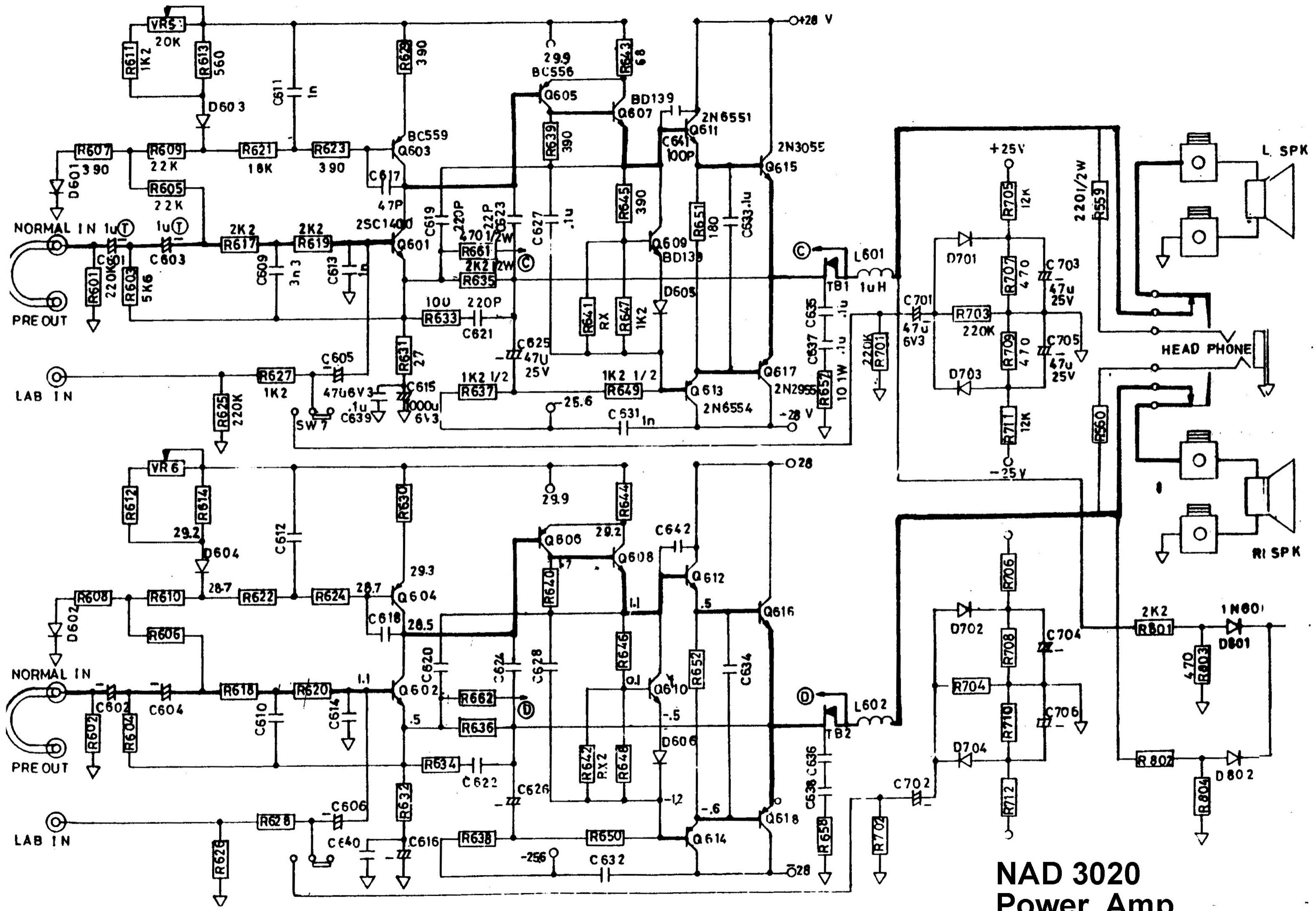
