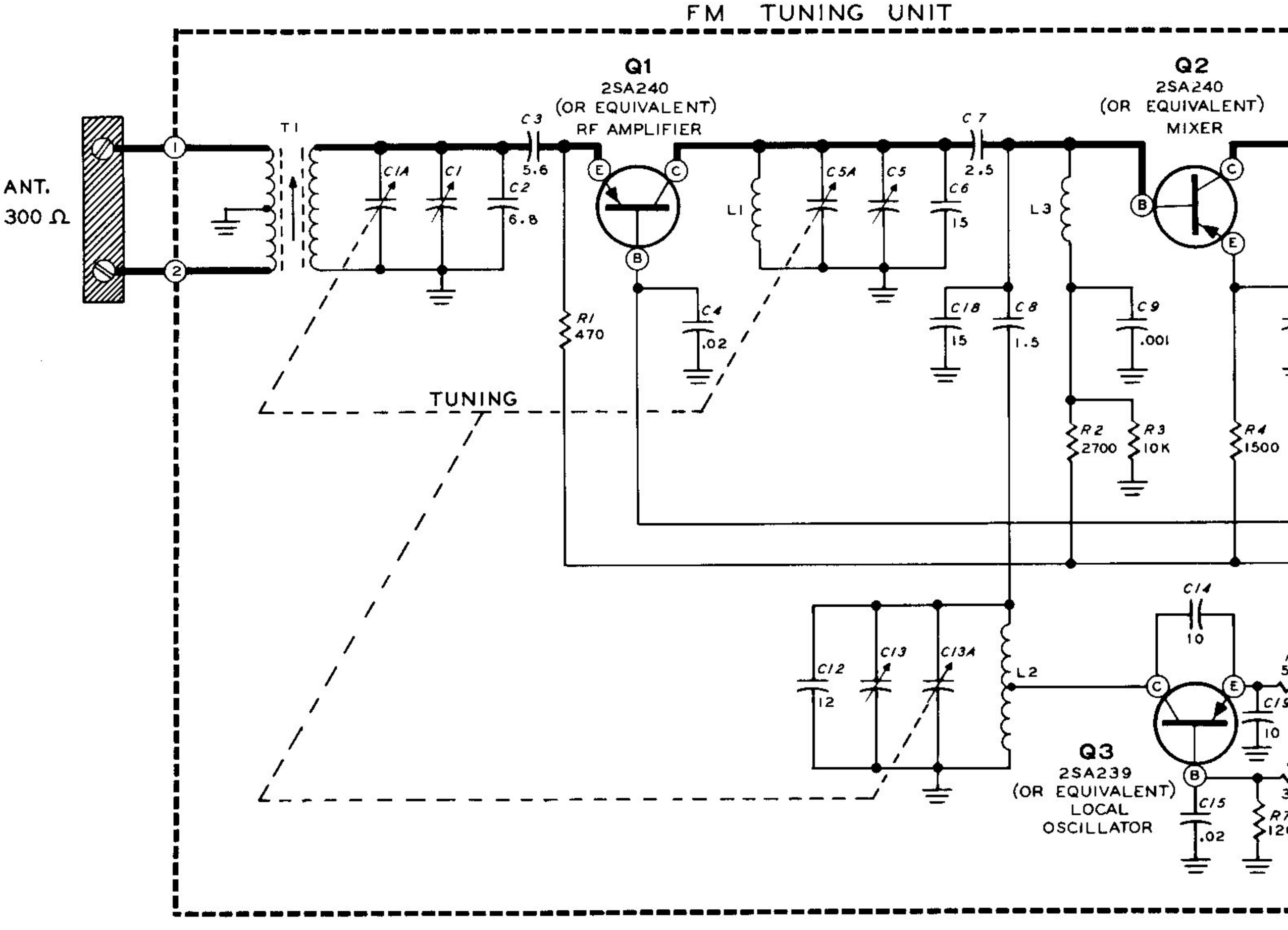


SCHEMATIC OF THE HEATHKIT® SOLID-STATE MONO FM RECEIVER

MODEL AR-27

NOTE:

1. RESISTOR AND CAPACITOR NUMBERS ARE IN THE FOLLOWING GROUPS:

   0-99 NUMBERS IN THE FM TUNER SECTION.
   100-199 NUMBERS IN THE AMPLIFIER SECTION.
   200-299 NUMBERS IN THE POWER SUPPLY SECTION.
   * DENOTES PARTS NOT MOUNTED ON THE CIRCUIT BOARD.

