

Figure 20. Radio Transmitter

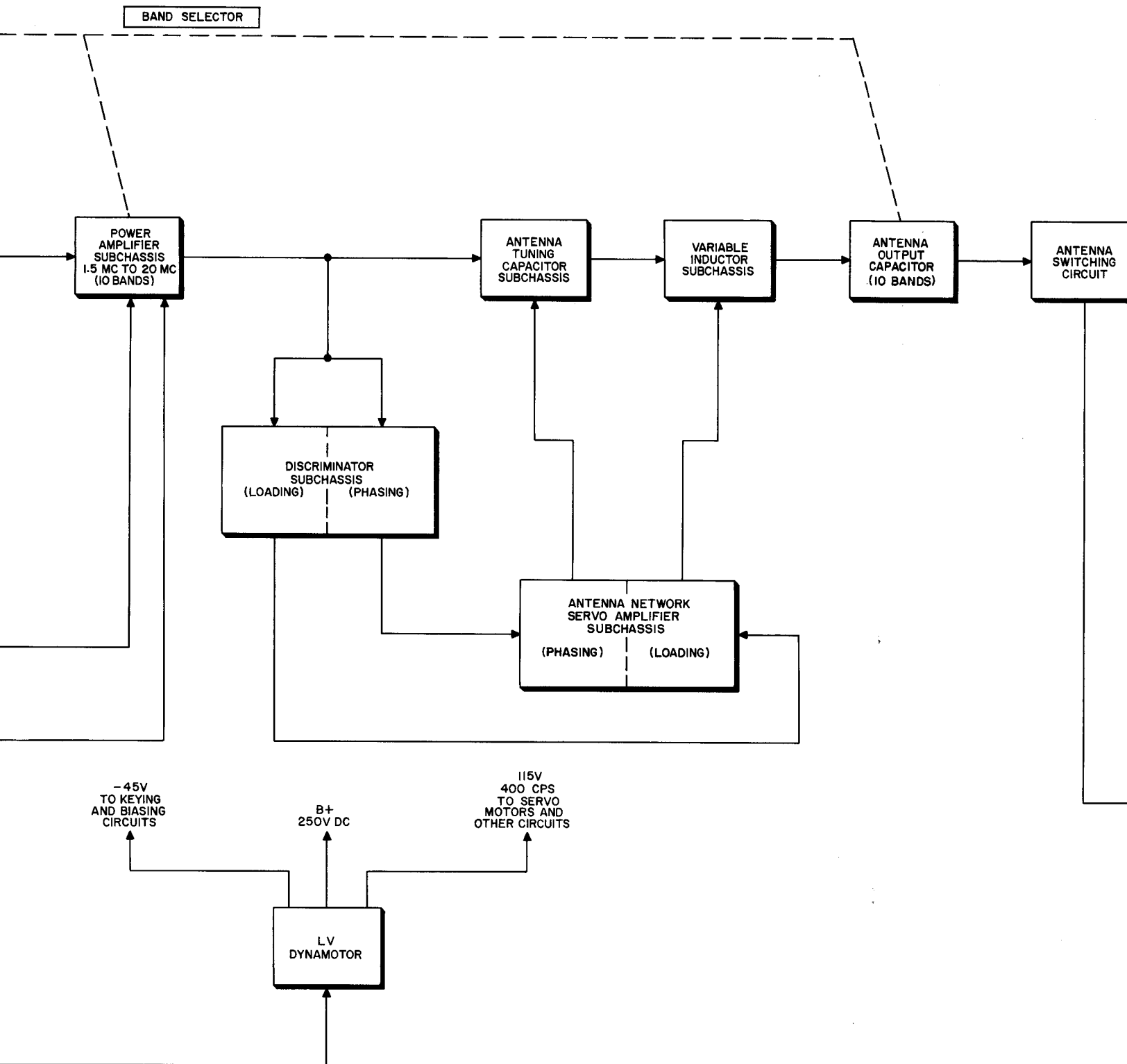
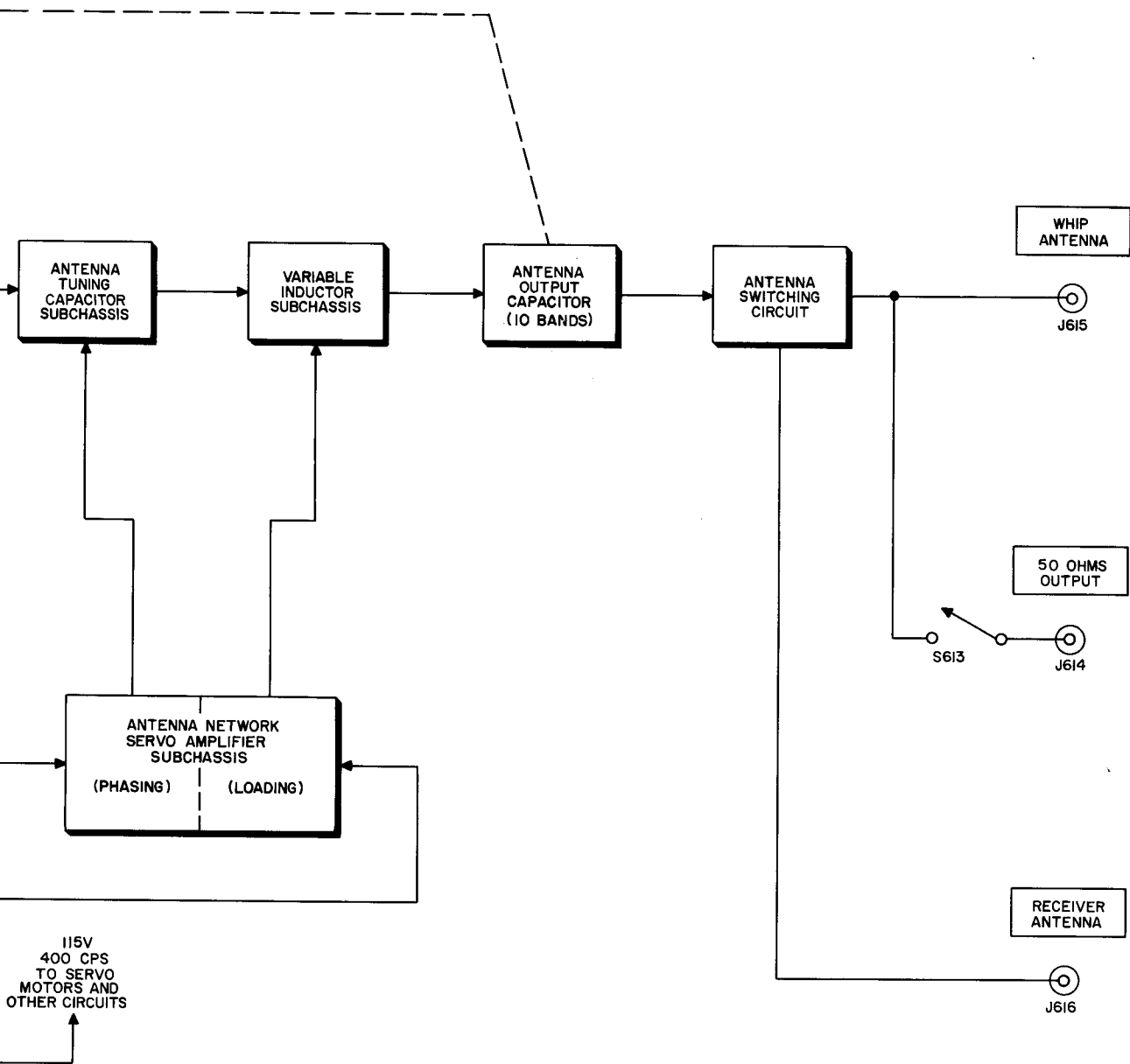


Figure 20. Radio Transmitter T-195/GRC-19, composite block diagram.



site block diagram.

TM806-21

390412 O -56 (In pocket) No. 1

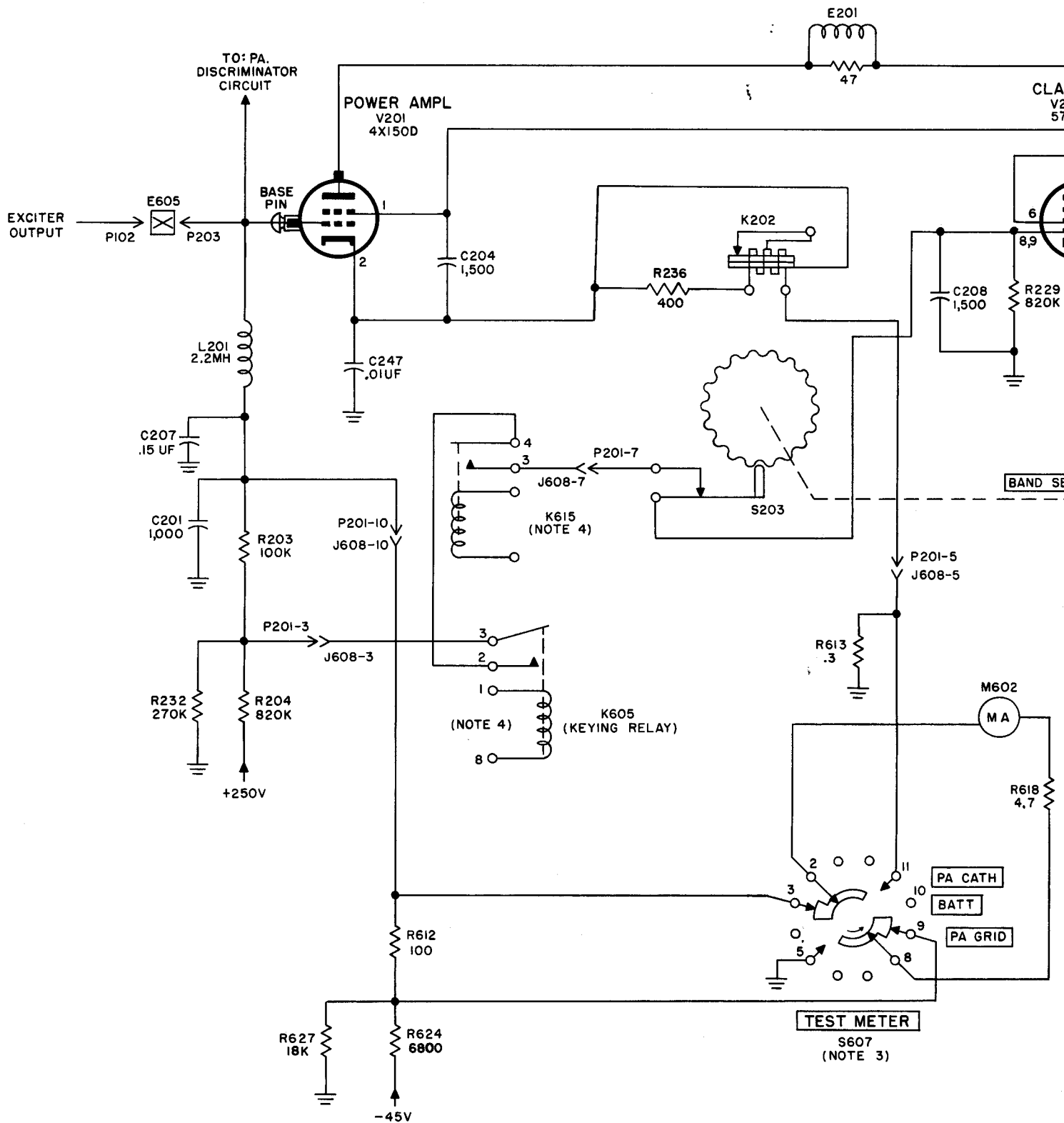
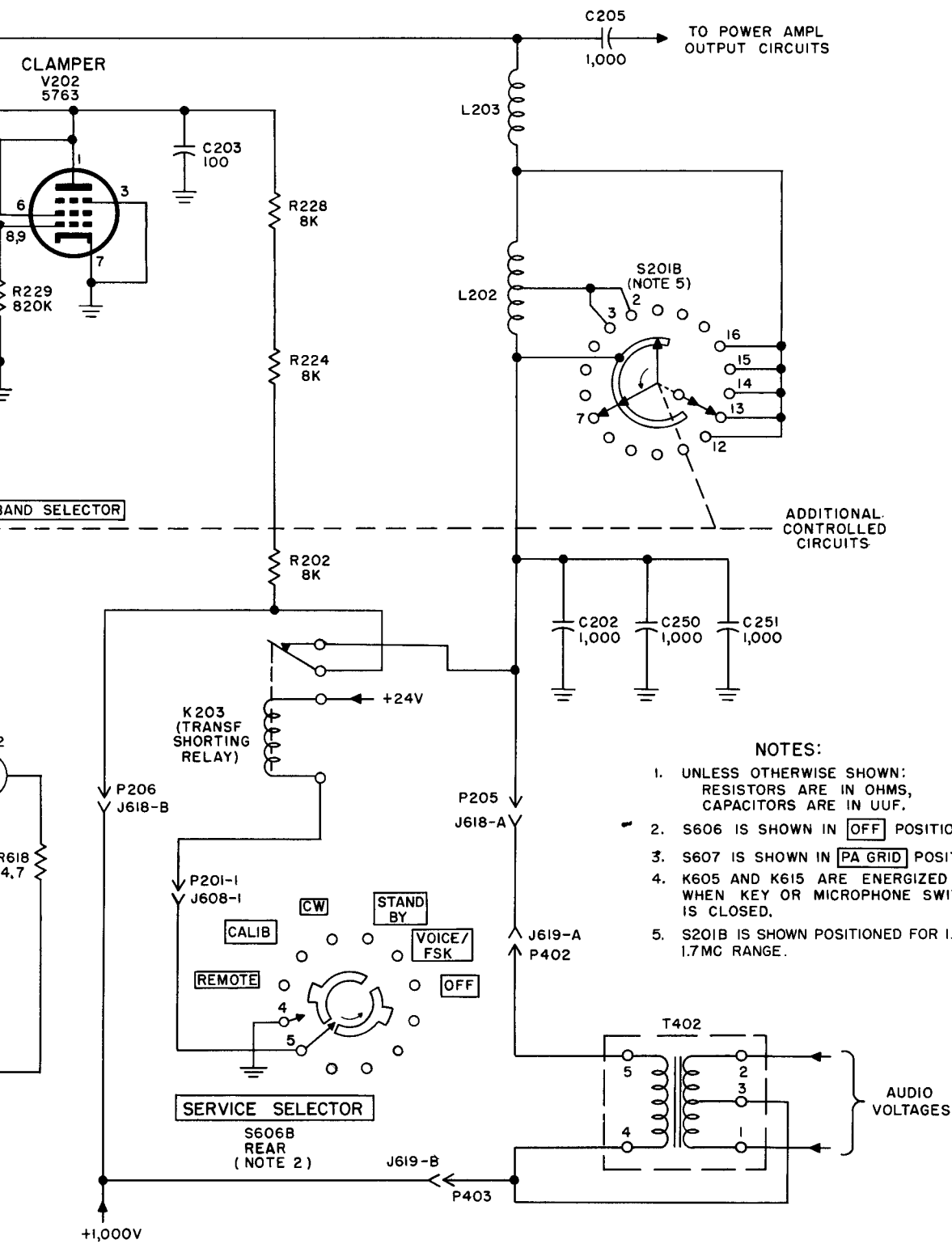


Figure 30. Power-amplifier and clamper stages.



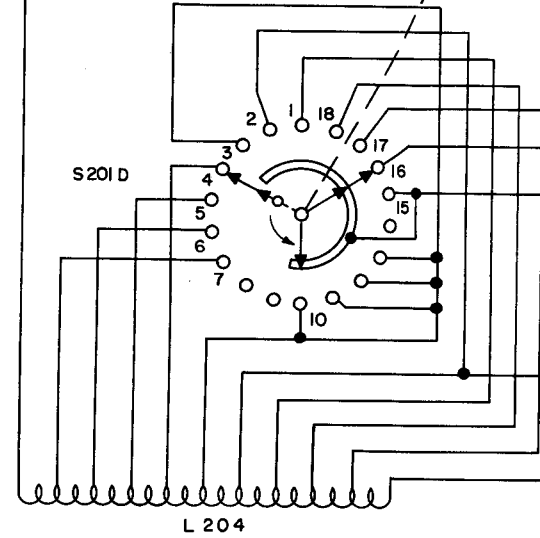
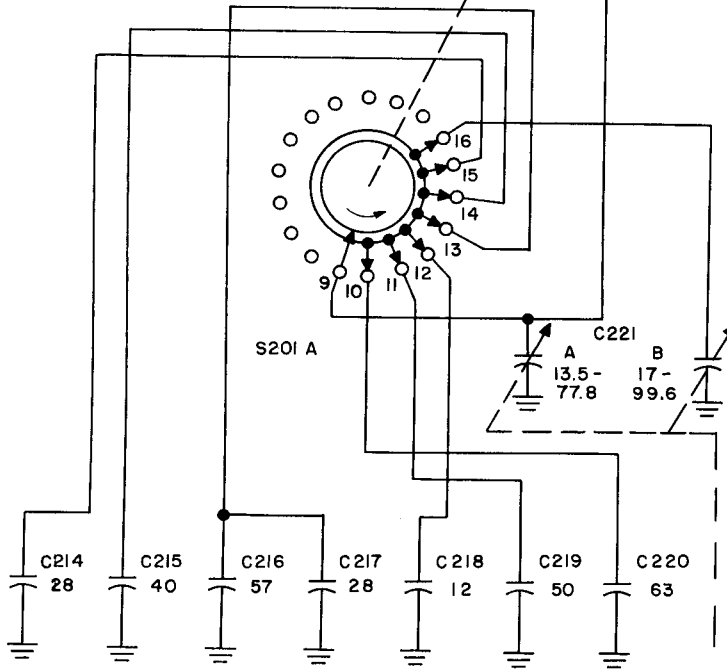
TM 806-31

ages, functional diagram.

390412 O -56 (In pocket) No. 2

FROM
POWER AMPL
PLATE CIRCUIT

C205 1,000



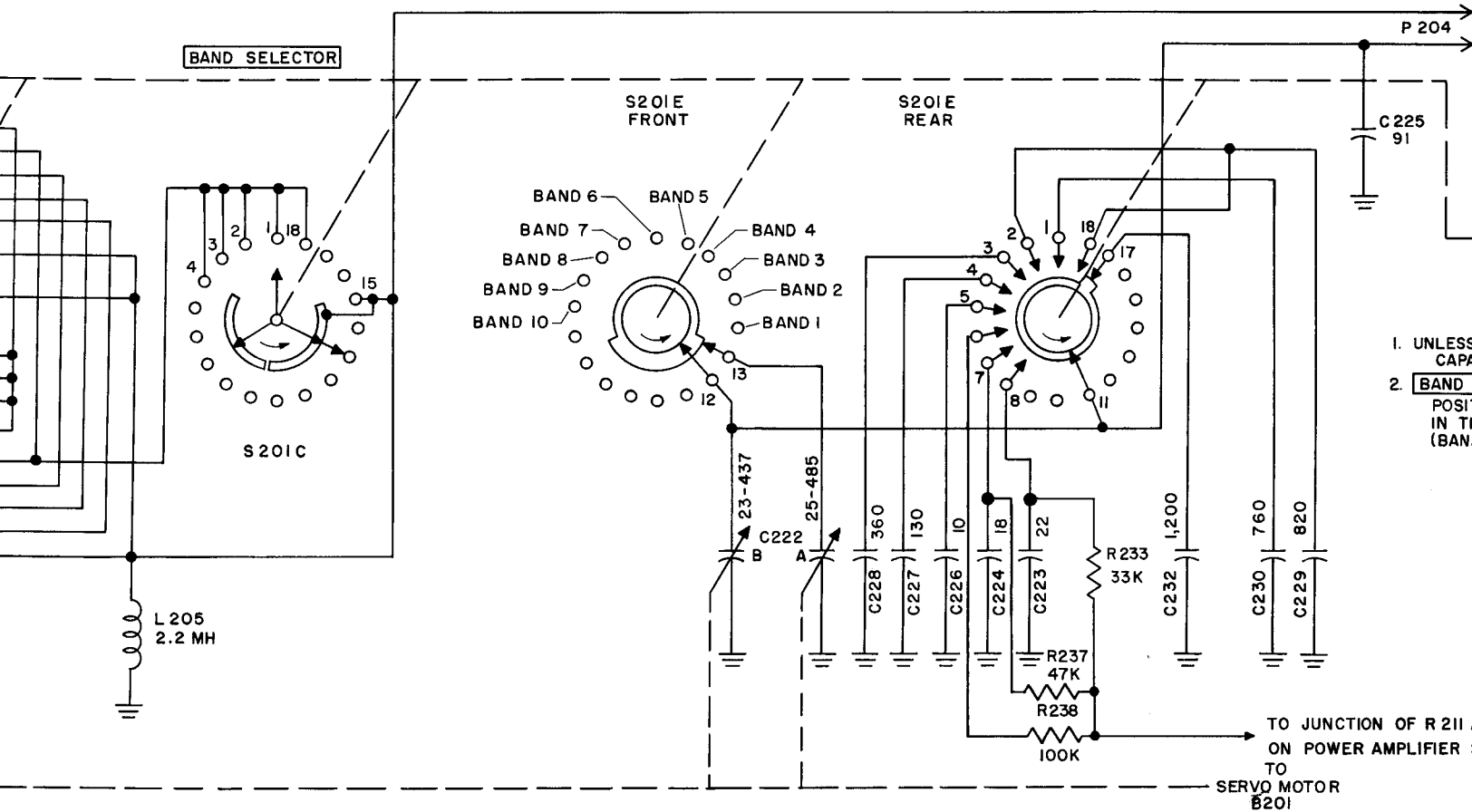
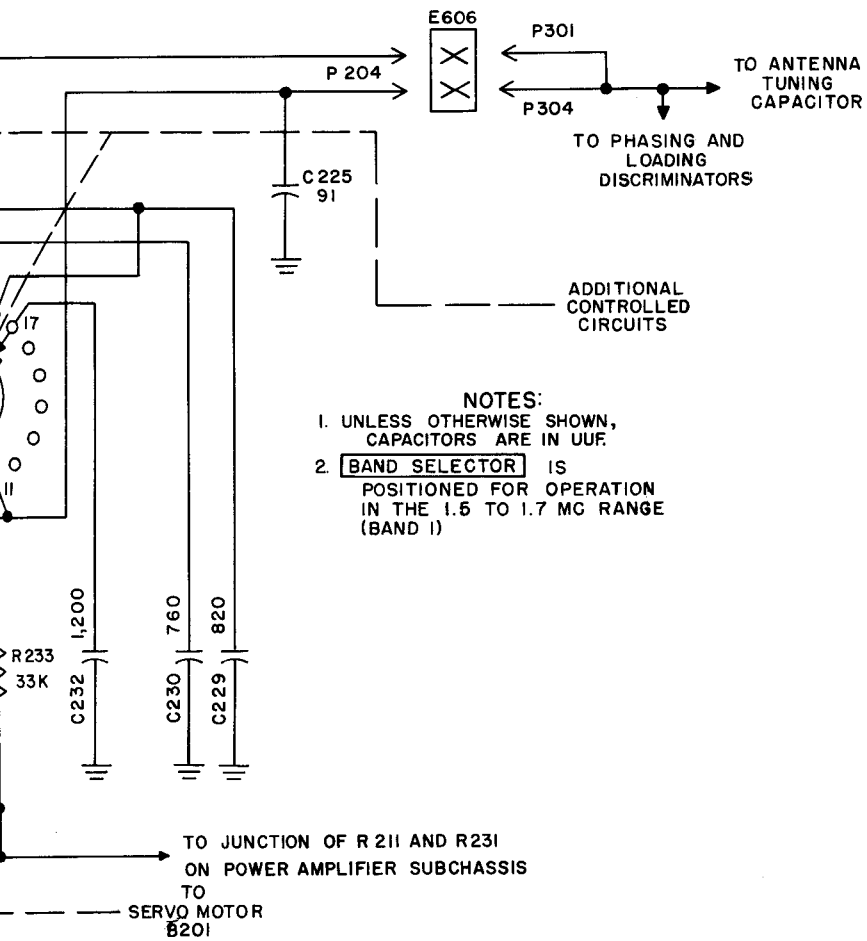


Figure 31. Power-amplifier plate circuit, functional diagram.