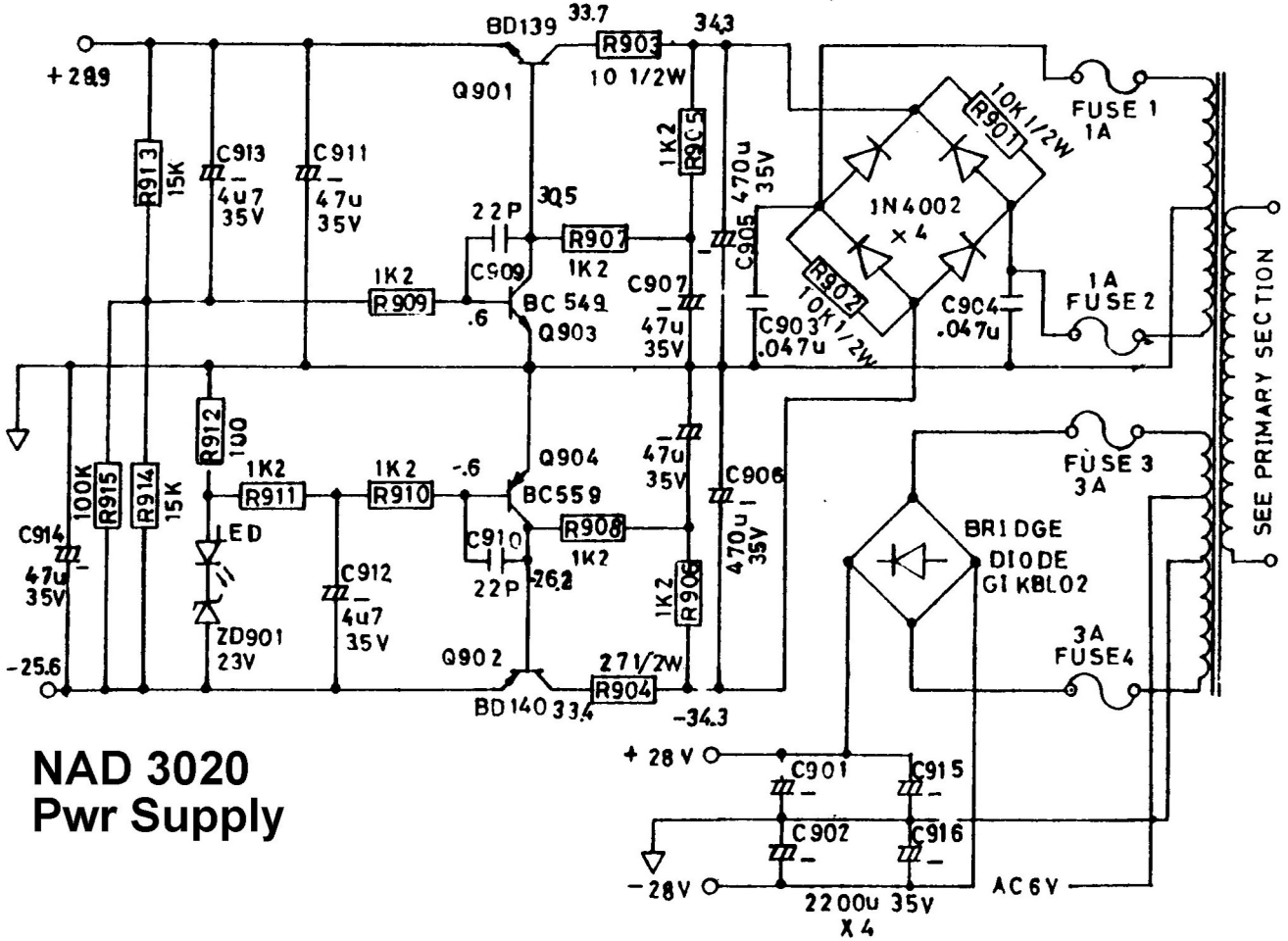