2. ALL RESISTORS ARE 1/2 WATT UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K = 1000, MEG = 100,000).

3. CAPACITOR VALUES LESS THAN 1 ARE IN μfd. VALUES OF 1 AND ABOVE ARE IN pF, UNLESS THEY ARE MARKED OTHERWISE.

4. ⬭ THIS SYMBOL INDICATES A POSITIVE DC VOLTAGE MEASUREMENT. TAKEN WITH AN 11 MEGOHM ELECTRONIC VOLTMETER OR VTVM FROM THE POINT INDICATED TO CHASSIS GROUND.

5. ☐ INDICATES B+ VOLTAGE POINTS.

6. ⬡ INDICATES CONNECTING POINTS ON THE CIRCUIT BOARD.

7. REFER TO THE CIRCUIT BOARD X-RAY VIEW AND CHASSIS PHOTO FOR THE PHYSICAL LOCATION OF PARTS.

8. ⟶ INDICATES CW ROTATION.

9. ALL VOLTAGES ARE MEASURED WITH NO SIGNAL INPUT.

40
ALENT)
CR

T2

C11
120

C10
.02

R4
1500

C21
130

C22
470

R8
47K

R12
3300

Q4
2N3588
1ST IF

7.3
0
7.6

R13
1500

C25
.01

T3

R15
4700

R16
1500

C26
.01

Q5
TIS37
2ND IF

.2
7.1
7.7

R17
1000

C27
.01

AMPLIFIED AGC

R10
3300

B+

R9
33

R11
33

C

C16
.02

AGC

R14
10K

+ C24
10 µFD

R5
5600

C19
10

C17
.02

R6
3900

R7
1200

Q101
2N3393
PRE-AMP

R105
56K
5%

3.3
.8
.2

R104
27K

C101
.68

R106
390

R107
390K

Q102
2N3393
PRE-AMP

R109
10K
5%

10.9
2.7

R110
100

+ C102
100 µFD

R111
1500

R112
47K

C103
.0022

C104
.0066

C105
+
10
µFD

*C106
.47

*R113
5000
TONE

VOLU
R114
10K

R108
39K

ALTERNATE
240 VOLT
WIRING

BLK-YEL
BLK-GRN
BLK-RED
BLK

120 VAC
50/60 HZ

T4

Q6
TIS37
3RD IF

T5

TP1

R23
1500

C31
270

R24
6800

C33
+ 5 µf

C32
270

R25
6800

R26
1000

D3

D4

.2

R18
150

C28
3.3

7.7

C27
.01

D2

R17
000

R19
5600

R20
1200

C29
.01

1.0

R22
470

7.7

8.3

C30
.01

R21
560

TP2

R27
150

C34
270

R28
68K

C35
.01

R29
8200

R125
390

C110
100 µFD

A

R126
150
1W

C111
50µFD

R127
150
1W

35

Q106
MJE521
AUDIO OUTPUT

13.6

D101

13

R128
4.7

R129
.51

C112
1000 µFD

SPKR 8

R120
33K-5%

R121
1800
5%

C109
250
µFD

R122
470

R124
3300
5%

C113
270

R130
.51

Q103
2N3393
PREDRIVER

Q104
2N3393
PREDRIVER

Q107
MJE371
AUDIO
OUTPUT

T

VOLUME
R114*
10K

C107
10
µFD

R115
6800

.8

1.7

11.6

1.1

.6

12.4

13

Q105
2N3053
DRIVER

R123
200
5%

R117
56K

R118
150K

C108
5

C114
.47

R116
330K

R119
100

P

E

F

POWER SUPPLY

PILOT
LAMPS

M

N

R203
90
5W

POWER SWITCH
(ON TONE CONTROL)