TM 806-32

390412 O - 56 (In pocket) No. 3

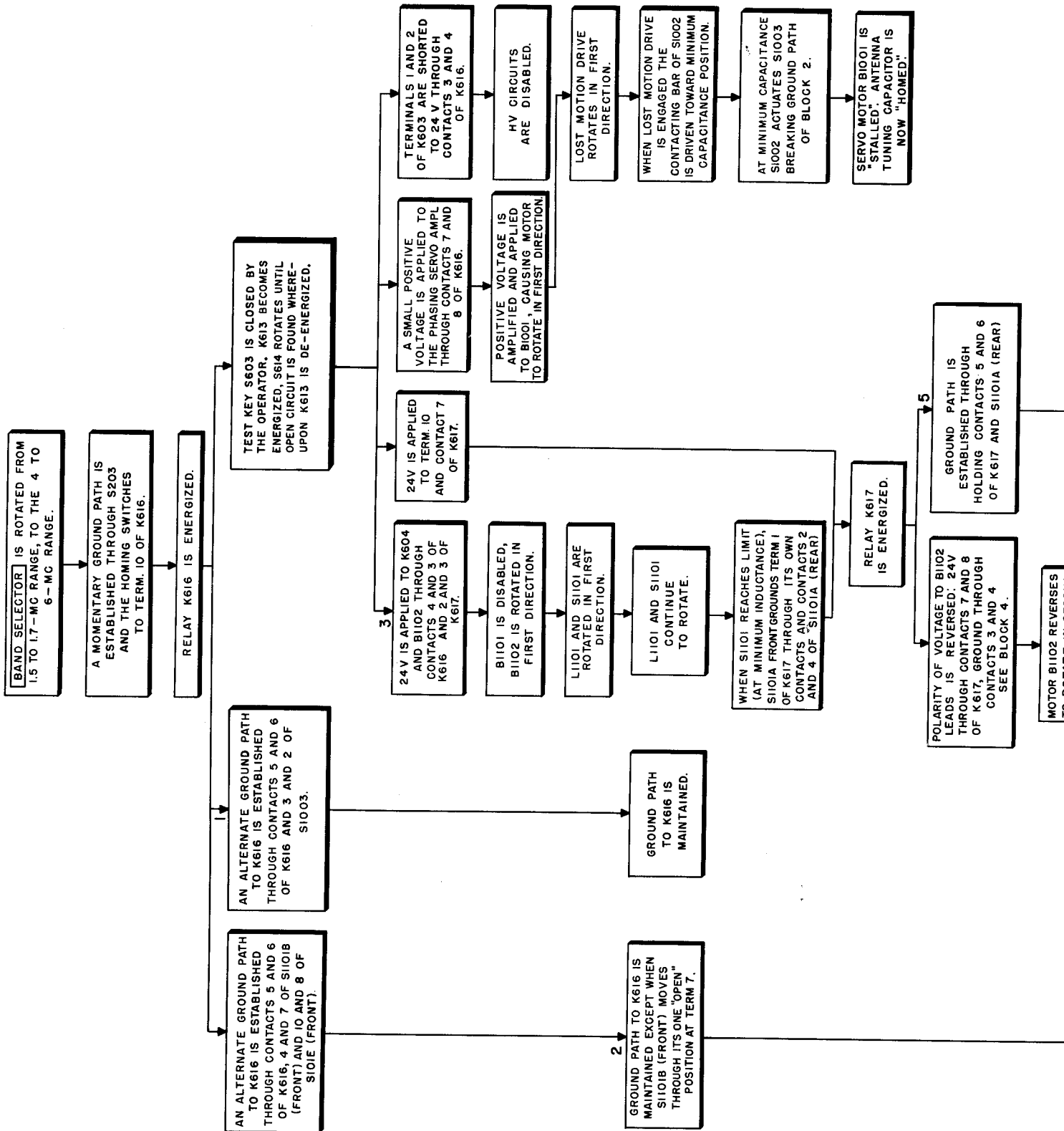
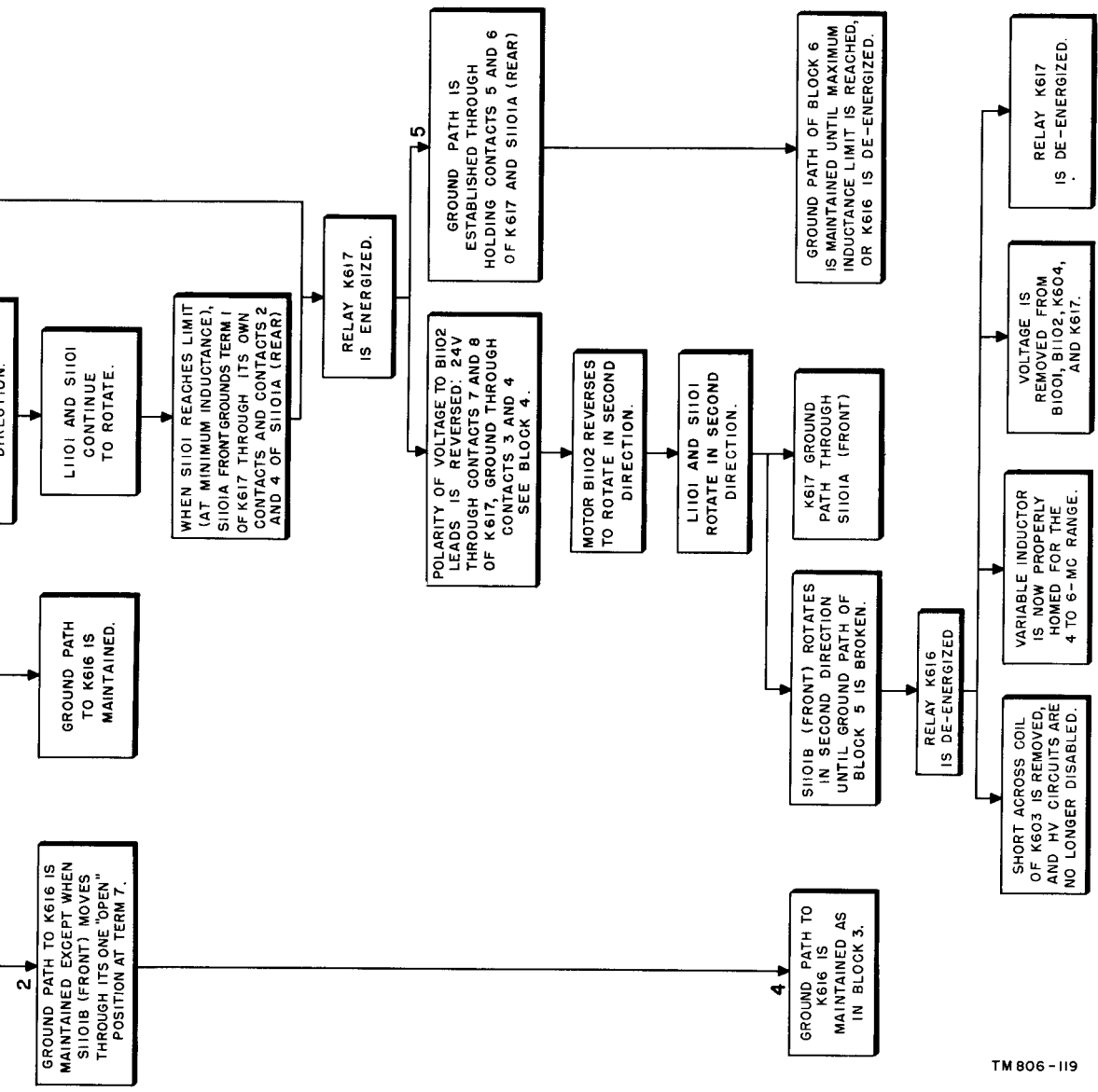
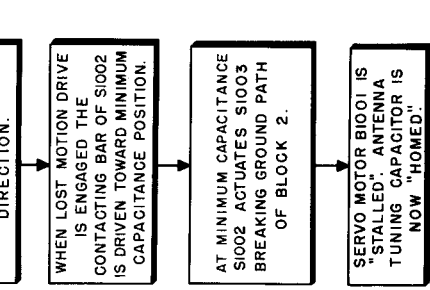


Figure 44. Homing cycle flow chart.

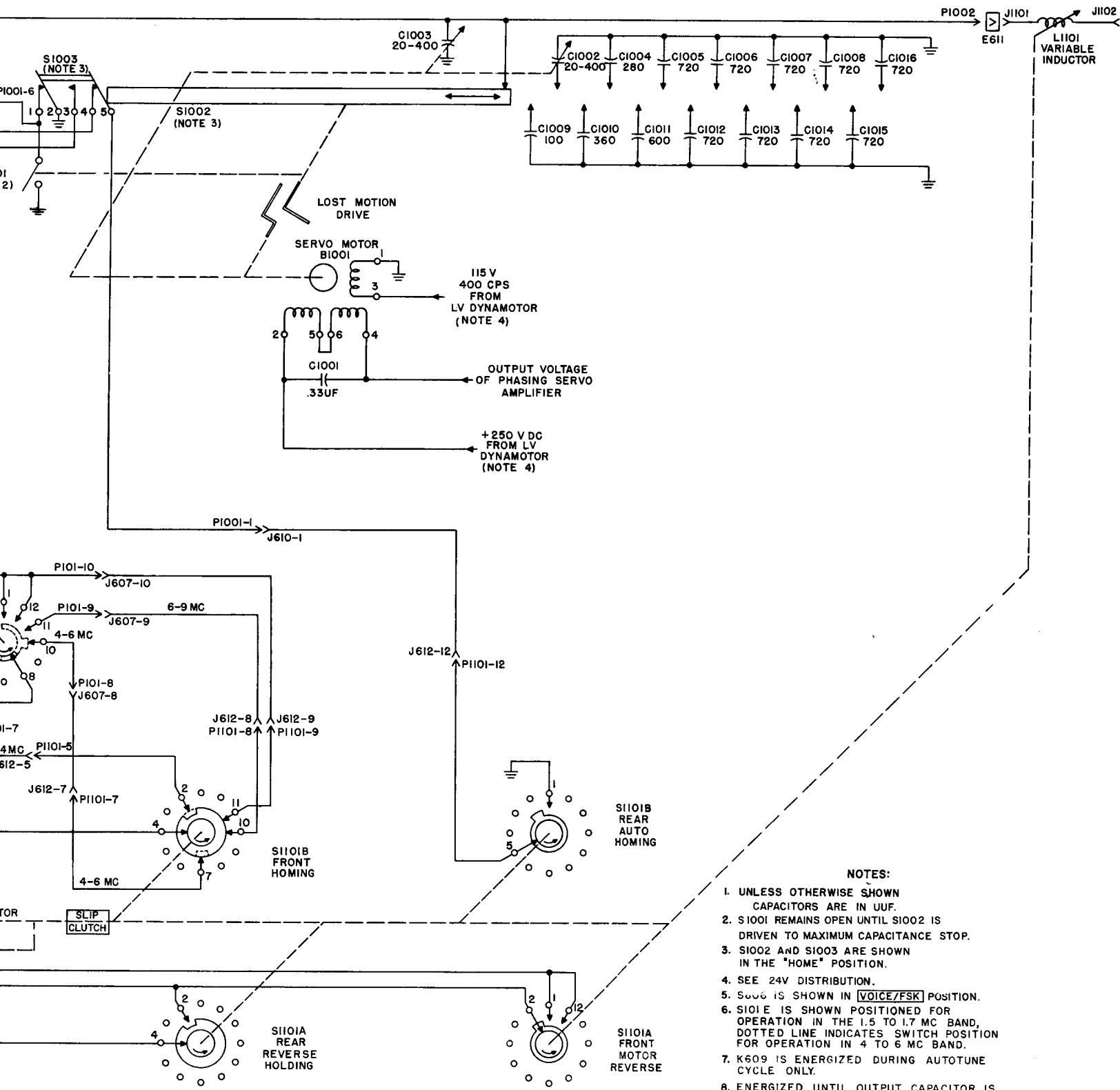


NOTES:

1. FIRST AND SECOND DIRECTIONS DESCRIBE ROTATION OF PARTS BEFORE AND AFTER MOTOR REVERSING.
2. OPERATION IS DESCRIBED FOR VOICE/FSK SETTING OF SERVICE SELECTOR.

TM 806-119

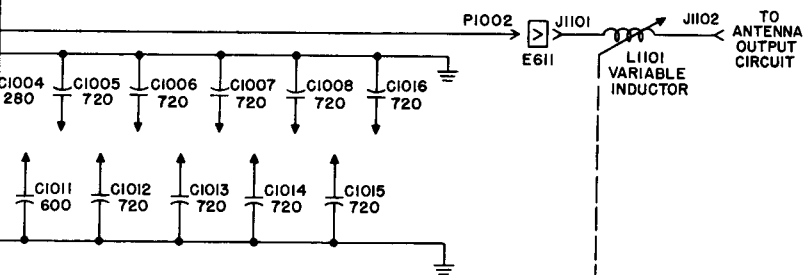
Figure 44. Homing cycle flow chart.



NOTES:

1. UNLESS OTHERWISE SHOWN CAPACITORS ARE IN UUF.
2. S1001 REMAINS OPEN UNTIL S1002 IS DRIVEN TO MAXIMUM CAPACITANCE STOP.
3. S1002 AND S1003 ARE SHOWN IN THE "HOME" POSITION.
4. SEE 24V DISTRIBUTION.
5. S606 IS SHOWN IN VOICE/FSK POSITION.
6. S101E IS SHOWN POSITIONED FOR OPERATION IN THE 1.5 TO 1.7 MC BAND, DOTTED LINE INDICATES SWITCH POSITION FOR OPERATION IN 4 TO 6 MC BAND.
7. K609 IS ENERGIZED DURING AUTOTUNE CYCLE ONLY.
8. ENERGIZED UNTIL OUTPUT CAPACITOR IS SELECTED.

5. Homing circuits, functional diagram.



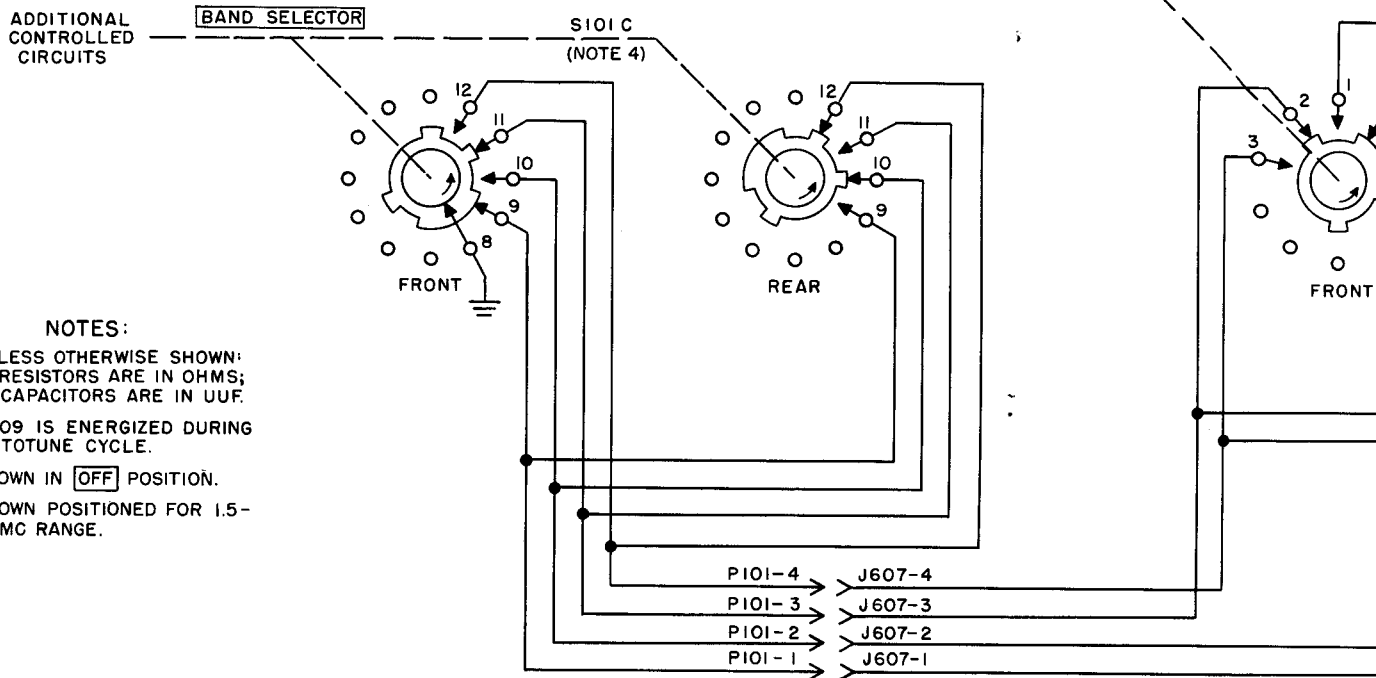
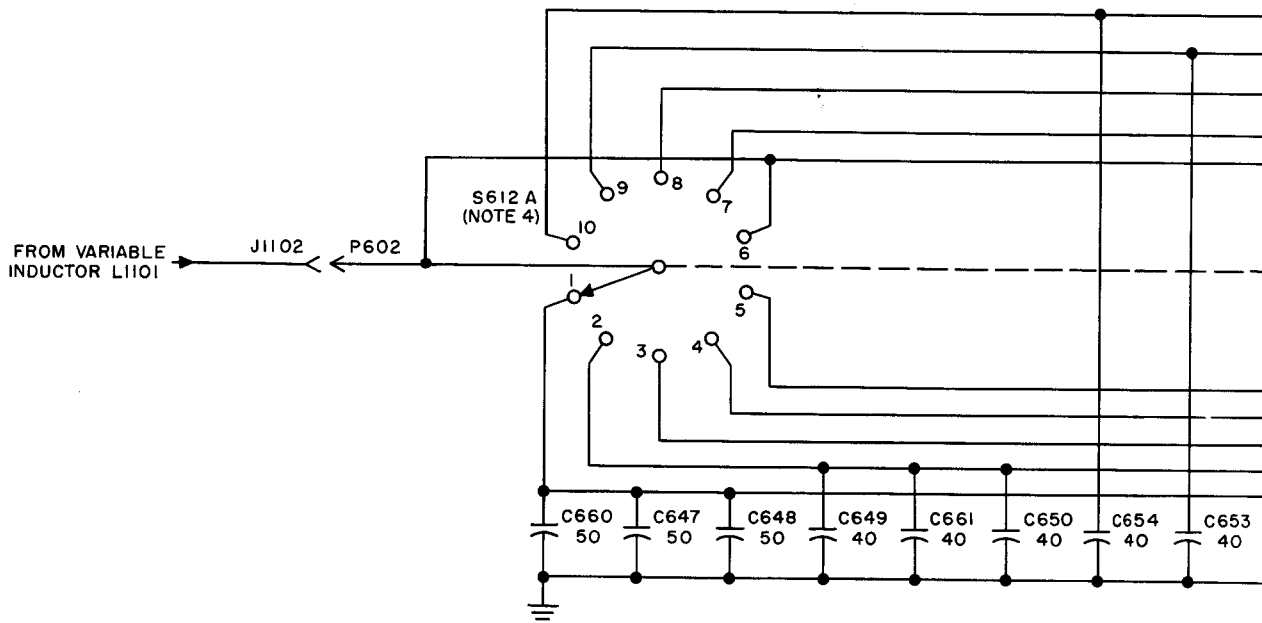
J1101B
REAR
AUTO
TUNING

NOTES:

1. UNLESS OTHERWISE SHOWN
CAPACITORS ARE IN UUF.
2. S1001 REMAINS OPEN UNTIL S1002 IS
DRIVEN TO MAXIMUM CAPACITANCE STOP.
3. S1002 AND S1003 ARE SHOWN
IN THE "HOME" POSITION.
4. SEE 24V DISTRIBUTION.
5. S606 IS SHOWN IN VOICE/FSK POSITION.
6. S101E IS SHOWN POSITIONED FOR
OPERATION IN THE 1.5 TO 1.7 MC BAND,
DOTTED LINE INDICATES SWITCH POSITION
FOR OPERATION IN 4 TO 6 MC BAND.
7. K609 IS ENERGIZED DURING AUTOTUNE
CYCLE ONLY.
8. ENERGIZED UNTIL OUTPUT CAPACITOR IS
SELECTED.