NAD 3020 Phono Preamp

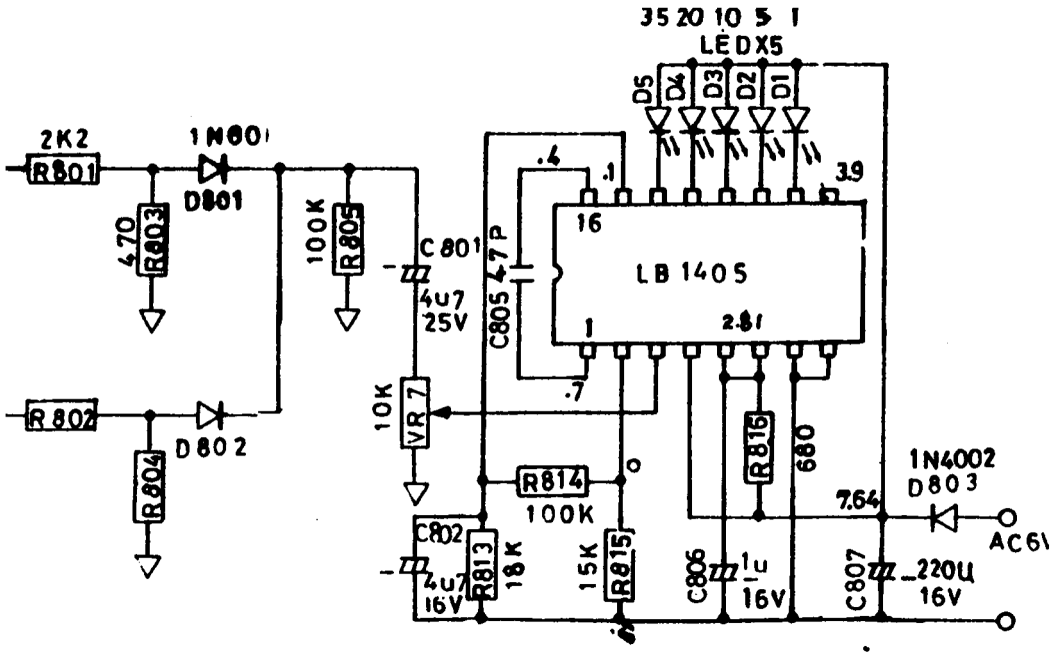


+28 V
NORMAL IN
PRE OUT
LAB IN
SW 7
VR5
20K
R611
1K2
R613
560
D603
D601
R607
390
R609
22K
R605
22K
R621
18K
R623
390
C611
1n
R629
390
BC559
Q603
C617
47P
2SC1400
Q601
R617
2K2
R619
2K2
C601
C603
R601
220K
R603
5K6
C609
3n3
C613
R627
1K2
R625
220K
C605
47u 6V3
C639
.1u
R631
27
C615
1000u
6V3
R633
100
C621
220P
C619
220P
C623
22P
R661
4701/2W
R635
2K2 1/2W
C627
.1u
C625
47U
25V
R637
1K2 1/2
BC556
Q605
29.9
R639
390
BD139
Q607
R643
68
R645
390
R641
RX
R647
1K2
Q609
BD139
D605
R649
1K2 1/2
-25.6
C631
1n
C641
100P
2N6551
Q611
Q613
2N6554
R651
180
C633 .1u
2N3055
Q615
Q617
2N2955
-28 V
TB1
L601
1uH
C635
.1u
C637
.1u
R657
10 1W
R701
220K
C701
47u
6V3
+25V
R705
12K
D701
R707
470
C703
47u
25V
R703
220K
R709
470
C705
47u
25V
D703
R711
12K
-25V
R559
2201/2W
R560
HEAD PHONE
L SPK
RI SPK
VR6
R612
R614
29.2
D604
28.7
D602
R608
R610
R606
R622
R624
C612
R630
29.3
Q604
C618
28.5
Q602
1.1
.5
C602
C604
R602
R604
R618
R620
C610
C614
R628
R626
C606
C640
R632
C616
R634
C622
R662
R636
C620
C624
C626
R638
Q606
29.2
29.9
R640
C628
R644
Q608
-256
R646
R642
RX2
R648
Q610
D606
-1.2
R650
C632
C642
Q612
Q614
-.6
R652
C634
Q616
Q618
28
-28
TB2
L602
C636
C638
R658
R702
C702
R706
R708
R704
R710
R712
D702
D704
C704
C706
2K2
R801
1N60
D801
470
R803
R802
D802
R804