FUSE,*
SLO-BLO
3/4 AMP

OFF

ON

T6

BLK-YEL

RED

D201

A

35

R201
3300

28

B

R202
1800

9.5

C

20 VAC
0/60 HZ

BLK-GRN

BLK-RED

RED-YEL

D202

RED

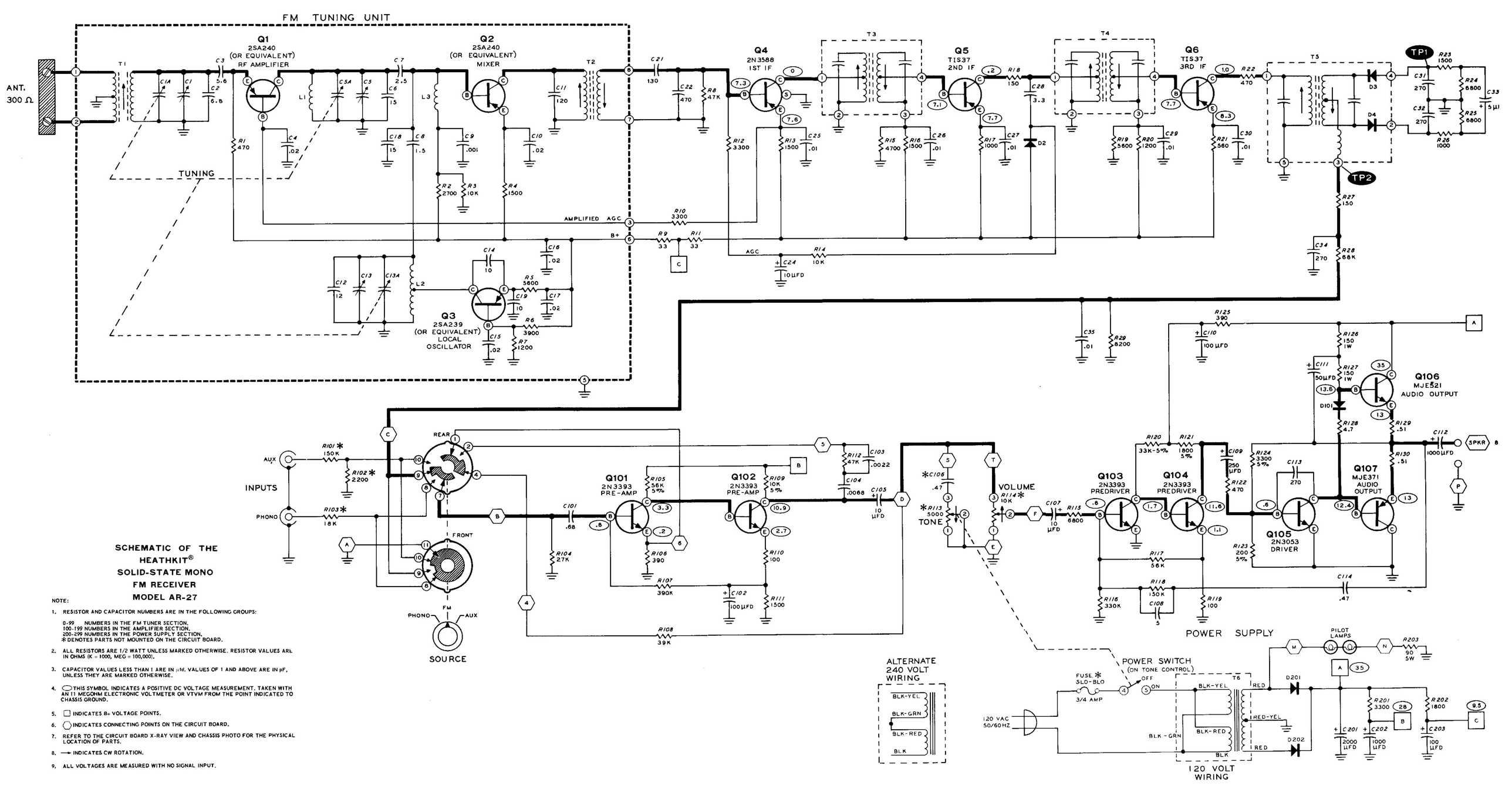
BLK

+ C201
2000
µFD

+ C202
1000
µFD

+ C203
100
µFD

120 VOLT
WIRING



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