J1101A
FRONT
MOTOR
REVERSE

TM 806 -43



NOTES:

1. UNLESS OTHERWISE SHOWN: RESISTORS ARE IN OHMS; CAPACITORS ARE IN UUF.
2. K609 IS ENERGIZED DURING AUTOTUNE CYCLE.
3. SHOWN IN **OFF** POSITION.
4. SHOWN POSITIONED FOR 1.5-1.7 MC RANGE.

Figure 52. Ou

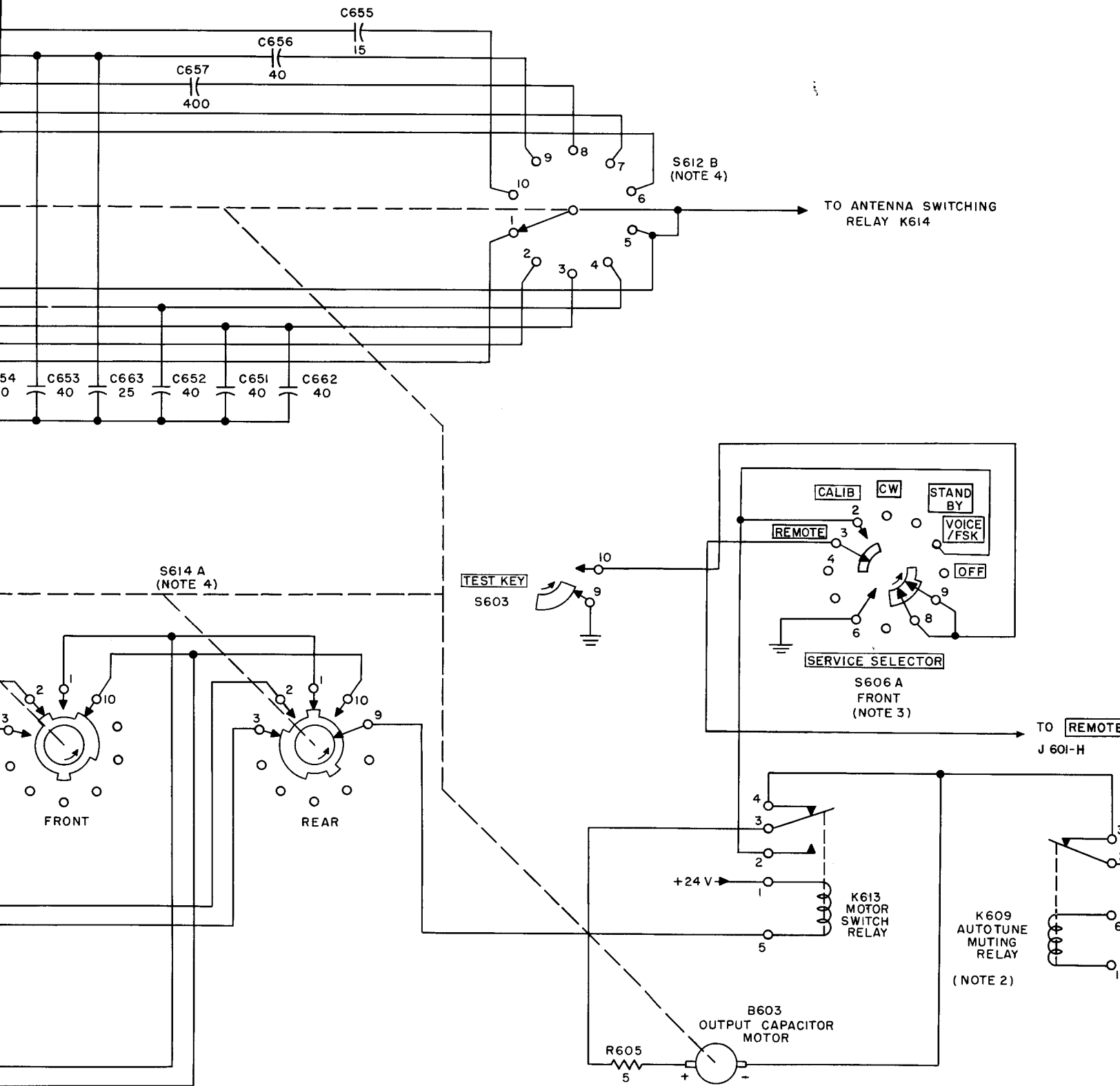
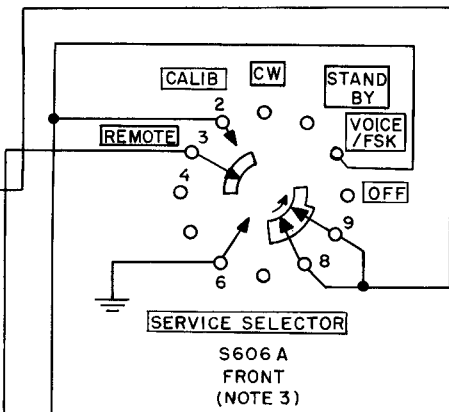


Figure 52. Output capacitor, functional diagram.

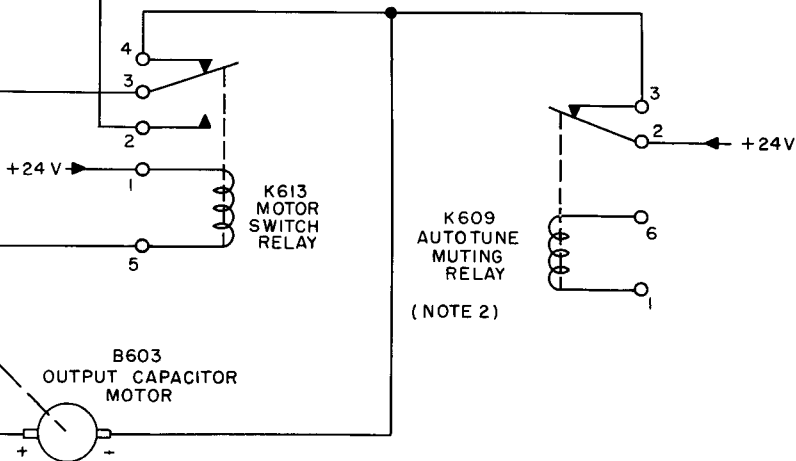
S612 B
(NOTE 4)

TO ANTENNA SWITCHING
RELAY K614



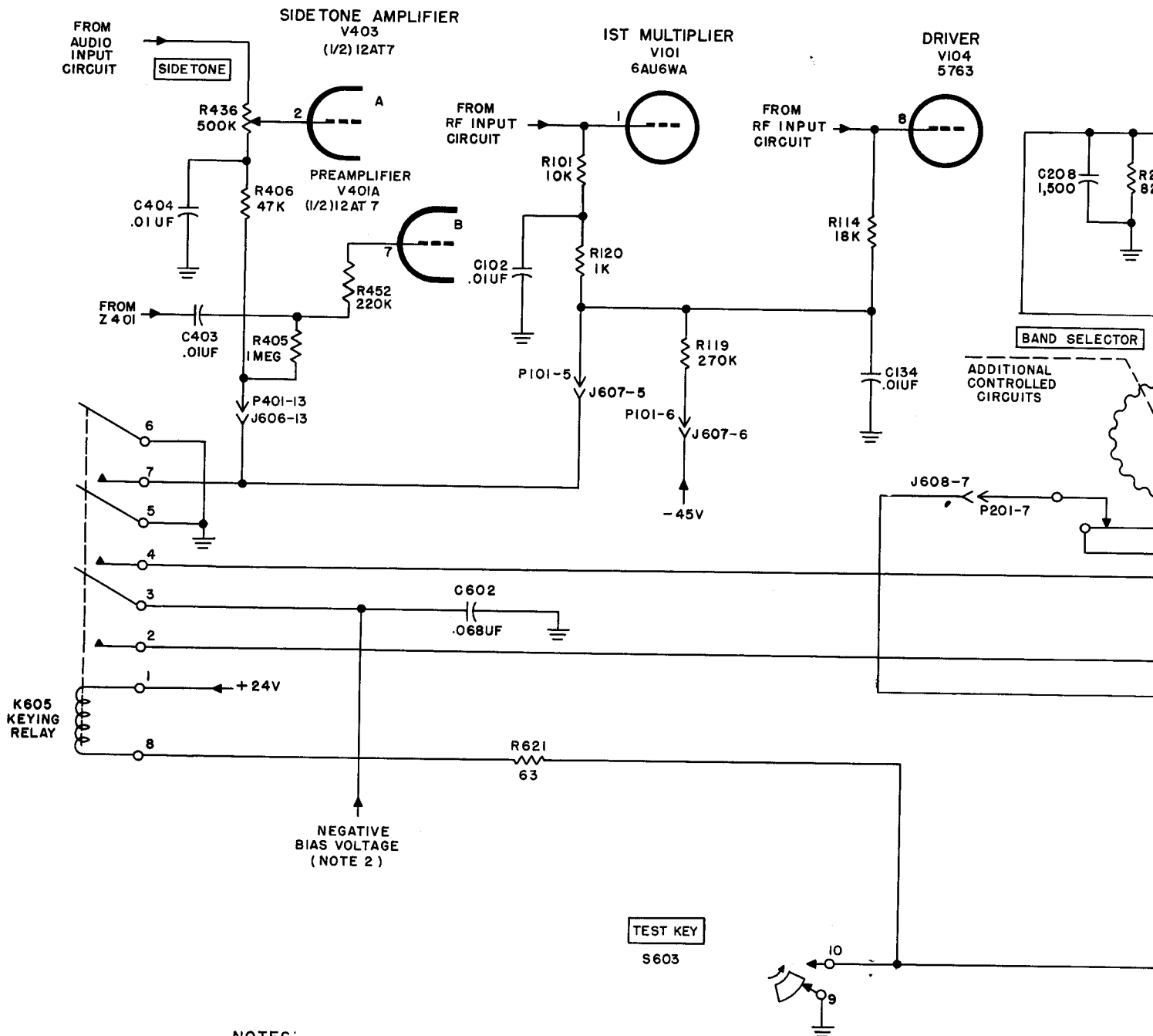
S606 A
FRONT
(NOTE 3)

TO REMOTE CONT
J 601-H



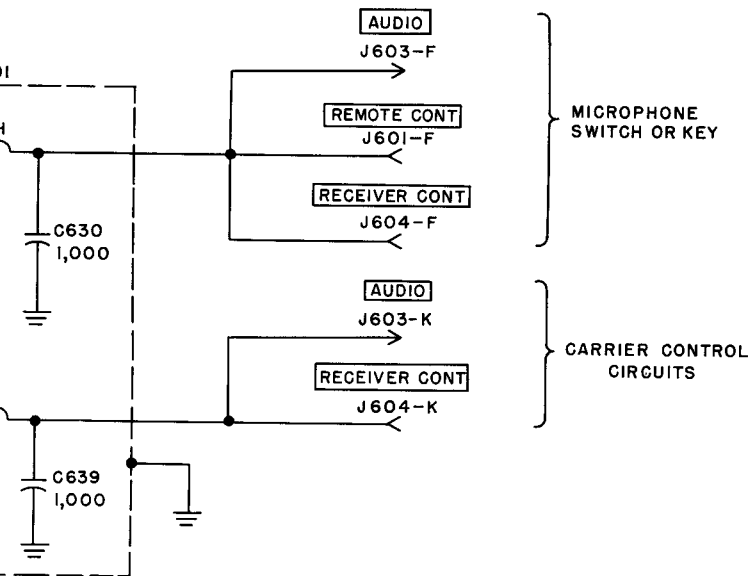
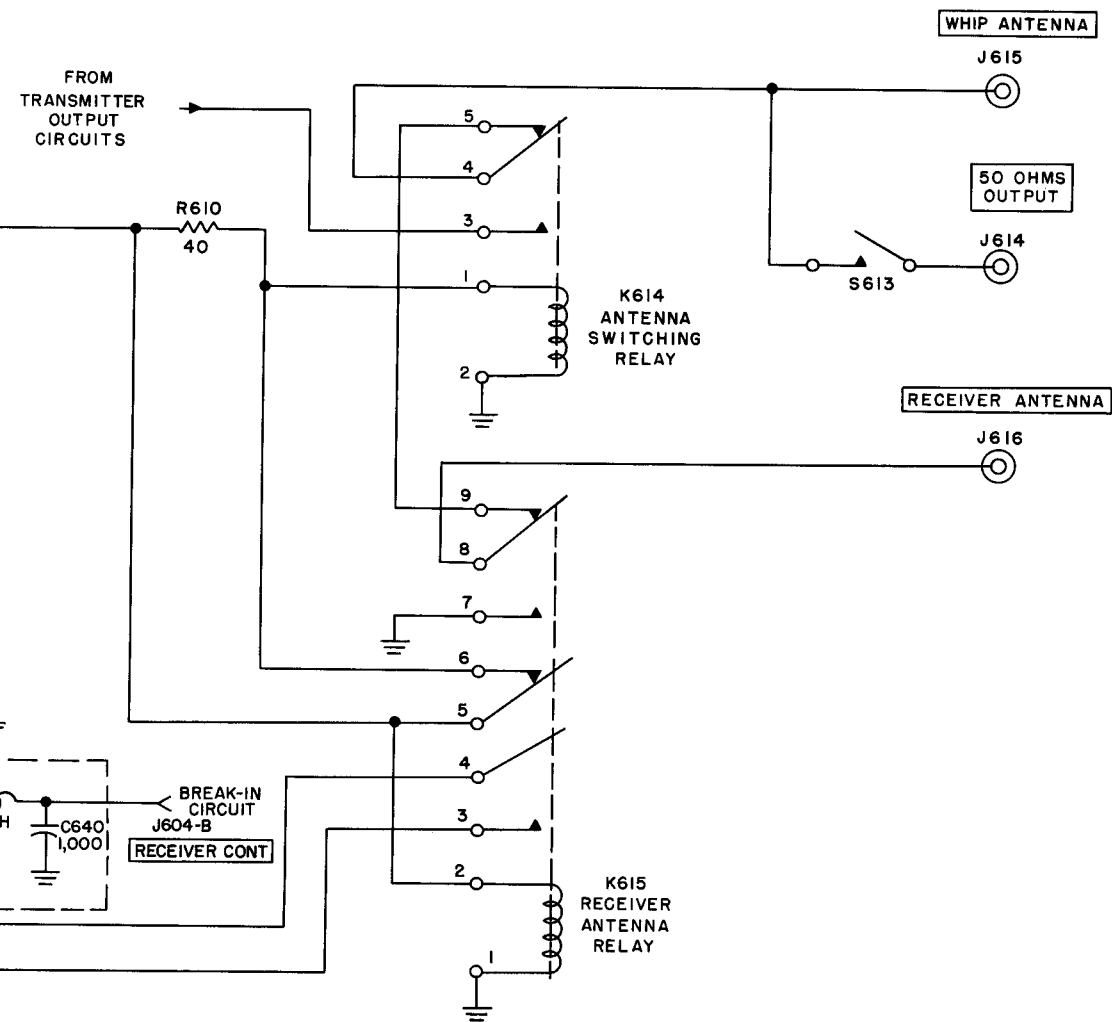
TM 806-49

390412 O - 56 (In pocket) No. 6



NOTES:

1. UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS,
CAPACITORS ARE IN UUF.
2. S602 IS SHOWN IN RELAY
POSITION.



TM 806-51

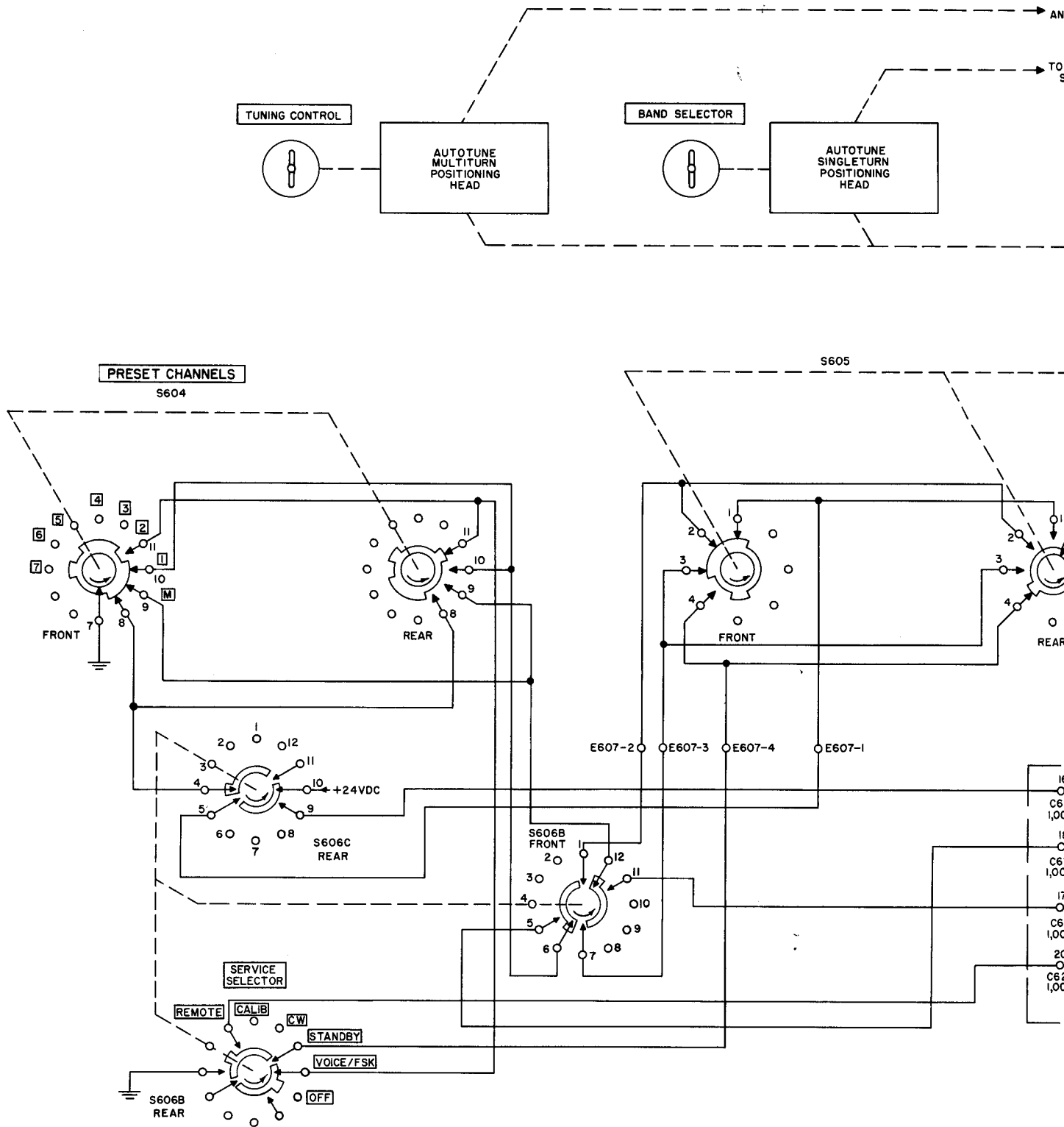
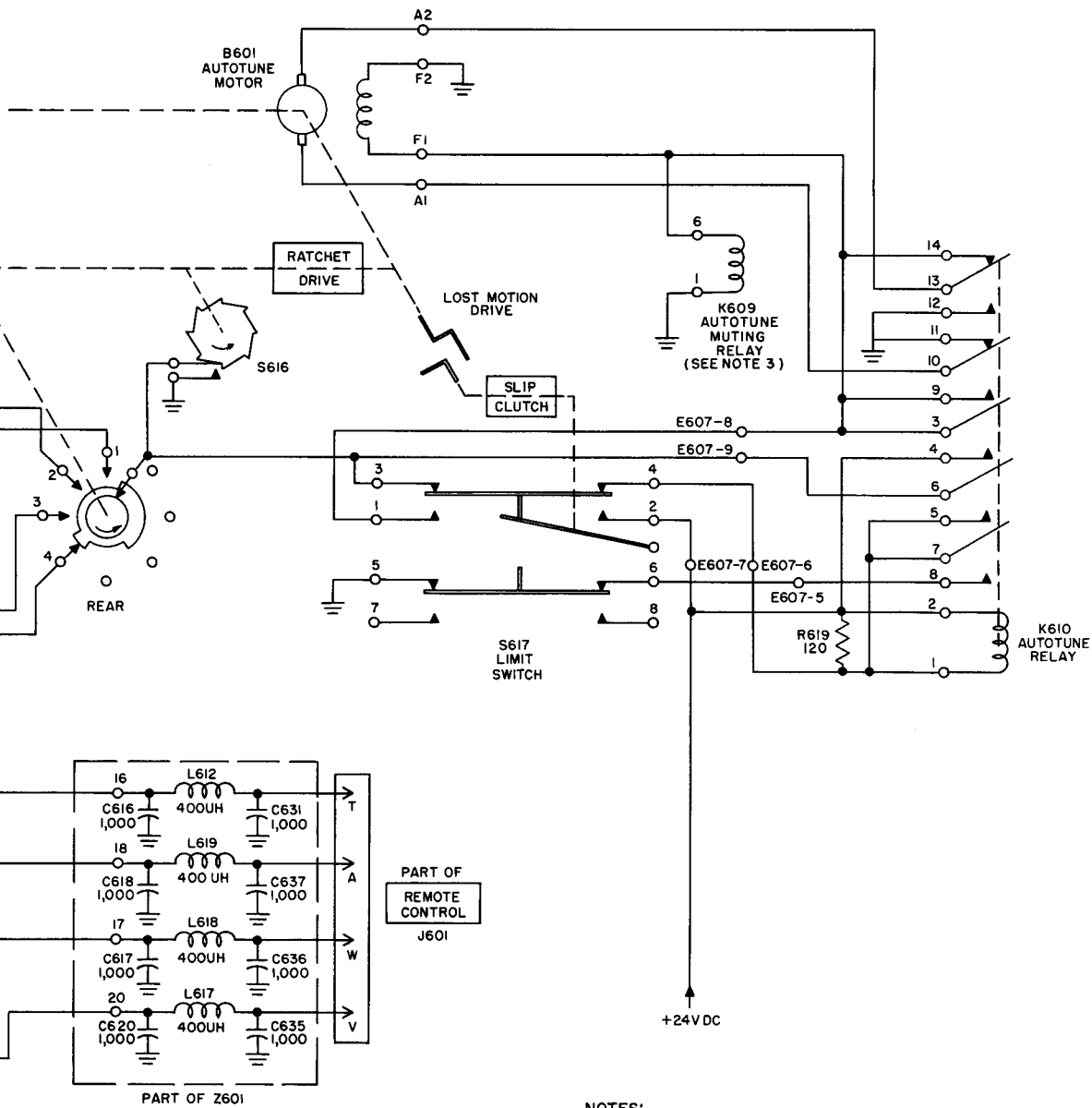


Figure 55. Autotune control circuits, function

TO MASTER OSCILLATOR
AND EXCITER TUNING CORES

TO BANDSWITCHES
S101 AND S201



NOTES:

1. S606 IS SHOWN IN OFF POSITION.
2. S604 IS SHOWN IN (M) (MANUAL) POSITION.
3. SEE +24-VOLT DISTRIBUTION.
4. UNLESS OTHERWISE SHOWN: CAPACITORS ARE IN UUF.