NAD 3020
Power Amp



NAD 3020
Pwr Supply


35 20 10 5 1
LEDX5
D5
D4
D3
D2
D1
2K2
R801
1N60
D801
470
R803
100K
R805
C801
4u7
25V
.4
.1
3.9
16
LB 1405
1
2.81
.7
C805 47P
R802
D802
R804
10K
VR 7
R814
100K
R816
680
1N4002
D803
7.64
AC6
C802
4u7
16V
R813
18K
15K
R815
C806
1u
16V
C807
220u
16V

IDLE CURRENT ALIGNMENT

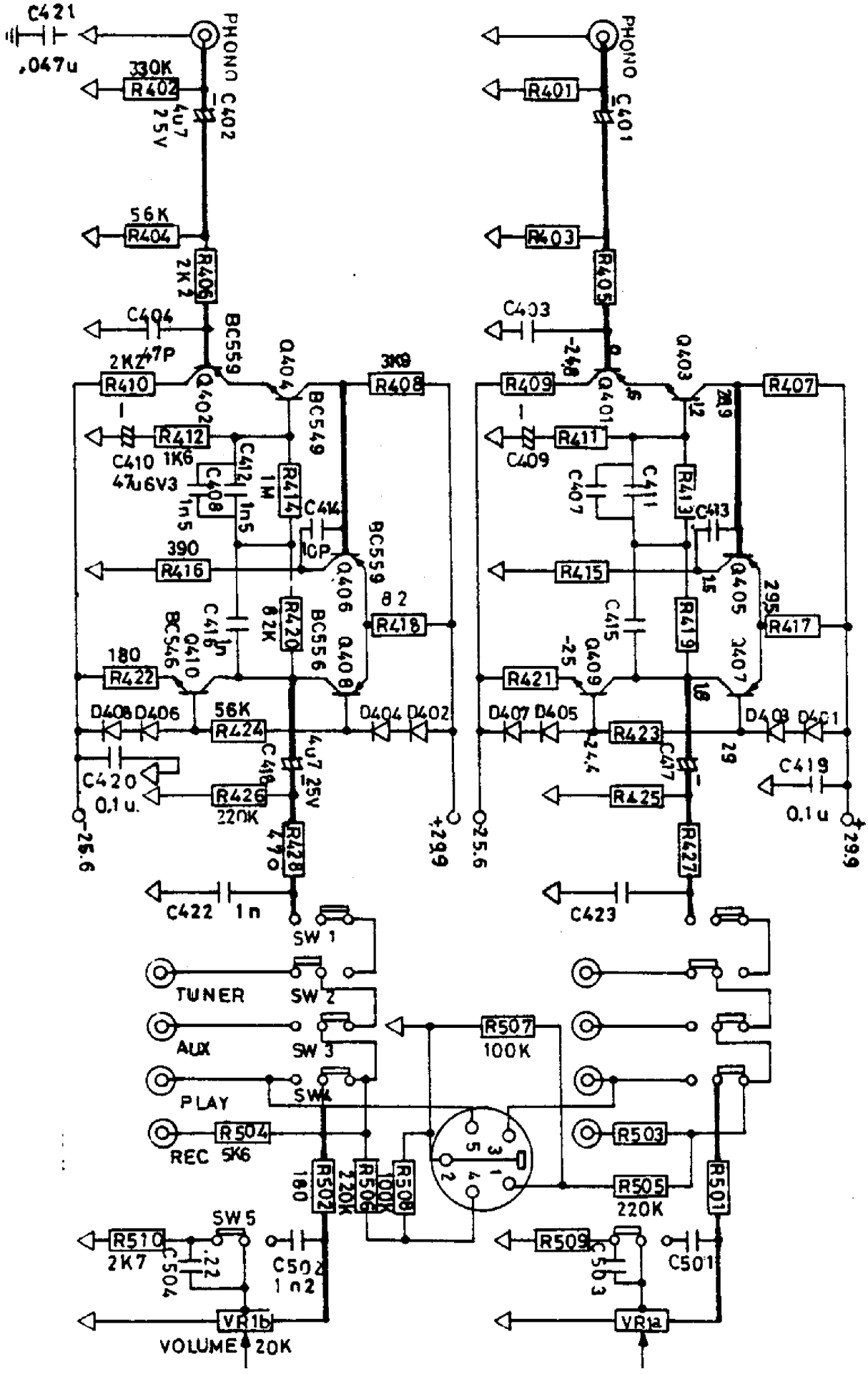
1. 5 Minutes minimum pre-heating is necessary.
2. Set the volume control at minimum position.
3. Connect DC milli-voltmeter across R654 for sight channel and across R653 for left channel. The meter sensitivity should be set for 30–100mV full scale deflection. RX1 (right channel) and RX2 (left channel).
4. Insert 1 kohm carbon resistor to connect in parallel with R654 (right channel) and R653 (left channel).
5. After insert 1Kohm. if the reading of meter were between 5 mV and 11mV then the alignment is completed.
6. If the reading were less than 5mV then the value of RX1 or RX2 should be reduced till the reading is between 5mV and 11mV.
7. If the reading were more than 11mV. then the value of RX1 or RX2 should be increase till the reading is between 5mV and 11mV.

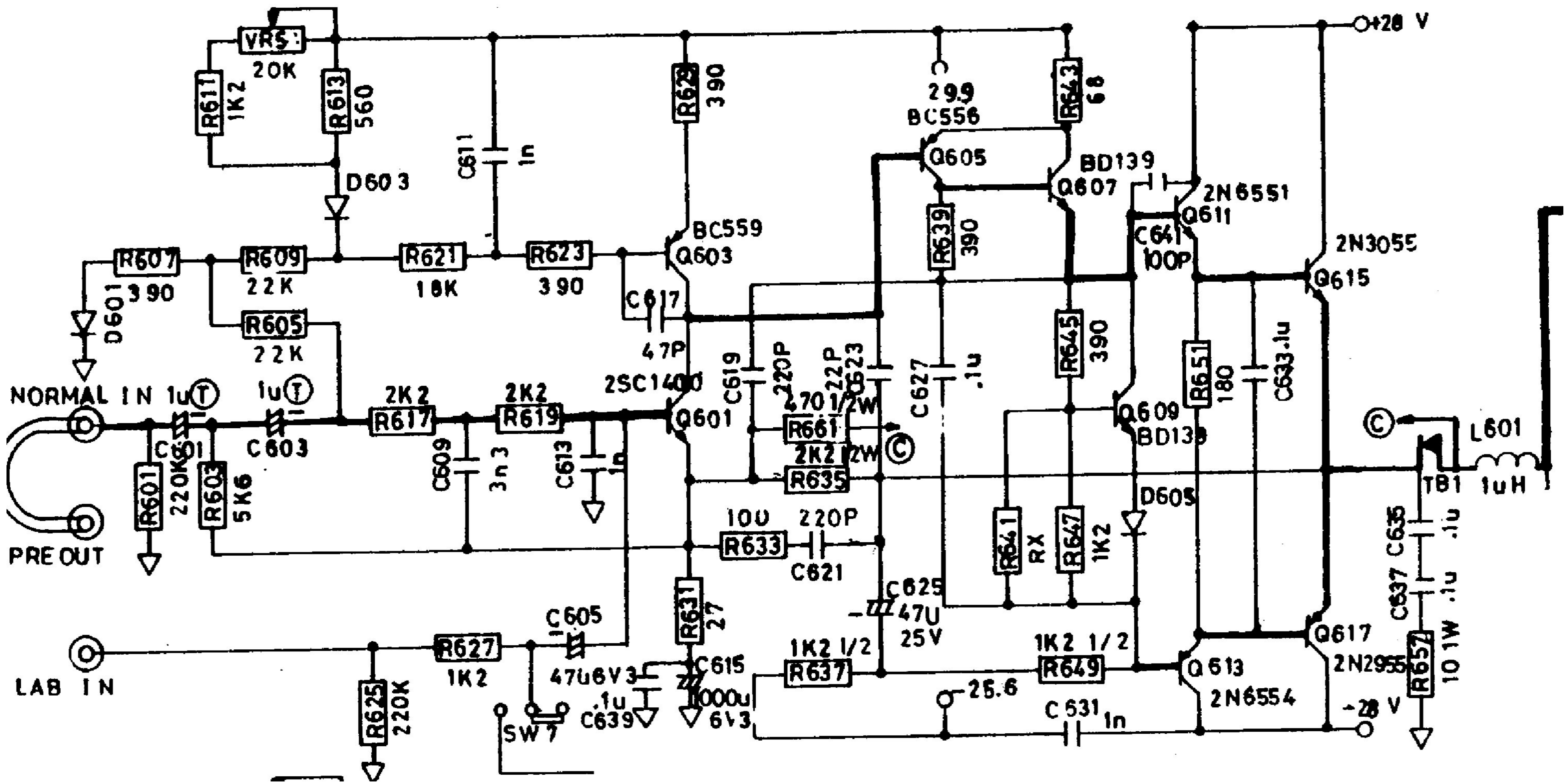
DC OFF-SET ALIGNMENT

1. 5 Minutes minimum pre heating is necessary.
2. Set volume control at minimum position.
3. Connect a DC milli-voltmeter to the speaker terminals of each channel. The meter sensitivity should be set for 100-300mV full scale deflection. The positive input of the meter should be connected to the red (+) speaker terminal.
4. Adjust VR5 (for left channel) and VR6 (for right channel) till the meter reading is zero.