TM 806-52

390412 O - 56 (In pocket) No. 8

uits, functional diagram.

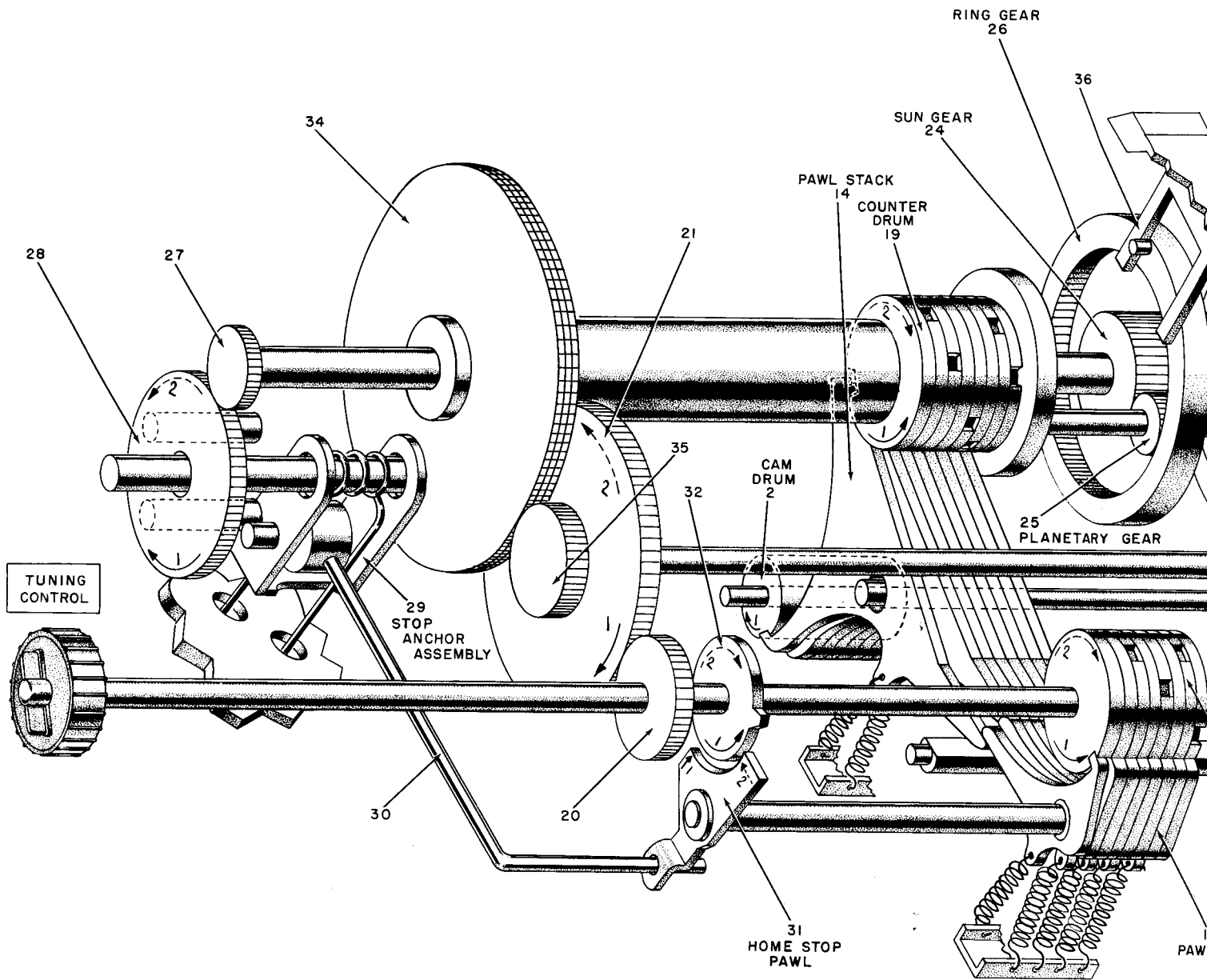
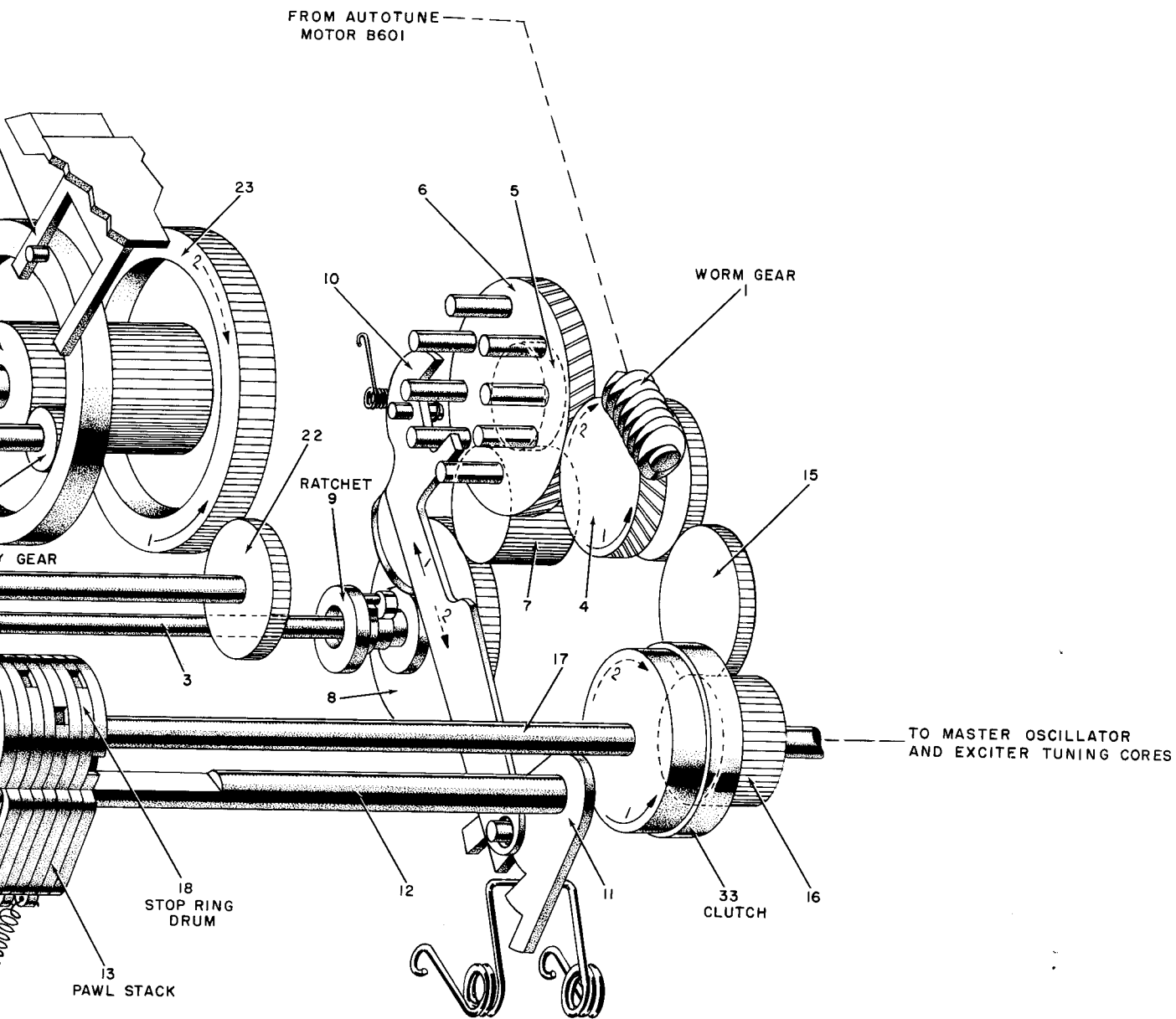


Figure 57. Multiturn positioning head, re



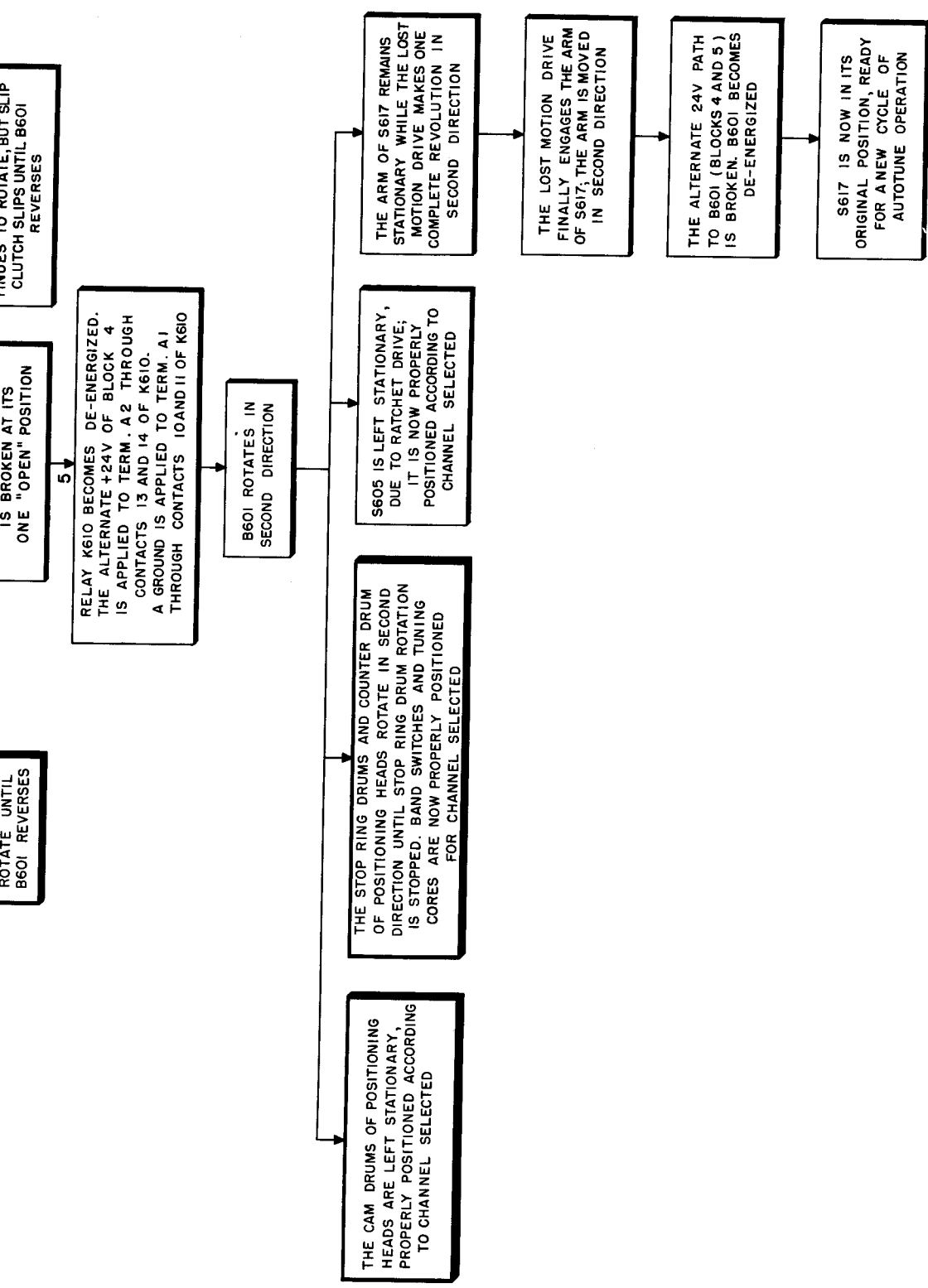
NOTE:

THIS IS A REPRESENTATIVE DRAWING.
PARTS ARE NOT NECESSARILY DRAWN
TO SCALE.

TM 806-54

390412 O - 56 (In pocket) No. 9

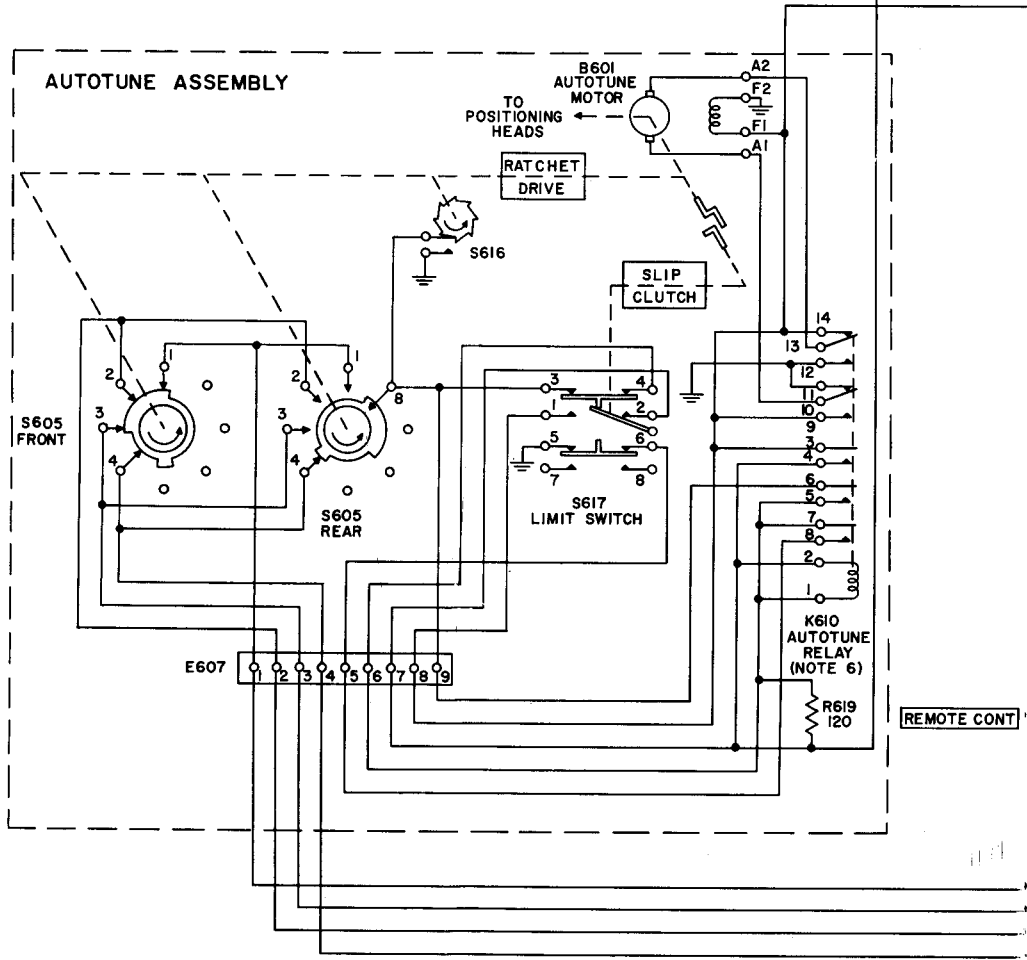
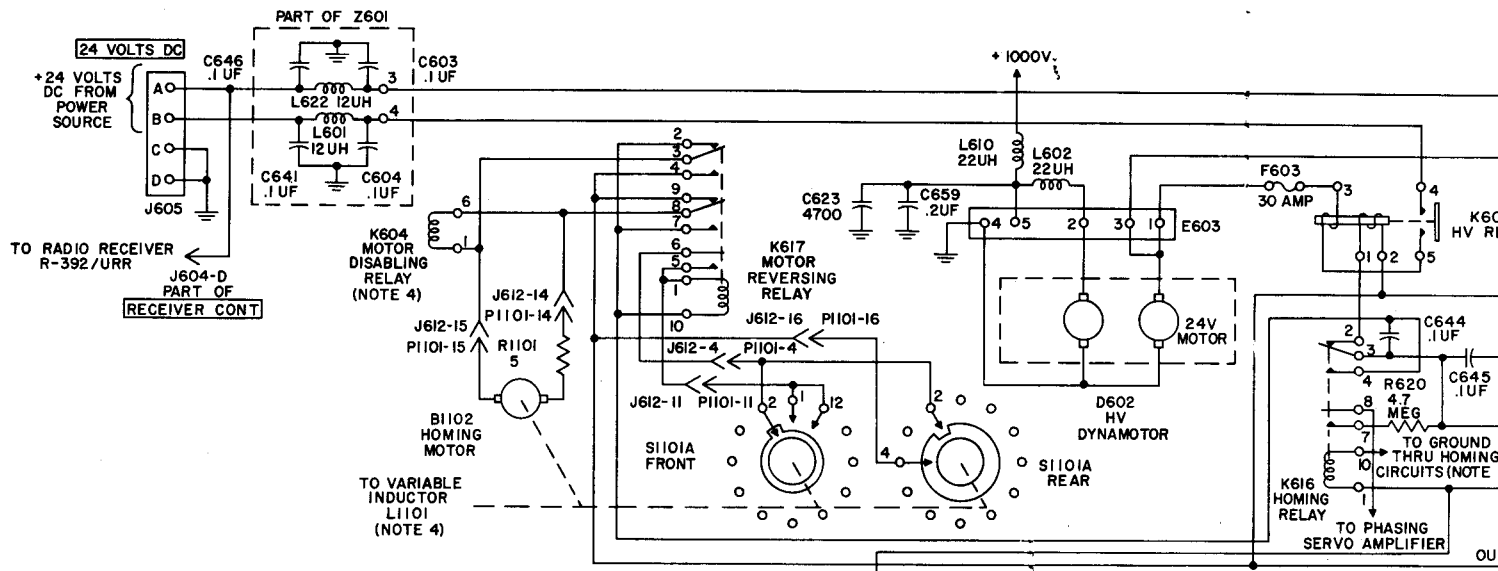
ing head, representative drawing.



TM 806-55

390412 O - 56 (In pocket) No. 10

Figure 58. Autotune circuits, flow chart.



| Terminal | Component | Value | Component | Value |
|----------|---------------|-------|-----------|-------|
| J601-J | REMOTE CONT | | C664 | 1000 |
| J603-C | AUDIO | | C605 | 1000 |
| J604-C | RECEIVER CONT | | C626 | 1000 |
| J601-H | REMOTE CONT | | L606 | 400UH |
| J601-C | REMOTE CONT | | C609 | 1000 |
| J601-C | REMOTE CONT | | C625 | 1000 |
| J601-E | REMOTE CONT | | L605 | 400UH |
| J601-E | REMOTE CONT | | C608 | 1000 |
| J601-E | REMOTE CONT | | C627 | 1000 |
| J601-S | REMOTE CONT | | L607 | 400UH |
| J601-S | REMOTE CONT | | C610 | 1000 |
| J601-S | REMOTE CONT | | C665 | 1000 |
| J601-T | REMOTE CONT | | L603 | 400UH |
| J601-T | REMOTE CONT | | C606 | 1000 |
| J601-T | REMOTE CONT | | C631 | 1000 |
| J601-F | AUDIO | | L612 | 400UH |
| J601-F | AUDIO | | C616 | 1000 |
| J603-F | AUDIO | | | |
| J604-F | RECEIVER CONT | | C630 | 1000 |
| J604-F | RECEIVER CONT | | L611 | 400UH |
| J604-F | RECEIVER CONT | | C614 | 1000 |
| J603-K | AUDIO | | | |
| J604-K | RECEIVER CONT | | C639 | 1000 |
| J604-K | RECEIVER CONT | | L621 | 400UH |
| J604-K | RECEIVER CONT | | C612 | 1000 |
| J601-V | REMOTE CONT | | | |
| J601-V | REMOTE CONT | | C635 | 1000 |
| J601-V | REMOTE CONT | | L617 | 400UH |
| J601-V | REMOTE CONT | | C620 | 1000 |
| J601-U | REMOTE CONT | | | |
| J601-U | REMOTE CONT | | C628 | 1000 |
| J601-U | REMOTE CONT | | L608 | 400UH |
| J601-U | REMOTE CONT | | C611 | 1000 |
| J601-W | REMOTE CONT | | | |
| J601-W | REMOTE CONT | | C636 | 1000 |
| J601-W | REMOTE CONT | | L618 | 400UH |
| J601-W | REMOTE CONT | | C617 | 1000 |
| J601-A | REMOTE CONT | | | |
| J601-A | REMOTE CONT | | C637 | 1000 |
| J601-A | REMOTE CONT | | L619 | 400UH |
| J601-A | REMOTE CONT | | C618 | 1000 |

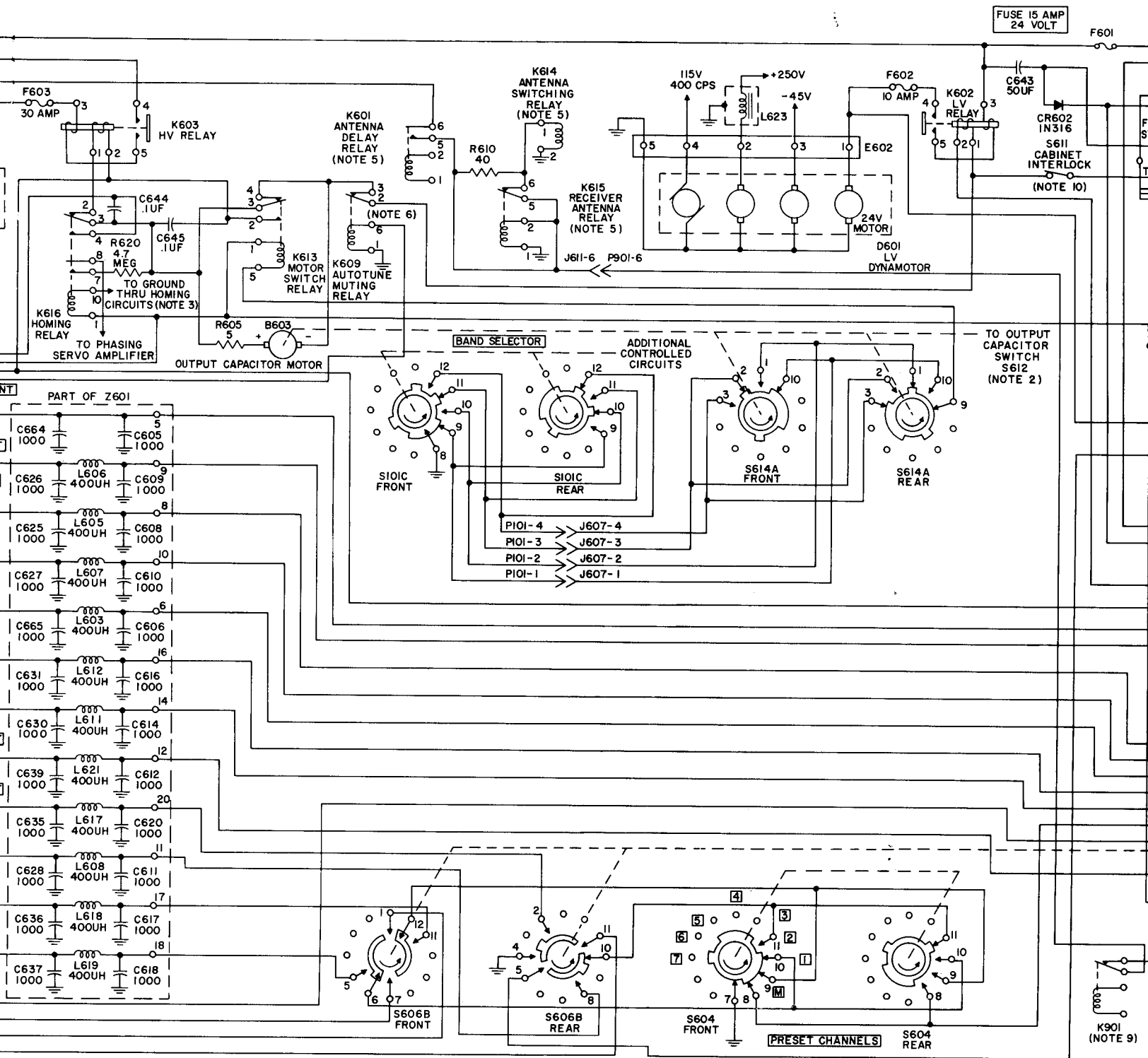
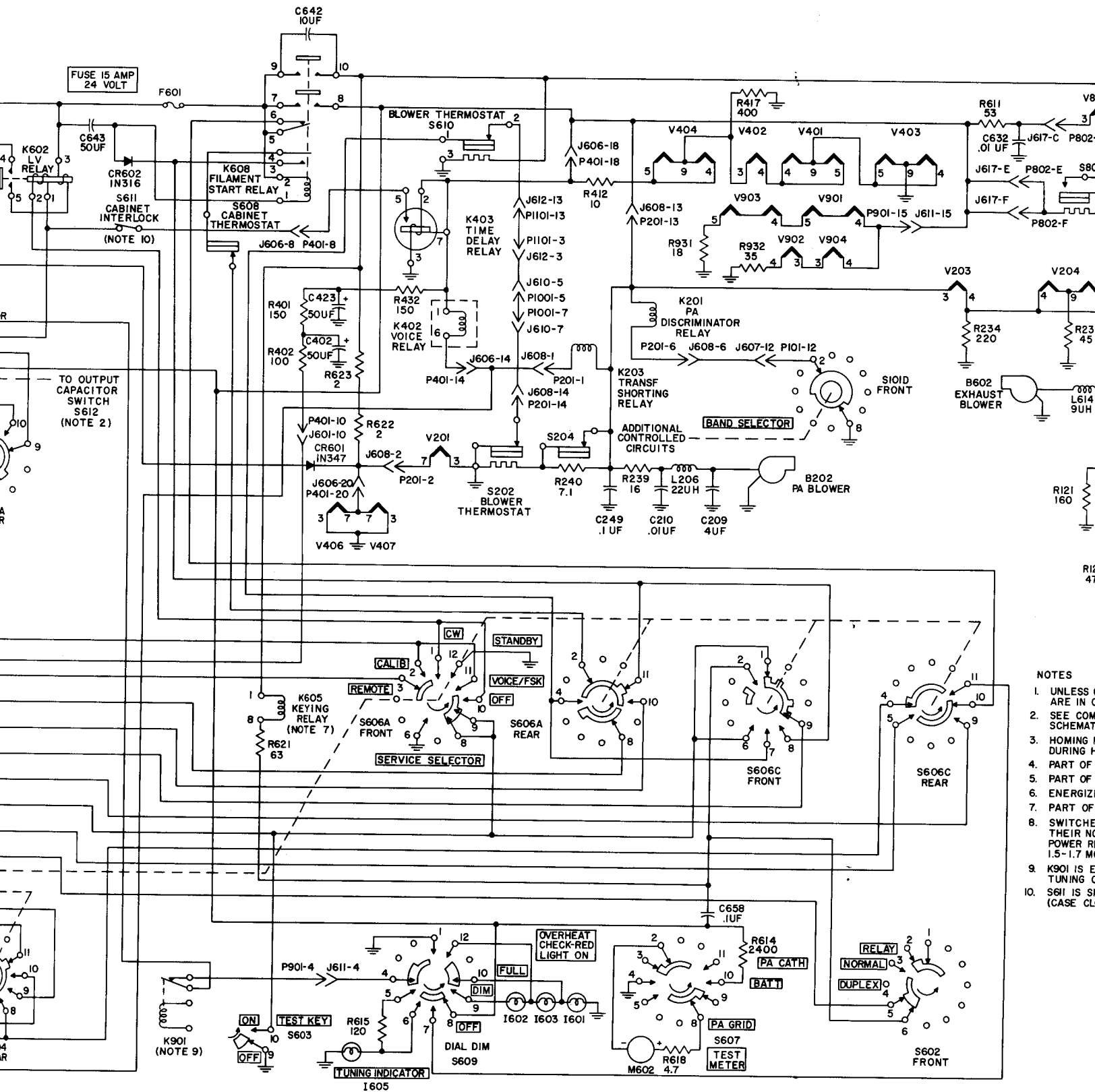
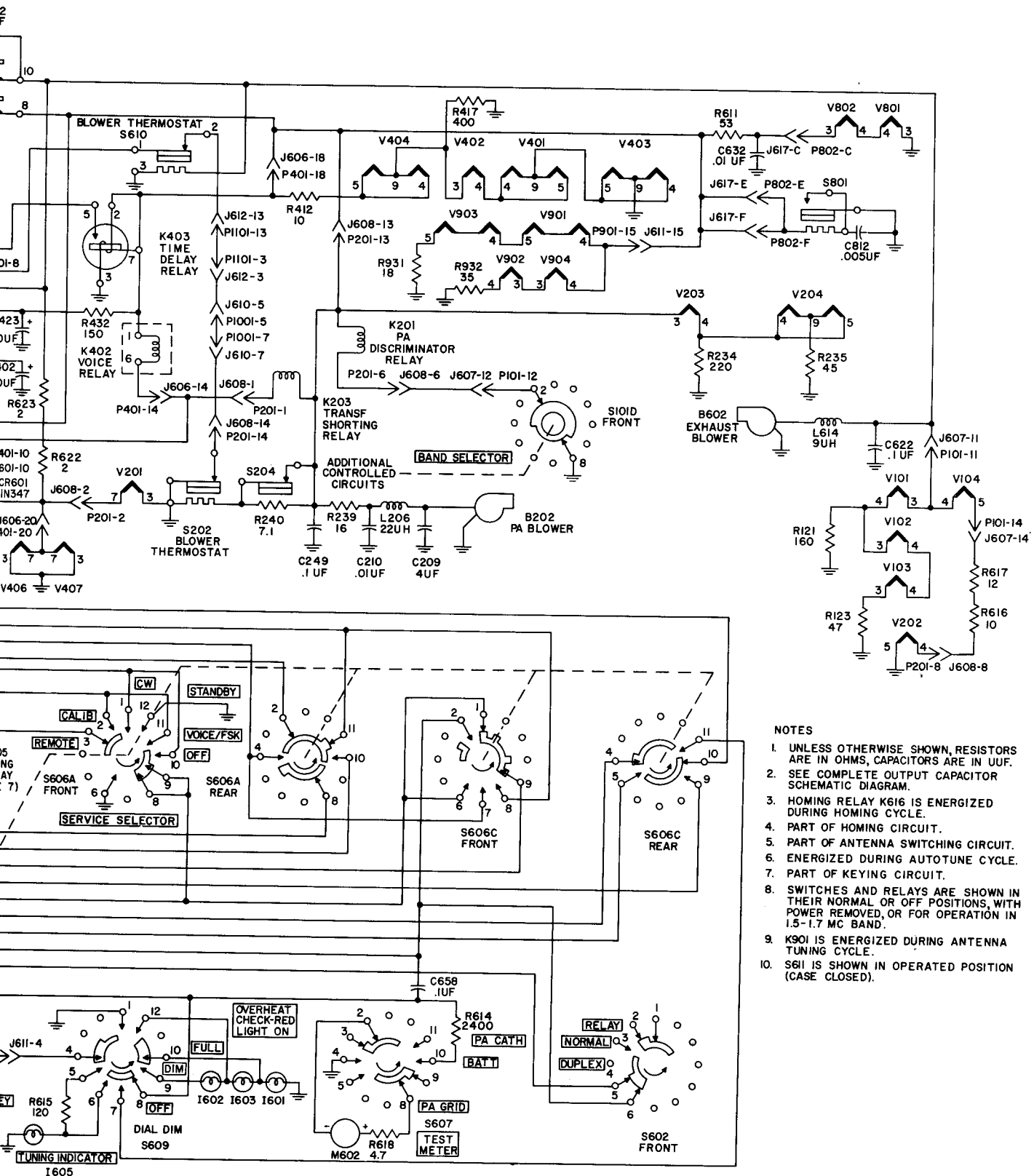


Figure 61. +24-volt distribution, functional diagram.



NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE IN C.
2. SEE COMPONENT LIST FOR PART OF SCHEMATIC.
3. HOMING SWITCH IS OPERATED DURING POWER ON.
4. PART OF SCHEMATIC.
5. PART OF SCHEMATIC.
6. ENERGIZED BY POWER ON.
7. PART OF SCHEMATIC.
8. SWITCHES ARE OPERATED BY THEIR NORMAL POWER RATED CURRENT (1.5-1.7 MA).
9. K901 IS ENERGIZED BY POWER ON.
10. S611 IS SHOWN IN CASE CL.



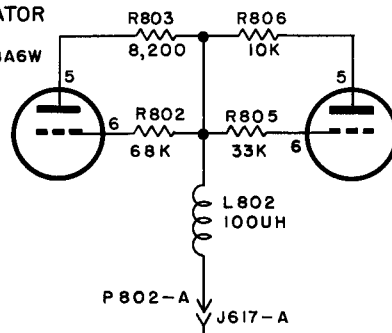
NOTES

1. UNLESS OTHERWISE SHOWN, RESISTORS ARE IN OHMS, CAPACITORS ARE IN UUF.
2. SEE COMPLETE OUTPUT CAPACITOR SCHEMATIC DIAGRAM.
3. HOMING RELAY K616 IS ENERGIZED DURING HOMING CYCLE.
4. PART OF HOMING CIRCUIT.
5. PART OF ANTENNA SWITCHING CIRCUIT.
6. ENERGIZED DURING AUTOTUNE CYCLE.
7. PART OF KEYING CIRCUIT.
8. SWITCHES AND RELAYS ARE SHOWN IN THEIR NORMAL OR OFF POSITIONS, WITH POWER REMOVED, OR FOR OPERATION IN 1.5-1.7 MC BAND.
9. K901 IS ENERGIZED DURING ANTENNA TUNING CYCLE.
10. S611 IS SHOWN IN OPERATED POSITION (CASE CLOSED).

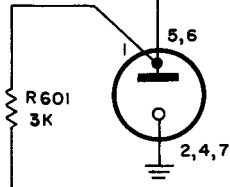
TM 806-57

BUFFER AMPL
V802
5749/6BA6W

OSCILLATOR
V801
5749/6BA6W

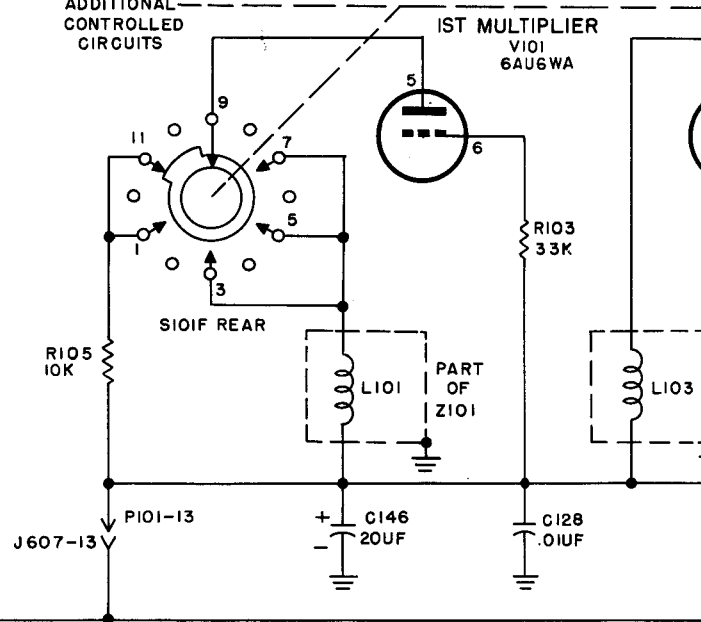


VOLTAGE REGULATOR
V601
0A2

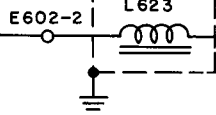


ADDITIONAL CONTROLLED CIRCUITS

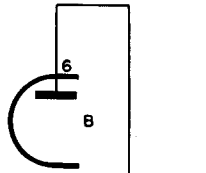
BAND SELECTOR



FROM LV DYNAMOTOR D601

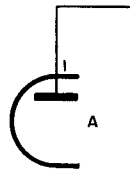


ANTENNA DELAY TUBE
V403
(1/2) 12AT7

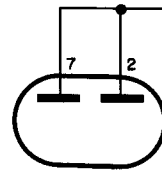


K601 ANTENNA DELAY RELAY

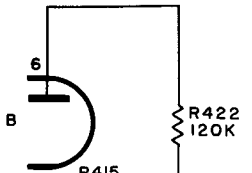
PREAMPLIFIER
V401
(1/2) 12AT7



LIMITER
V402
5726/6AL5W



1ST AUDIO AMPL
V401
(1/2) 12AT7



P401-7

R626
47K

R407
120K

R408
47K

P401-11

R413
1.8
MEG

R415
120K

R414
250K

R409
27K

R422
120K

R421
10K

2

3

6

0

1

0

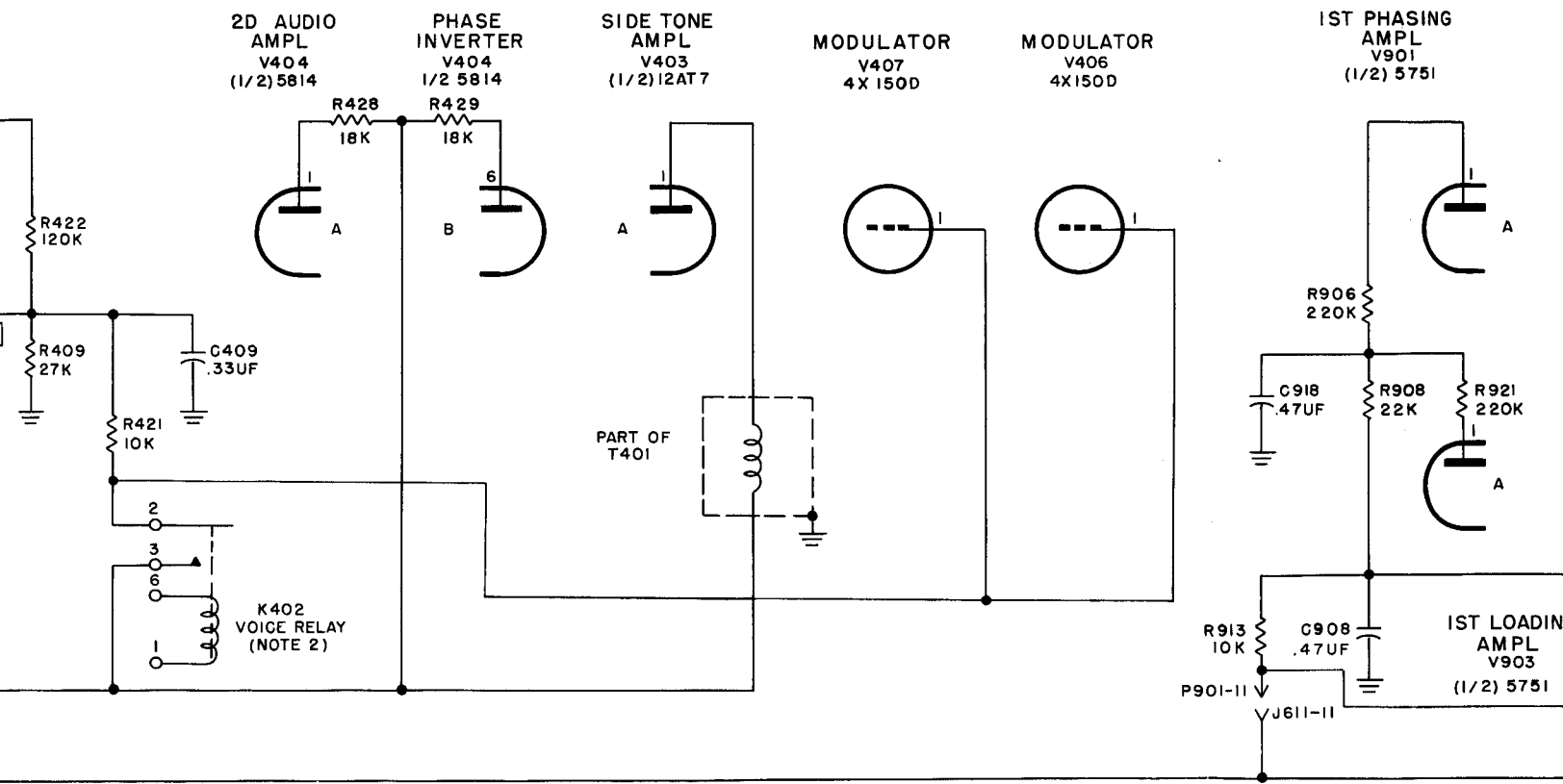
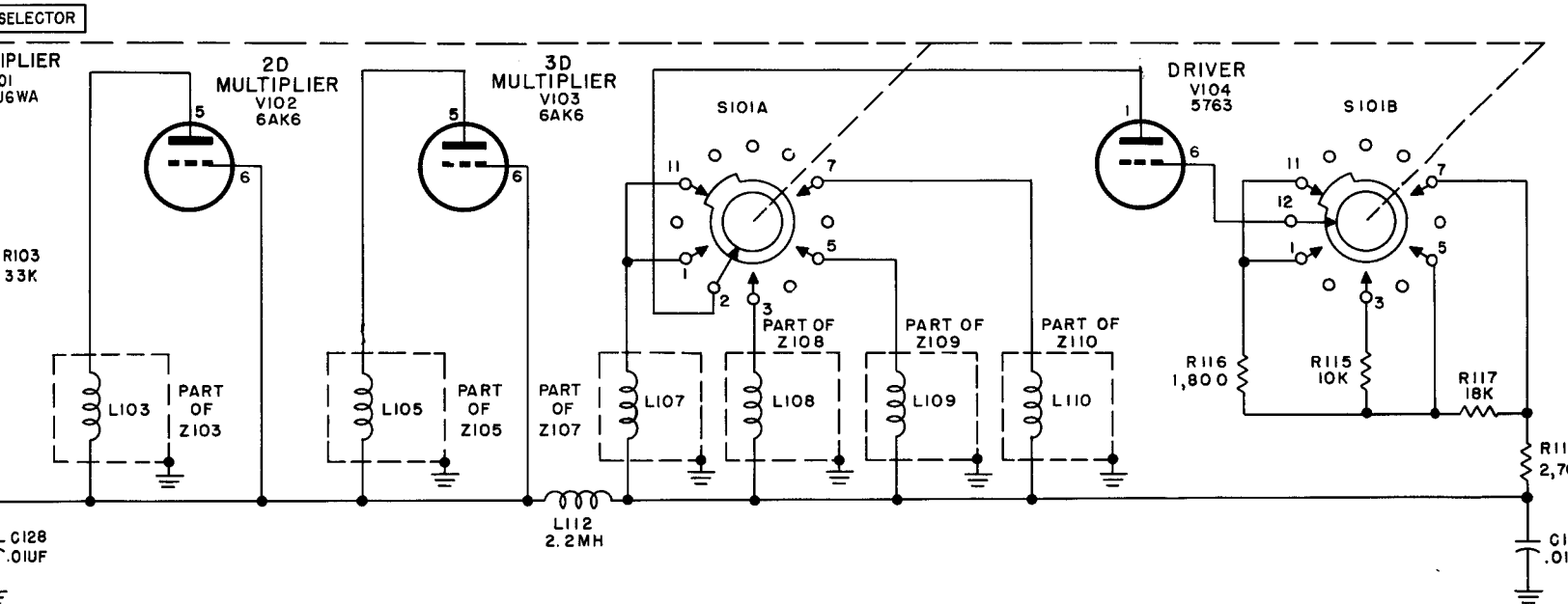
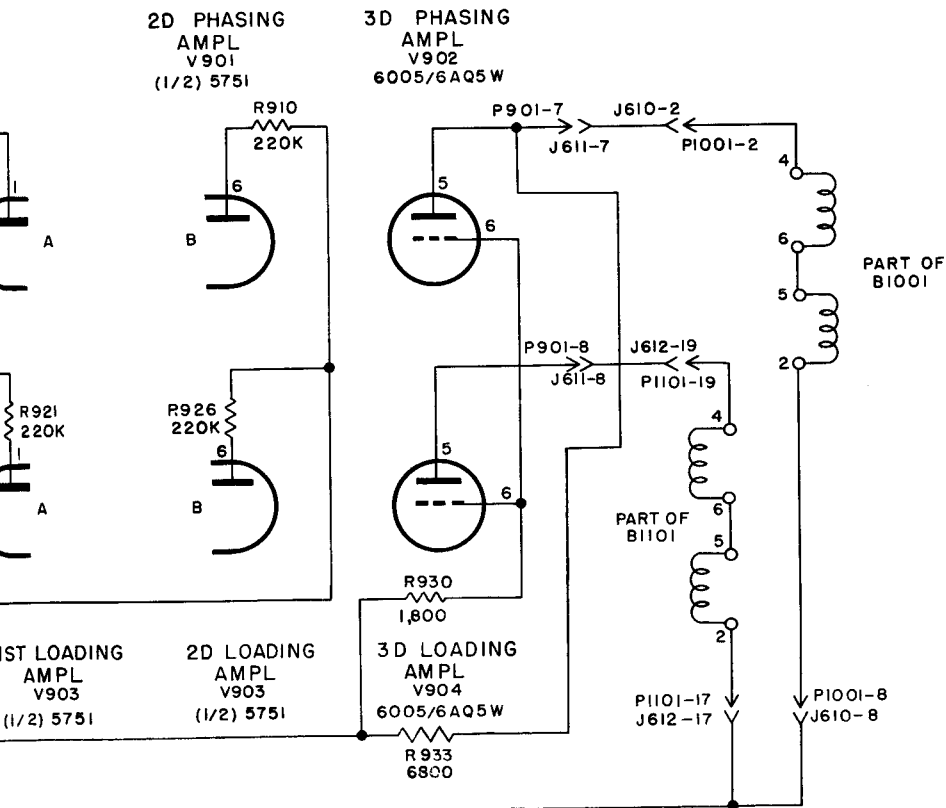
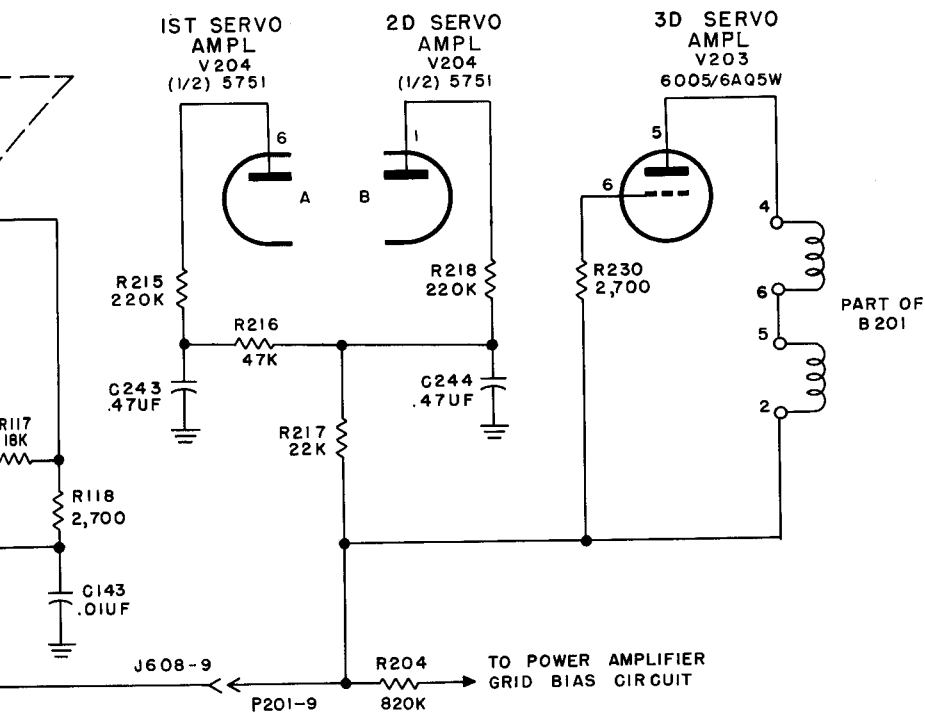