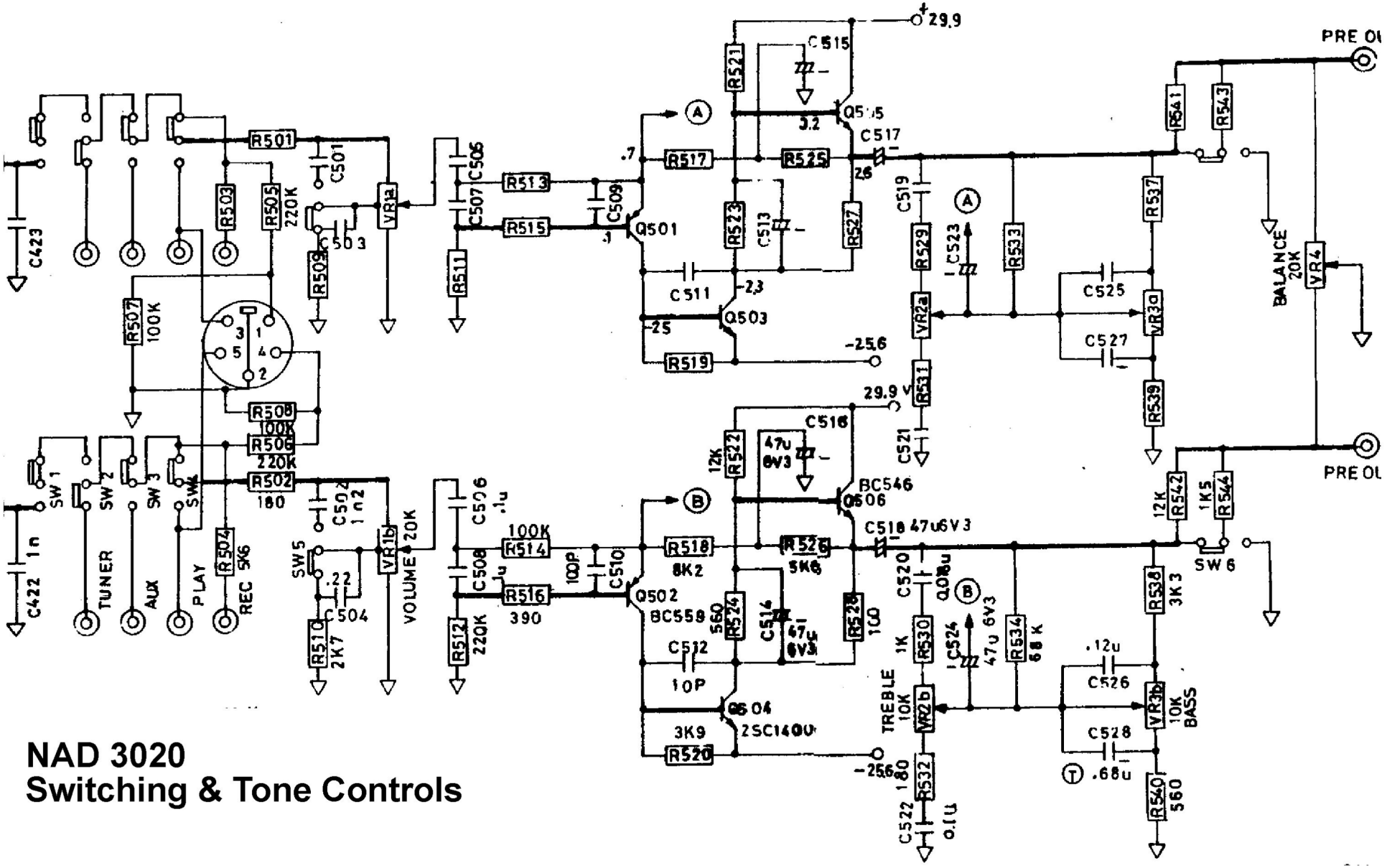
POWER INDICATOR ALIGNMENT

1. Feed an 1KHZ sine wave approx 150 mV RMS to AUX Input.
2. Connect an 8 ohm dumy load and an AC voltmeter and oscilloscope to the speaker terminals.
3. Set the volume control till the output voltage is 12.6V making sure that no dipping of the waveform is occurring.
4. Adjust VR7 till the LED D5 (marked 20W) is lighted.

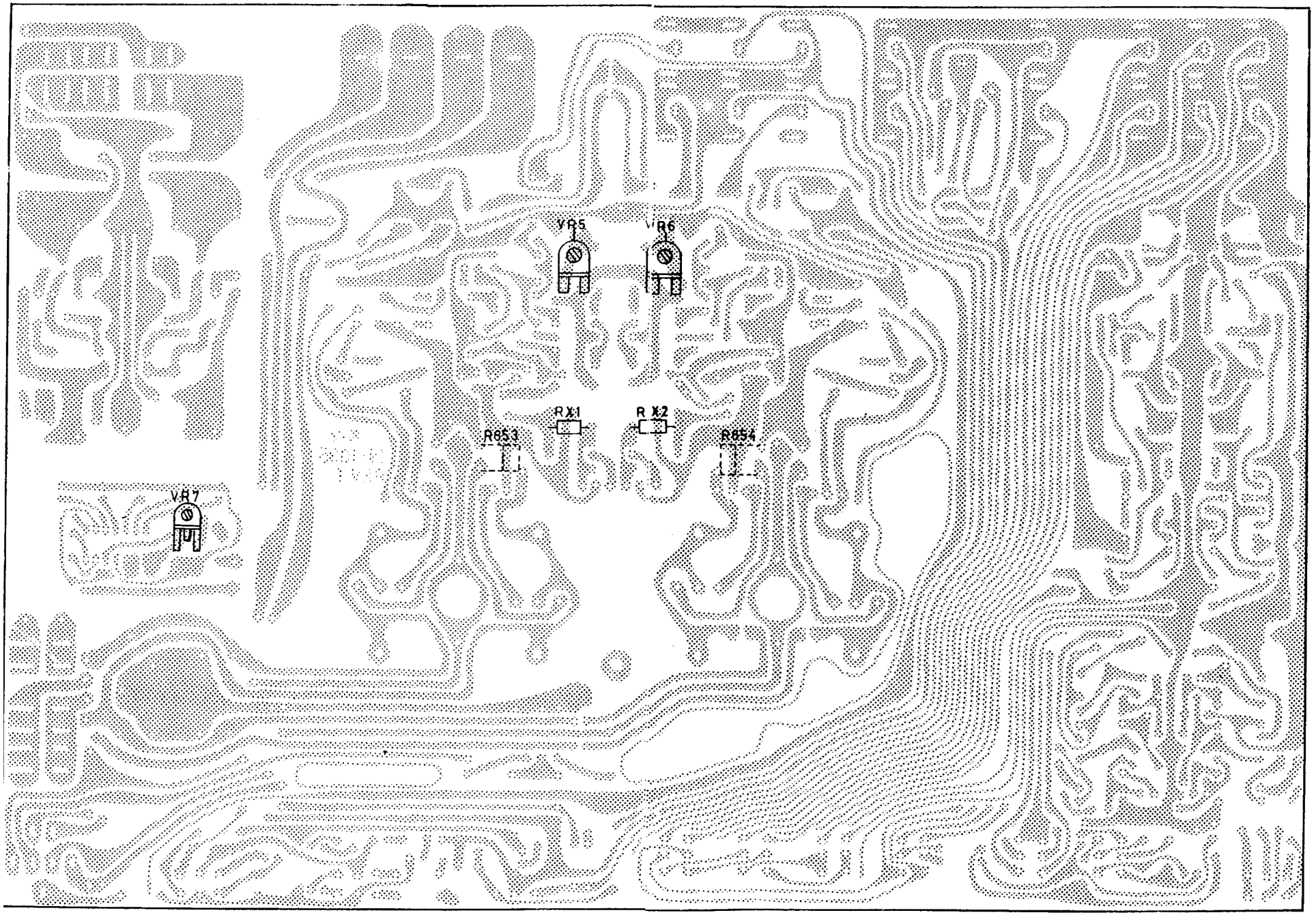

C421
,047u
330K
R402
4u7 25V
PHONO
C402
56K
R404
R406
2K2
C404
BC559
2K2 47P
R410
Q402
Q404
BC549
R408
R412
C410 1K6
47u6V3
C412
C408
1n5
1n5
R414
1M
C414
10P
390
R416
BC559
Q406
Q408
BC556
R420
8 2K
R418
180
R422
BC546
Q410
C418
D408 D406
56K
R424
D404 D402
C420
0.1 u.
C419
4u7 25V
R426
220K
R428
470
-25.6
+29.9
C422 1n
SW 1
TUNER
SW 2
AUX
SW 3
PLAY
SW4
REC
R504
5K6
R507
100K
R502
180
R506
220K
R508
100K
SW5
R510
2K7
C504
.22
C502
1n2
VR1b
VOLUME
20K
R401
C401
R403
R405
C403
-24
Q401
Q403
R409
R407
R411
C409
C407
C411
R413
C413
R415
Q405
Q407
C415
R419
R417
Q409
-25
R421
D407 D405
R423
D403 D401
C417
24.4
29
C419
0.1 u
R425
R427
C423
R503
R505
220K
R501
R509
C503
C501
VR1a



+28 V
-28 V
VR5 20K
R611 1K2
R613 560
D603
C611 1n
R629 390
R643 68
29.9
BC556
Q605
BD139
Q607
2N6551
Q611
C641 100P
2N3055
Q615
R607 390
D601
R609 22K
R621 18K
R623 390
BC559
Q603
C617 47P
R605 22K
R639 390
R645 390
R651 180
C633 .1u
NORMAL IN
1u
C601
C603
2K2
R617
R619
2SC1400
Q601
C619 220P
22P C623
C627 .1u
Q609 BD139
R661 470 1/2W
R635 2K2 1/2W
L601 1uH
TB1
PRE OUT
R601 220K
R603 5K6
C609 3n3
C613 1n
R633 100
C621 220P
C625 47U 25V
R641 RX
R647 1K2
D605
C635 .1u
C637 .1u
R631 27
C615 1000u 6V3
R637 1K2 1/2
R649 1K2 1/2
Q613 2N6554
Q617 2N2955
R657 10 1W
LAB IN
R627 1K2
C605 47u6V3
C639 .1u
SW7
R625 220K
25.6
C631 1n



NAD 3020
Switching & Tone Controls


VR5
VR6
RX1
RX2
R653
R654
VR7