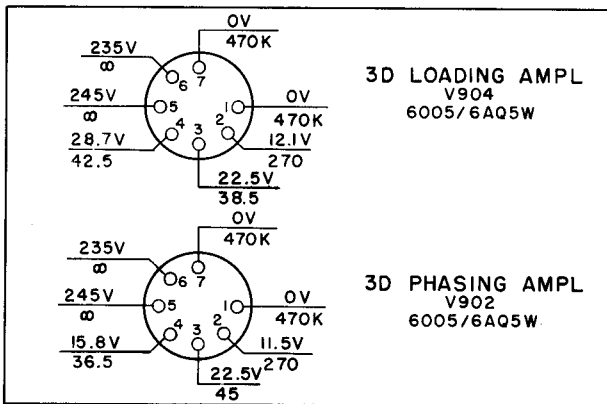
Figure 63. +250-volt distribution, function diagram.



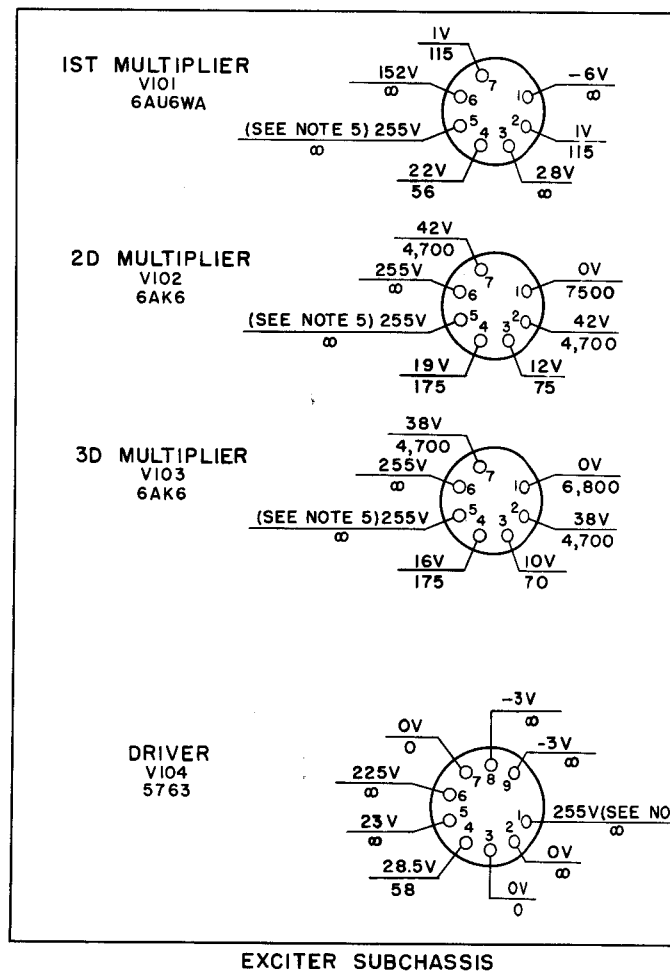
NOTES:

1. UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS,
CAPACITORS ARE IN UUF.
2. K402 IS ENERGIZED IN
VOICE/FSK OPERATION.

TM 806-59

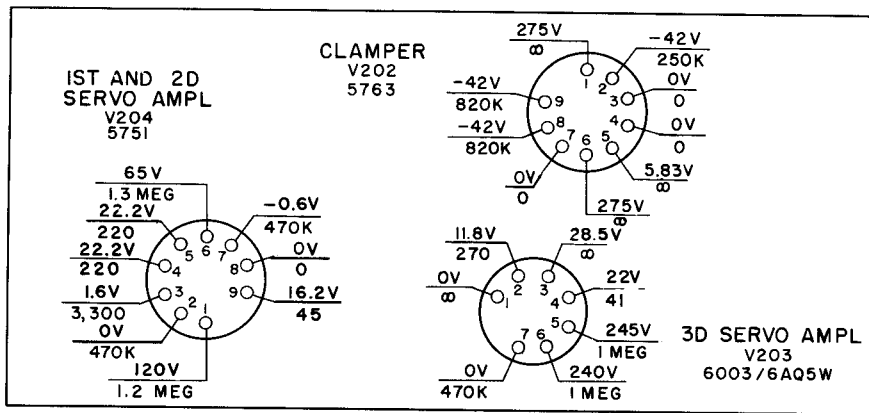


ANTENNA NETWORK
SERVO AMPLIFIER SUBCHASSIS

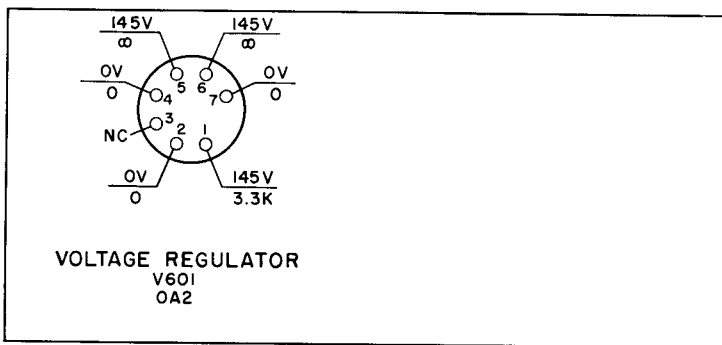


EXCITER SUBCHASSIS

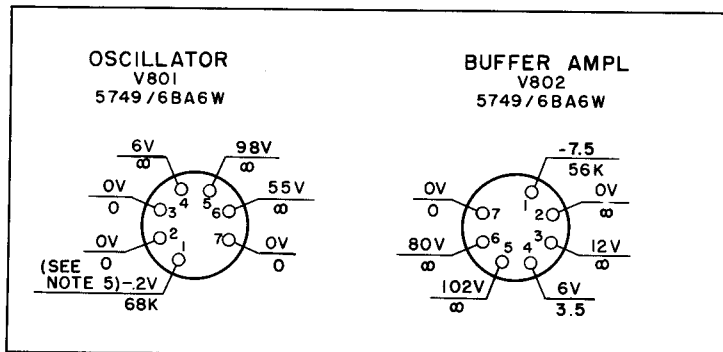
Figure 104. Radio T...



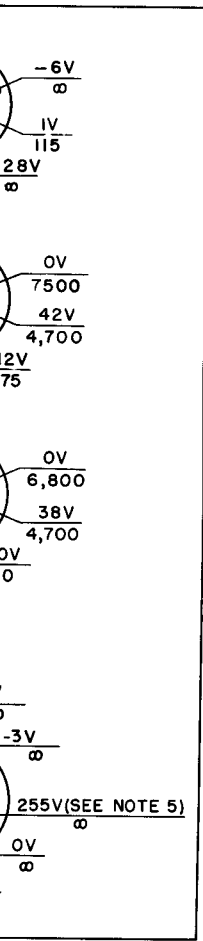
PA DISCRIMINATOR SUBASSEMBLY
PART OF POWER AMPLIFIER SUBCHASSIS



REGULATOR SUBASSEMBLY
PART OF MAIN FRAME



MASTER OSCILLATOR
SUBCHASSIS



FRONT

REAR

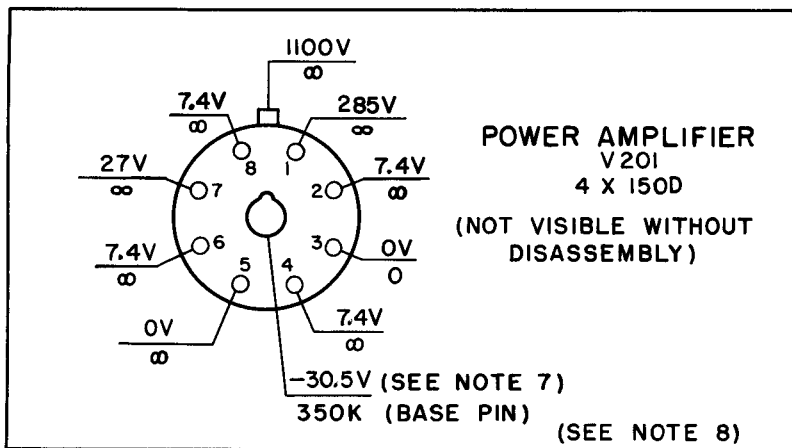
TOP
DECK

1. UNLESS OTHERWISE SHOWN, RESISTANCES ARE IN OHMS AND PIN TO GROUND WITH A 20K RESISTOR AND WITH THE SUBCHASSIS PIN TO MAIN FRAME.
2. NC INDICATES NO CONNECTION.
3. ∞ INDICATES INFINITY.
4. UNLESS OTHERWISE NOTED, ALL RESISTANCE MEASUREMENTS ARE AT [OFF], AND THE BAND SWITCH IS SET AT 18.000 MC AS SHOWN ON THE DIAL. ALL VOLTAGE MEASUREMENTS ARE AT [DIAL DIM], SET AS FOLLOWS: [DIAL DIM] AT [-34], [RELAY-NORMAL-D] AT [CW].
5. THIS MEASUREMENT TAKEN WITH THE TUBE IN PLACE.
6. ALL TUBES IN EACH SUBCHASSIS

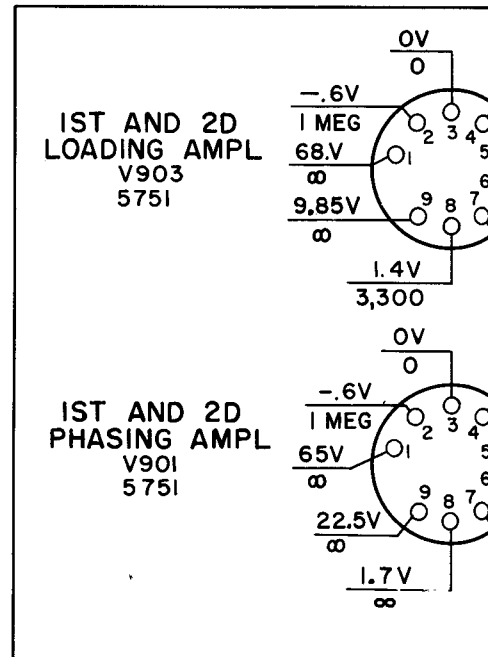
NOTES:

1. UNLESS OTHERWISE SHOWN, RESISTANCES ARE IN OHMS AND ARE MEASURED FROM SOCKET PIN TO GROUND WITH A 20,000-OHMS-PER-VOLT METER AND WITH THE SUBCHASSIS PLUGS DISCONNECTED FROM THE MAIN FRAME.
VOLTAGES ARE DC AND ARE MEASURED FROM SOCKET PIN TO GROUND WITH A VTVM AND WITH SUBCHASSIS CONNECTED TO MAIN FRAME, USING THE REQUIRED BENCH-TEST CABLE.
2. NC INDICATES NO CONNECTION.
3. ∞ INDICATES INFINITY.
4. UNLESS OTHERWISE NOTED, ALL RESISTANCE MEASUREMENTS ARE TAKEN WITH THE SERVICE SELECTOR AT OFF, AND THE BAND SELECTOR AND TUNING CONTROL SET FOR 18.000 MC AS SHOWN ON THE FREQUENCY INDICATOR. ALL VOLTAGE MEASUREMENTS ARE TAKEN AT 18 MC WITH THE CONTROL SET AS FOLLOWS: DIAL DIM AT FULL, TEST KEY AT ON, LINE LEVEL AT -34, RELAY-NORMAL-DUPLEX AT NORMAL, AND SERVICE SELECTOR AT CW.
5. THIS MEASUREMENT TAKEN WITH TEST KEY AT OFF.
6. ALL TUBES IN EACH SUBCHASSIS REMOVED.

POWER
AMPLIFIER
SUBCHASSIS



ANTENNA-NETWORK SE
AMPLIFIER SUBCHASSIS



NOTES:

1. UNLESS OTHERWISE SHOWN, RESISTANCES ARE IN OHMS AND ARE MEASURED FROM SOCKET PIN TO GROUND WITH A 20,000-OHMS-PER-VOLT METER, AND WITH THE SUBCHASSIS PLUGS DISCONNECTED FROM THE MAIN FRAME. VOLTAGES ARE DC AND ARE MEASURED FROM SOCKET PIN TO GROUND WITH A VTVM AND WITH THE SUBCHASSIS CONNECTED TO MAIN FRAME, USING THE REQUIRED BENCH-TEST CABLE.
2. NC INDICATES NO CONNECTION.
3. ∞ INDICATES INFINITY.
4. UNLESS OTHERWISE NOTED, ALL RESISTANCE MEASUREMENTS ARE TAKEN WITH THE **SERVICE SELECTOR** AT **OFF**, AND THE **BAND SELECTOR** AND **TUNING CONTROL** SET FOR 18.000 MC AS SHOWN ON THE FREQUENCY INDICATOR. ALL VOLTAGE MEASUREMENTS ARE TAKEN AT 18 MC WITH THE CONTROLS SET AS FOLLOWS: **DIAL DIM** AT **FULL**, **TEST KEY** AT **ON**, **LINE LEVEL** AT **-34**, **RELAY-NORMAL-DUPLEX** AT **NORMAL**, AND **SERVICE SELECTOR** AT **CW**.
5. THIS MEASUREMENT TAKEN WITH **TEST KEY** AT **OFF**.
6. VOLTAGE MEASUREMENT FOR THE MODULATOR SUBCHASSIS ARE MADE WITH **SERVICE SELECTOR** AT **VOICE** AND NO MODULATION INPUT TO THE TRANSMITTER.
7. THE MEASUREMENTS FOR THE PLATES OF V406 AND V407 ARE TAKEN AT TERMINALS 2 AND 1 RESPECTIVELY OF T402.
8. MEASUREMENTS FOR SOCKET PINS 2,5,7 AND BASE PIN OF V201 ARE TAKEN AT TERMINALS E205, E207, E206, AND E208 RESPECTIVELY LOCATED ON SHIELD NEAR SOCKET XV201.
9. ALL TUBES IN EACH SUBCHASSIS REMOVED.

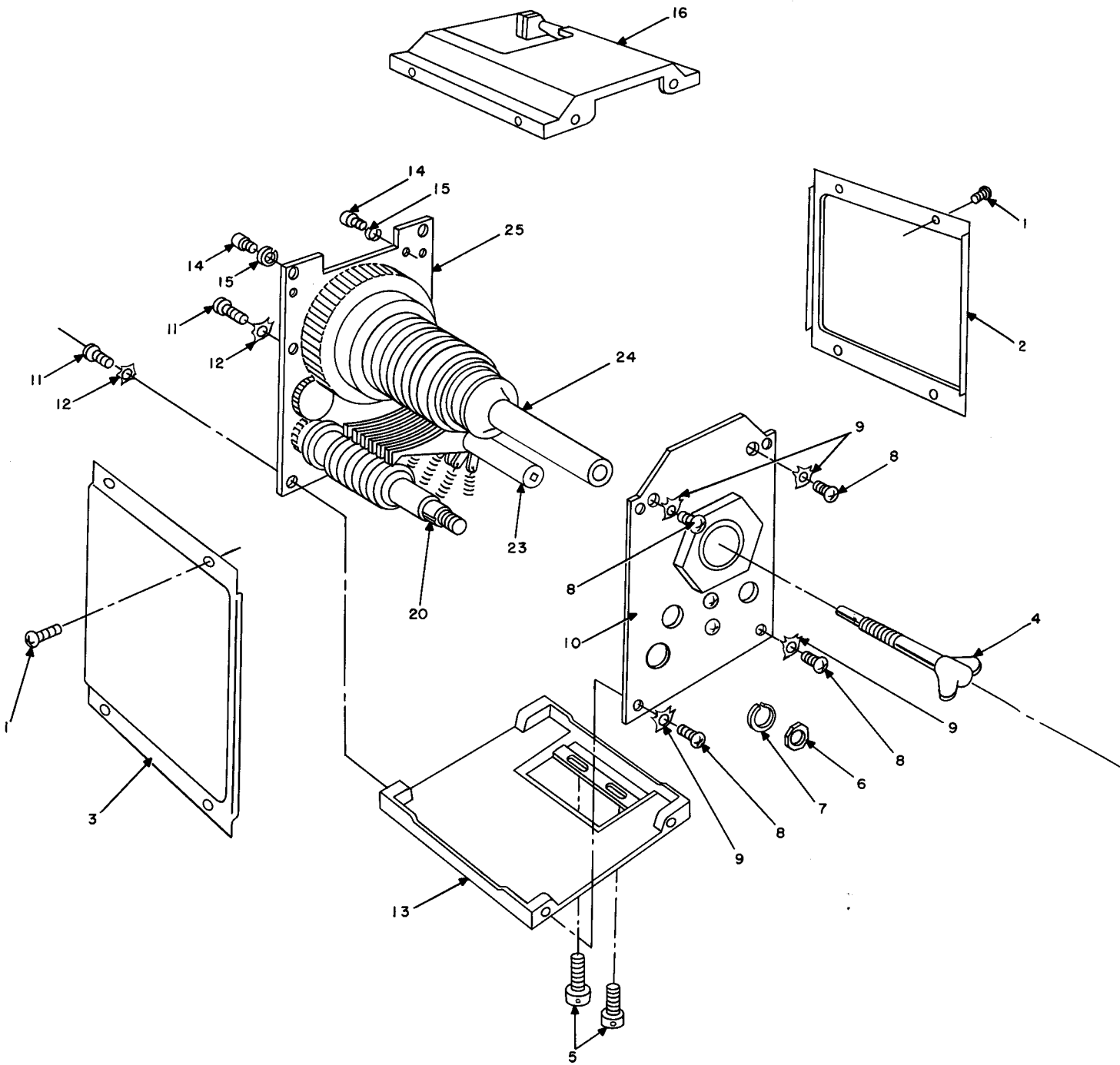
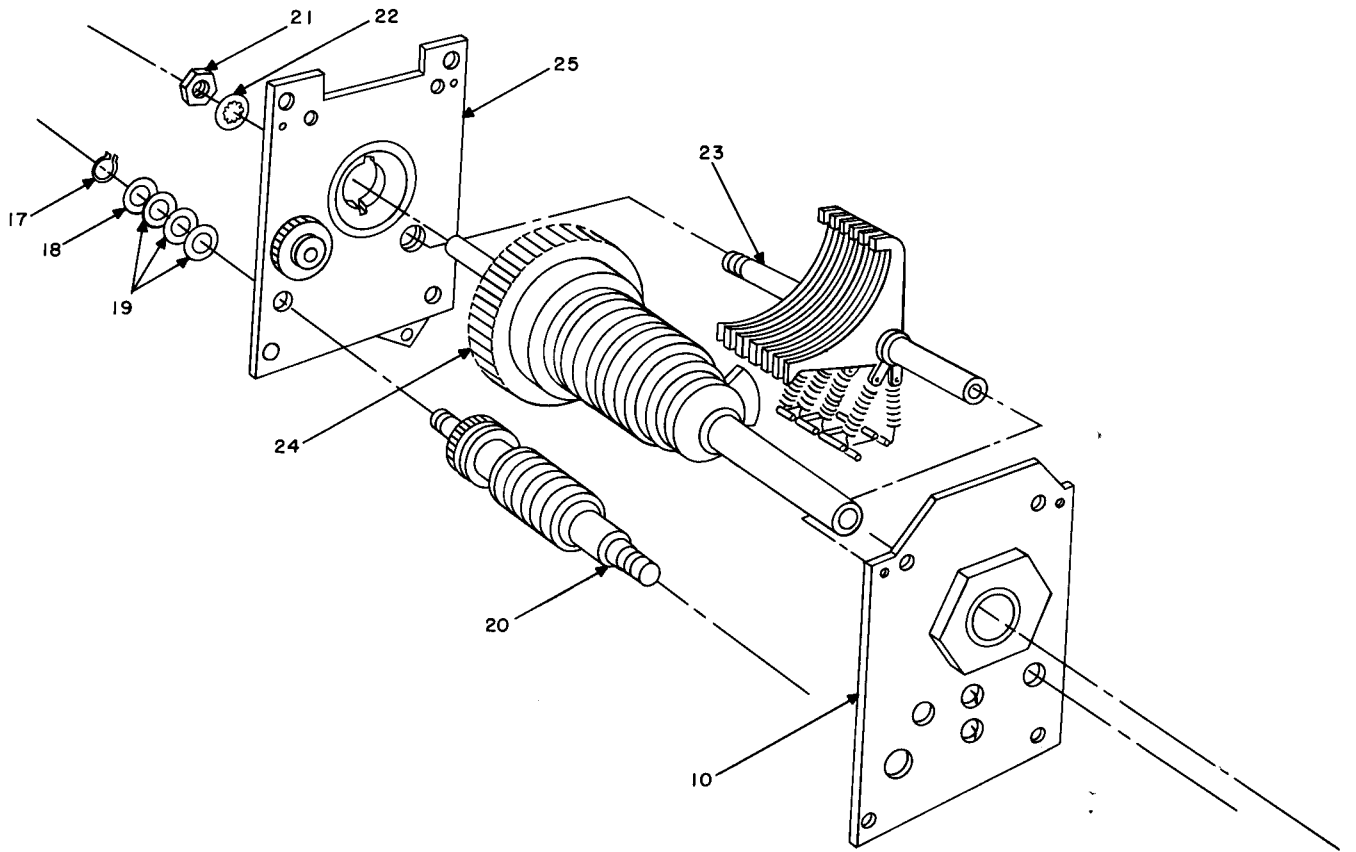


Figure 113. Disassembly of Au



assembly of Autotune singleturn head

TM 806-107

390412 O - 56 (In pocket) No. 15

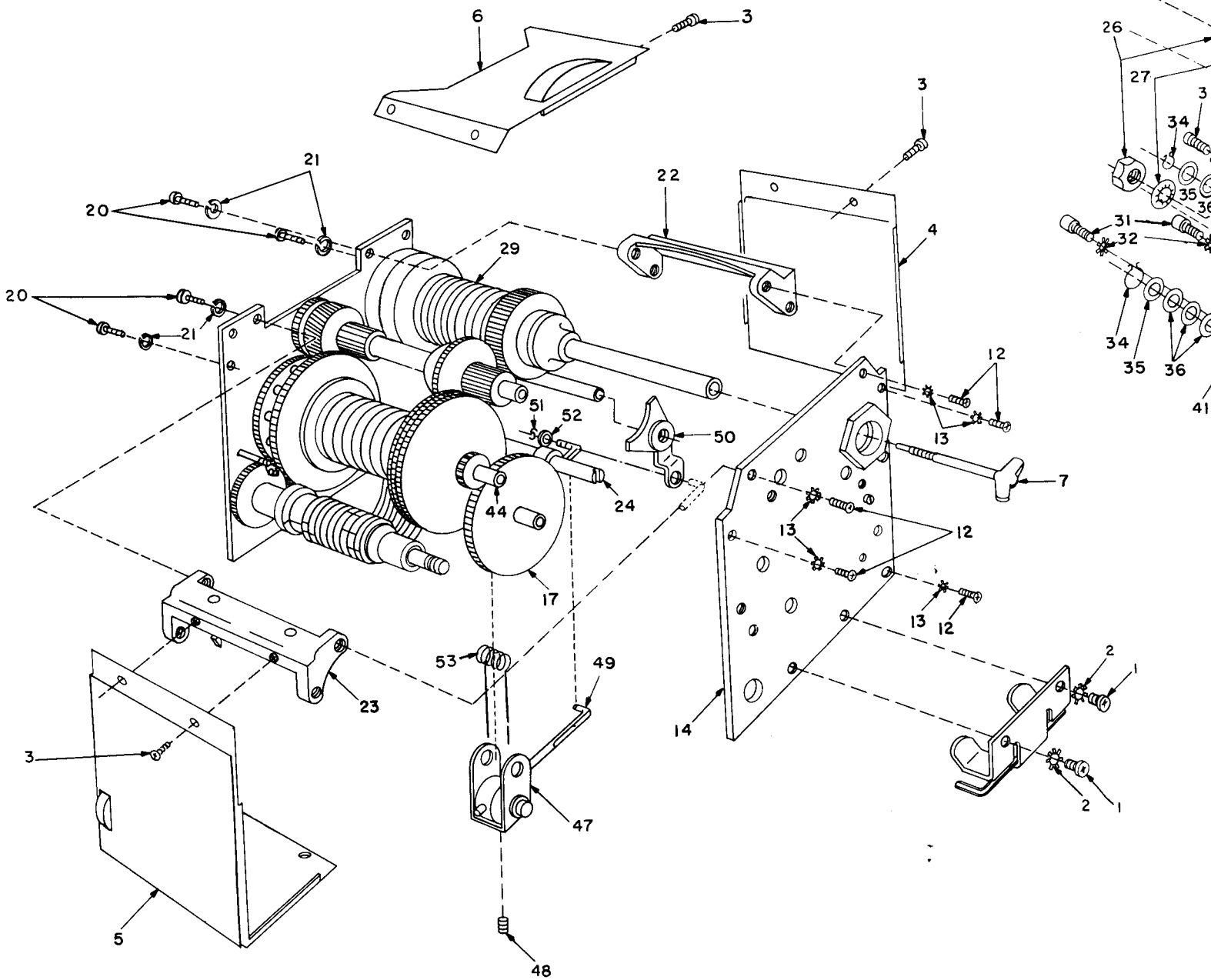
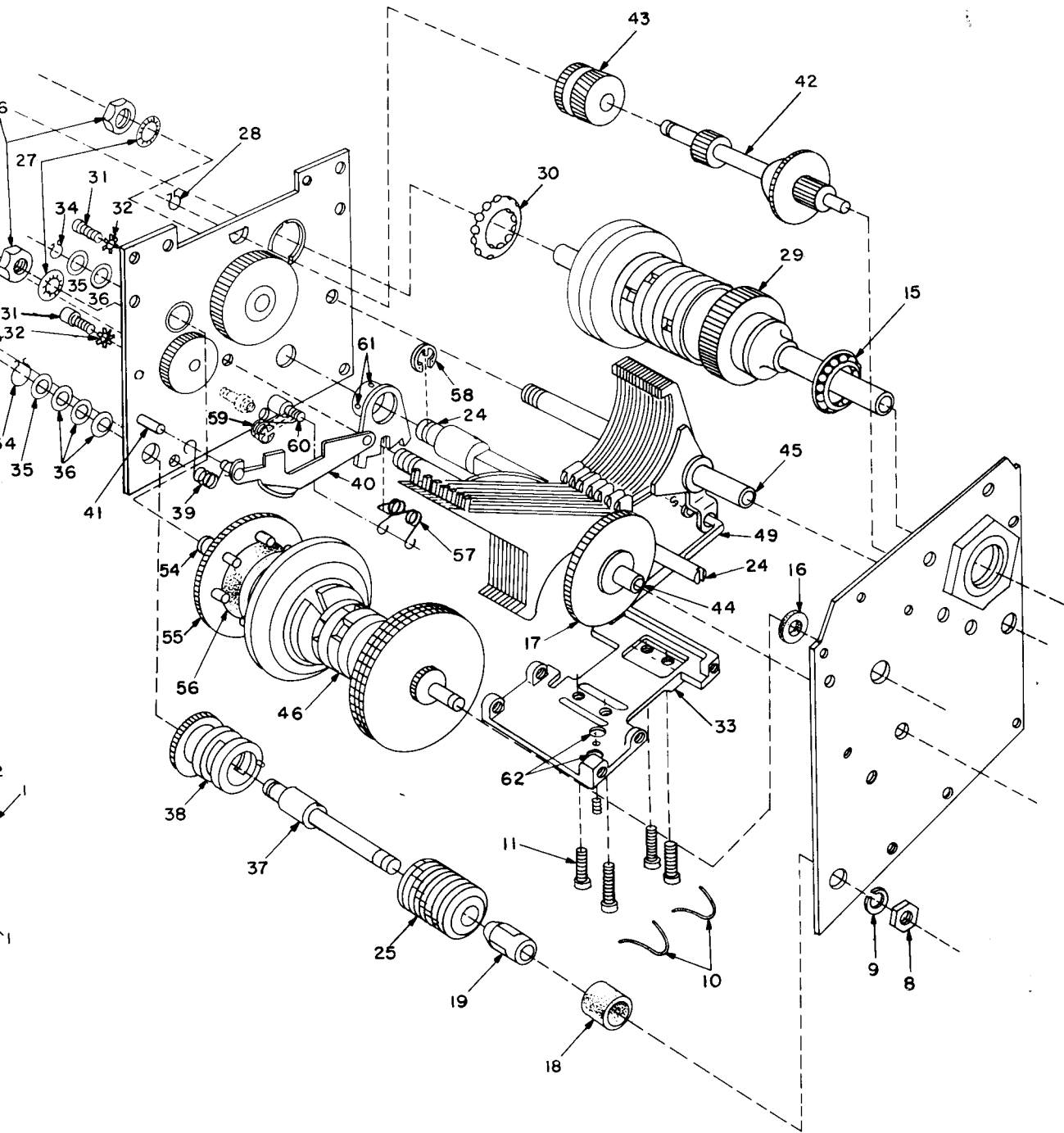


Figure 114. Disassembly of Autotune multi-tuner.



TM 806-105

Autotune multiturn head.

390412 O - 56 (In pocket) No. 16

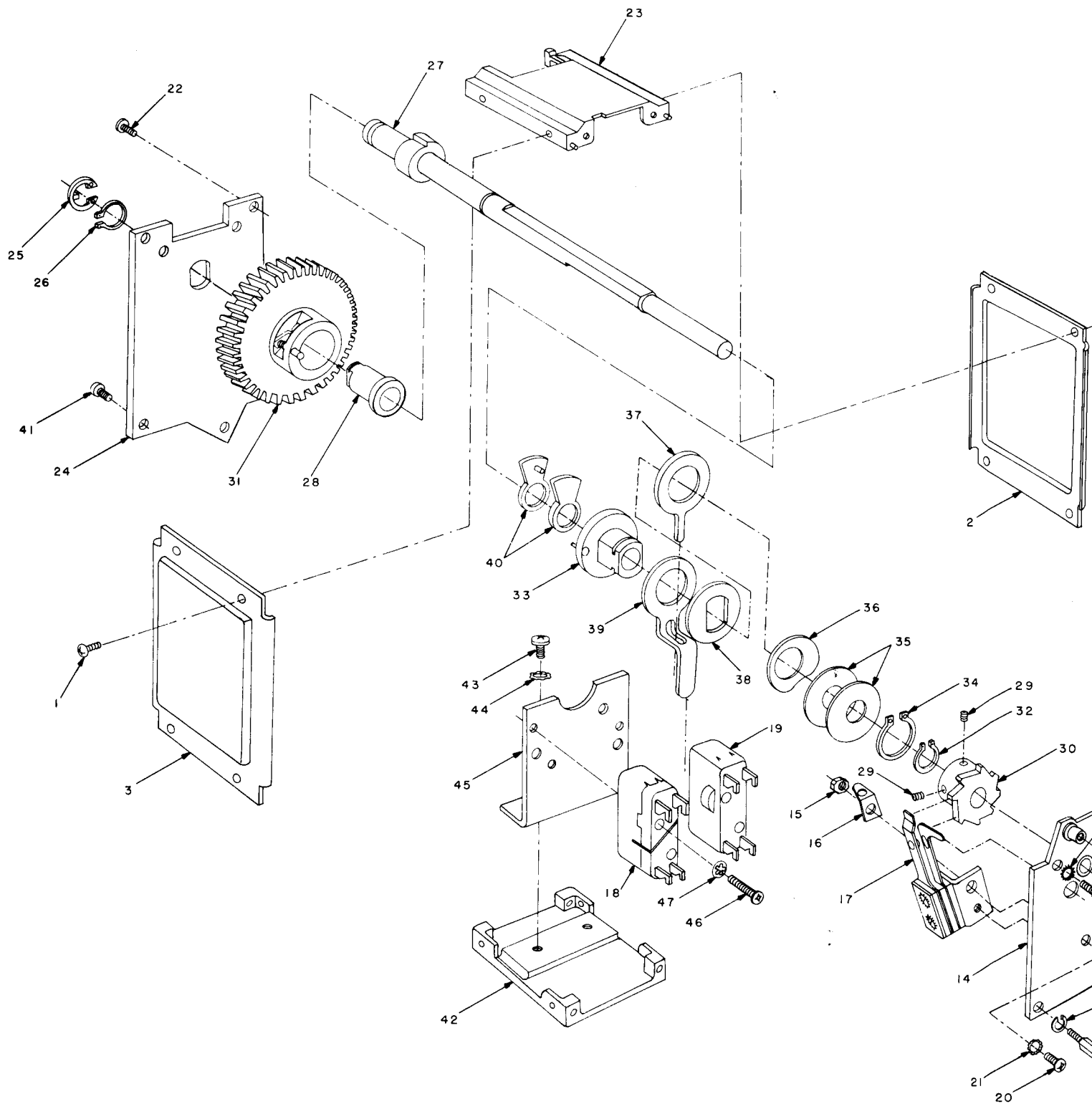
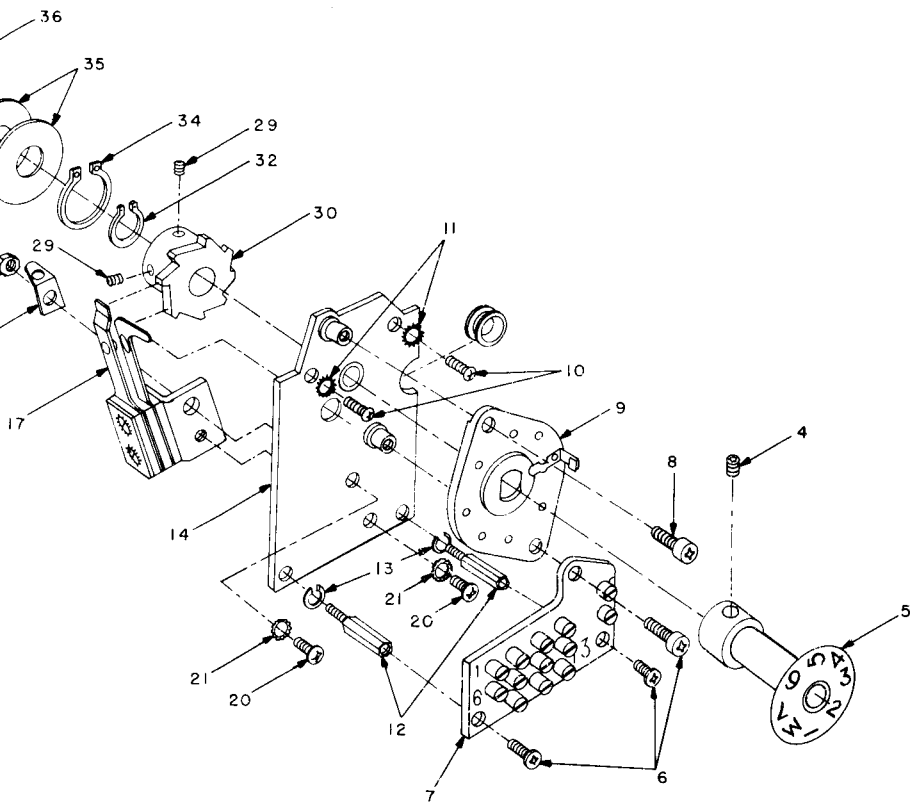
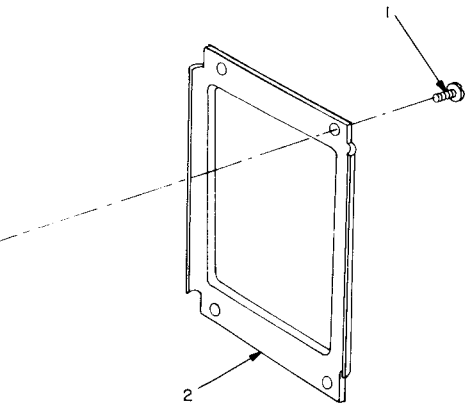


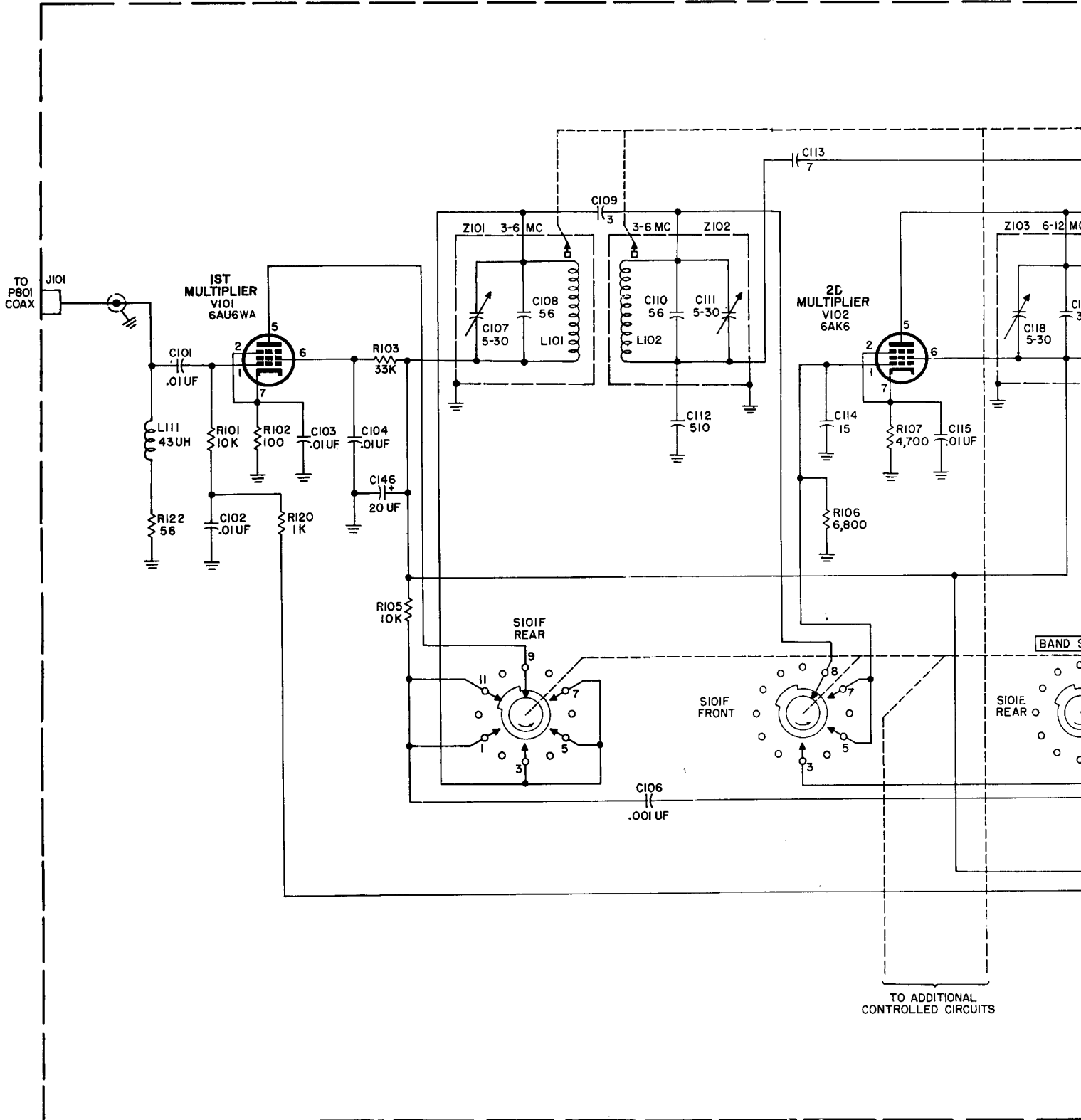
Figure 115. Disassembly of Autotune control head.



TM 806-106

390412 O - 56 (in pocket) No. 17

the control head.



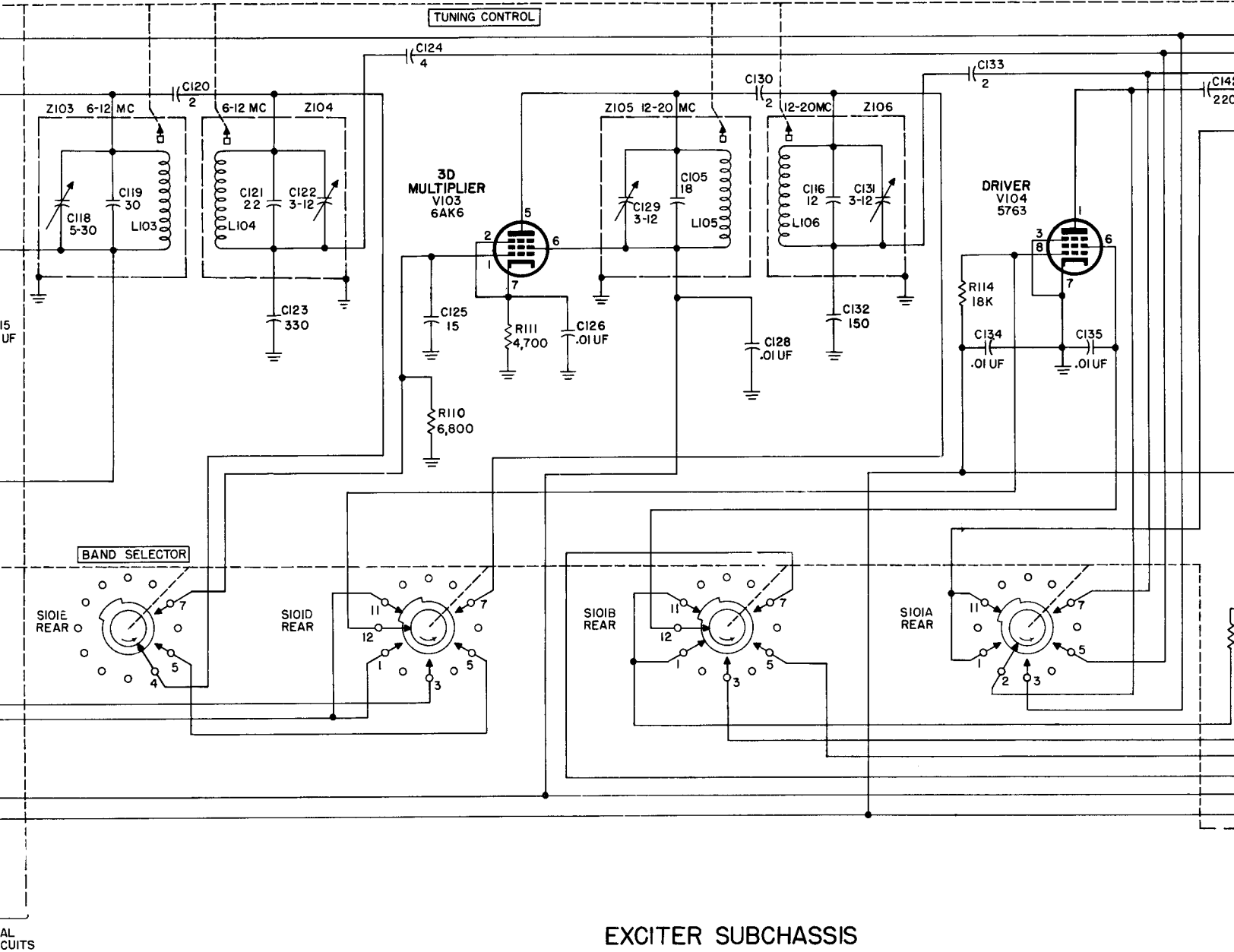
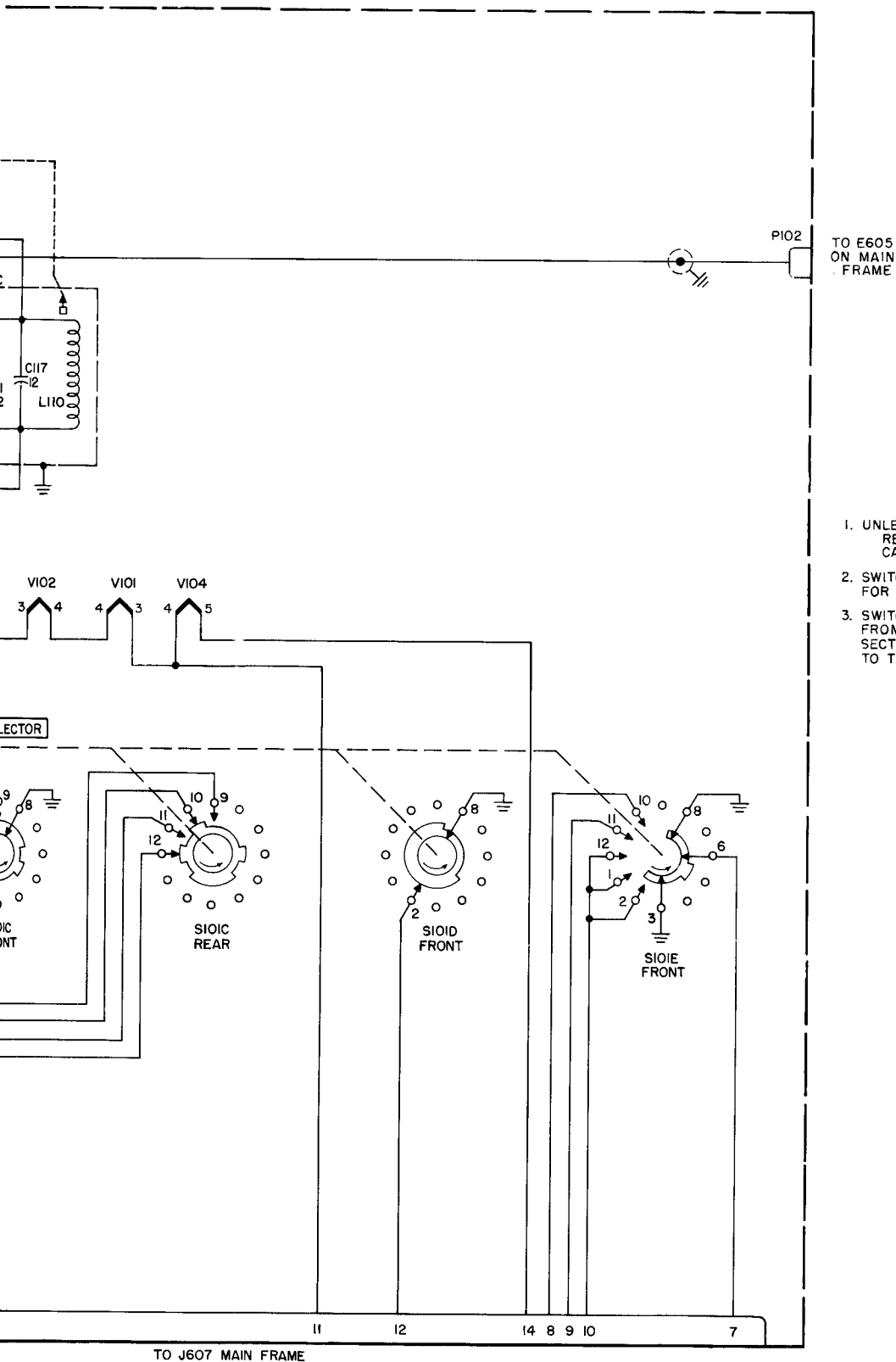


Figure 130. Exciter subchassis, schematic diagram.



NOTES:

1. UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS
CAPACITORS ARE IN UJF
2. SWITCHES ARE SHOWN POSITIONED
FOR THE 1.5 TO 1.7 MC RANGE
3. SWITCHES ARE SHOWN AS VIEWED
FROM THE REAR OF THE EQUIPMENT
SECTIONS DESIGNATED A ARE CLOSED
TO THE FRONT PANEL

POWER AMPLIFIER SUBCHASSIS

TO E605 ON MAIN FRAME

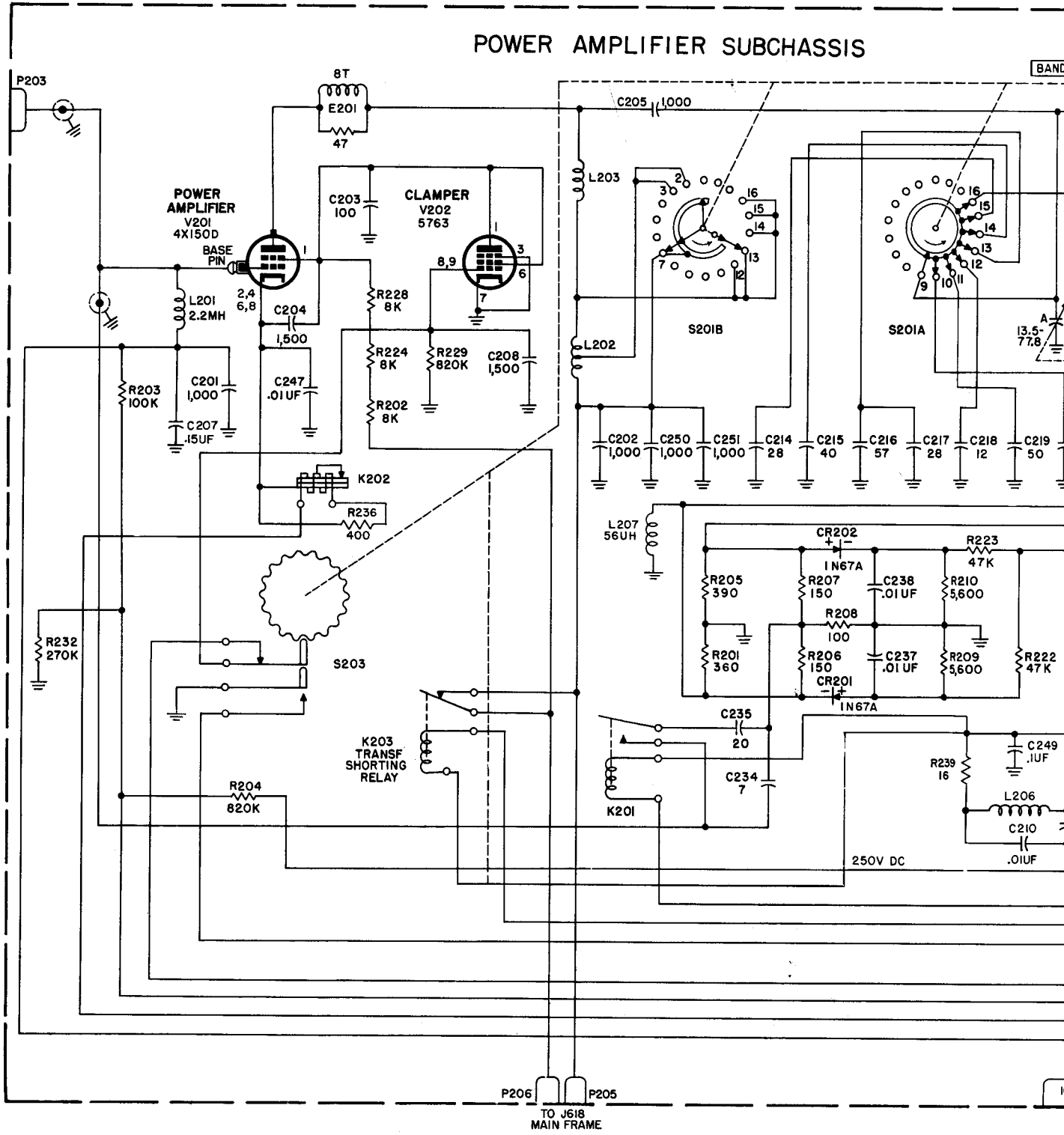
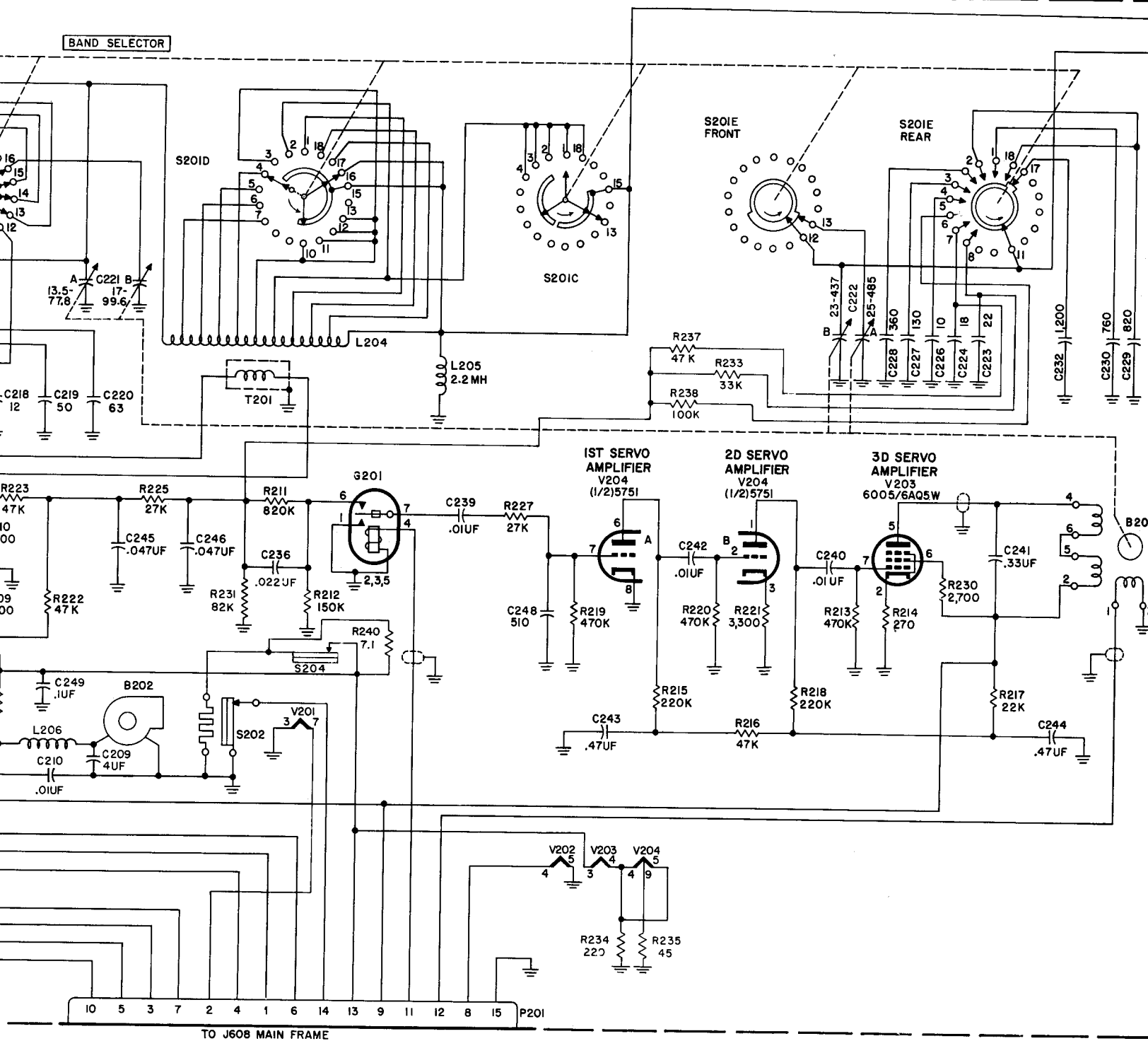
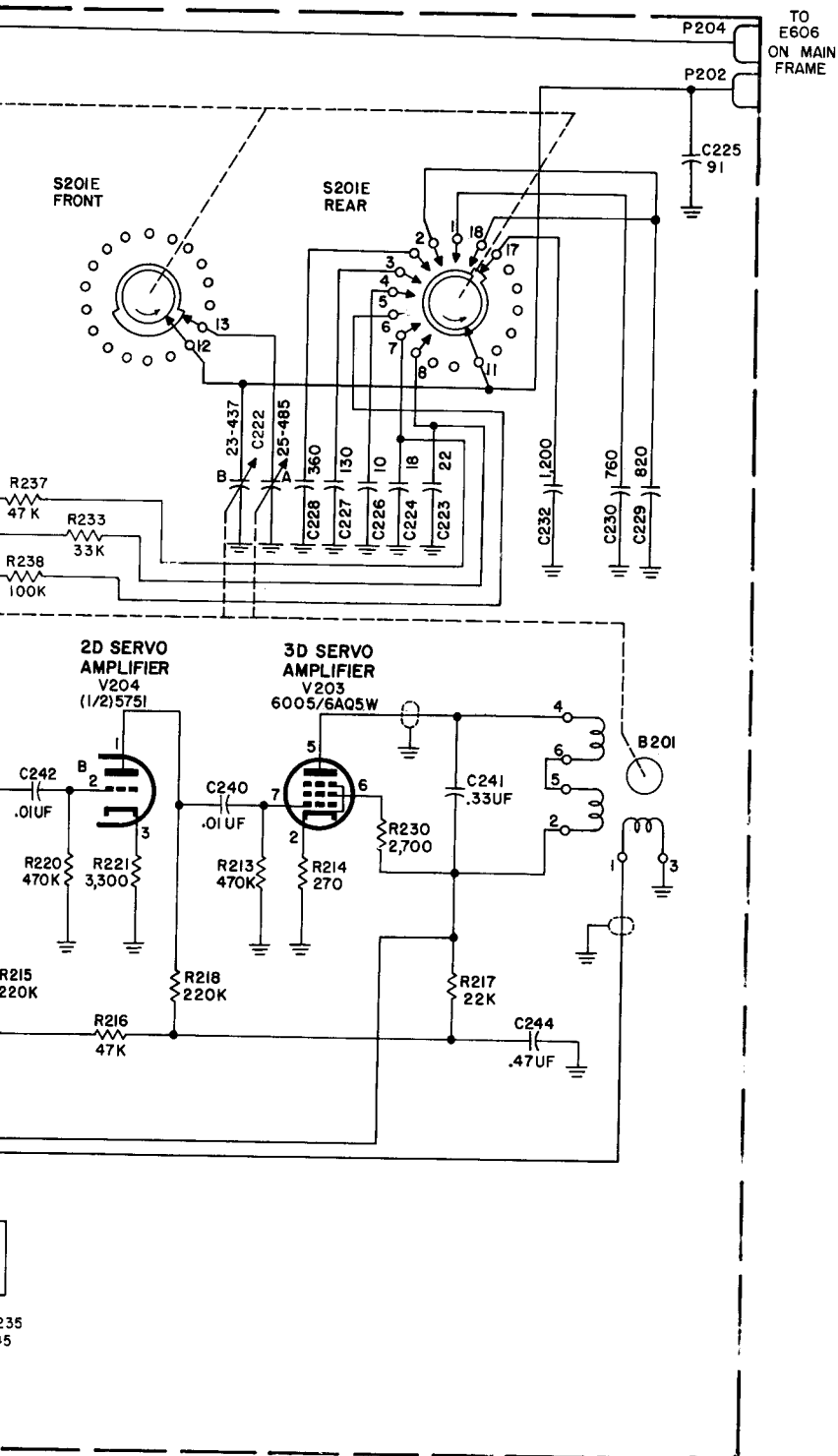


Figure 131. Power amp



NOTES:

1. UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS,
CAPACITORS ARE IN UUF.
2. S201 IS SHOWN AS VIEWED FROM
REAR OF EQUIPMENT AND POSITIONED
FOR THE 1.5 TO 1.7 MC RANGE



NOTES:

1. UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS,
CAPACITORS ARE IN UUF.
2. S201 IS SHOWN AS VIEWED FROM
REAR OF EQUIPMENT AND POSITIONED
FOR THE 1.5 TO 1.7 MC RANGE

TM806-128

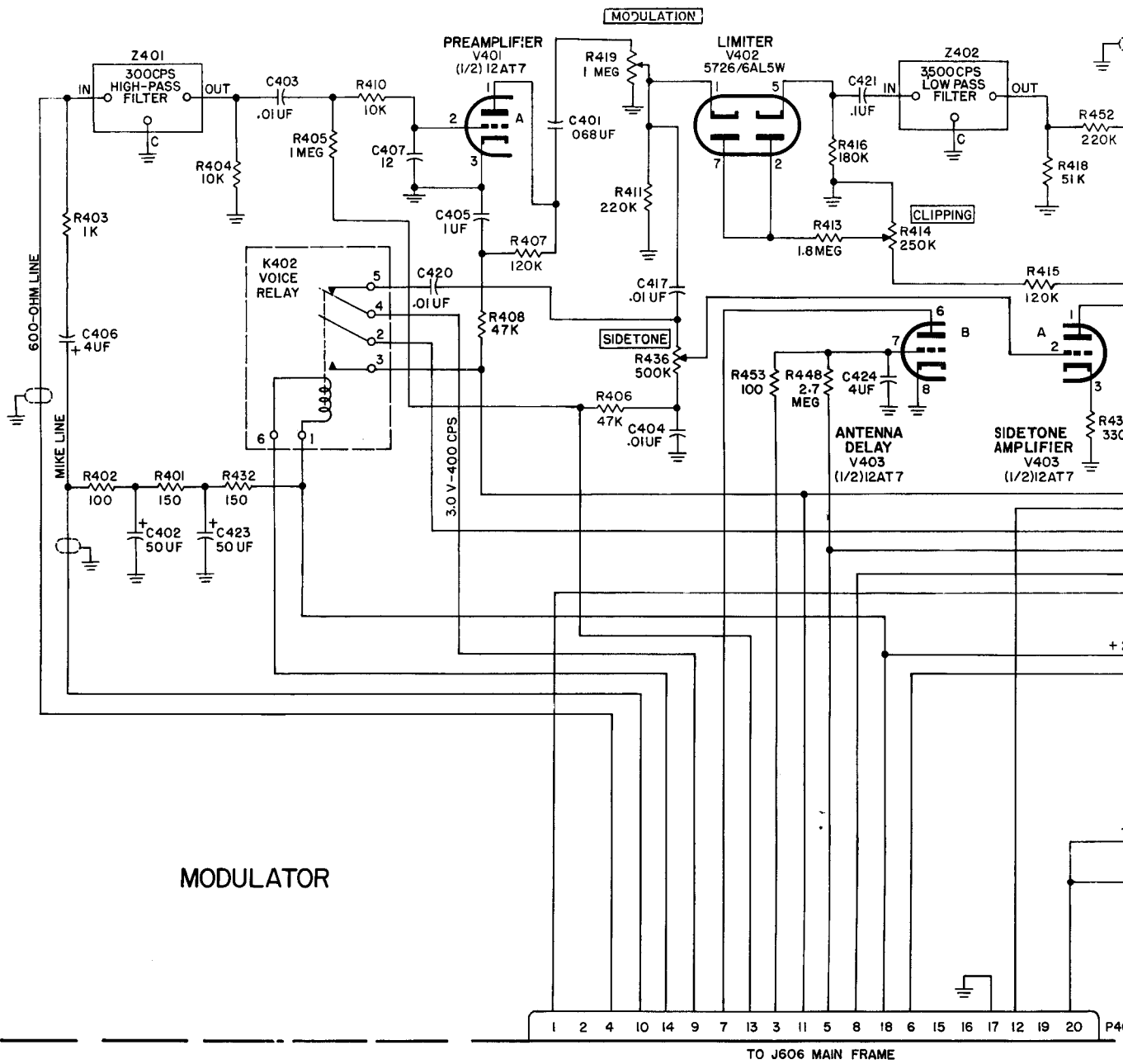
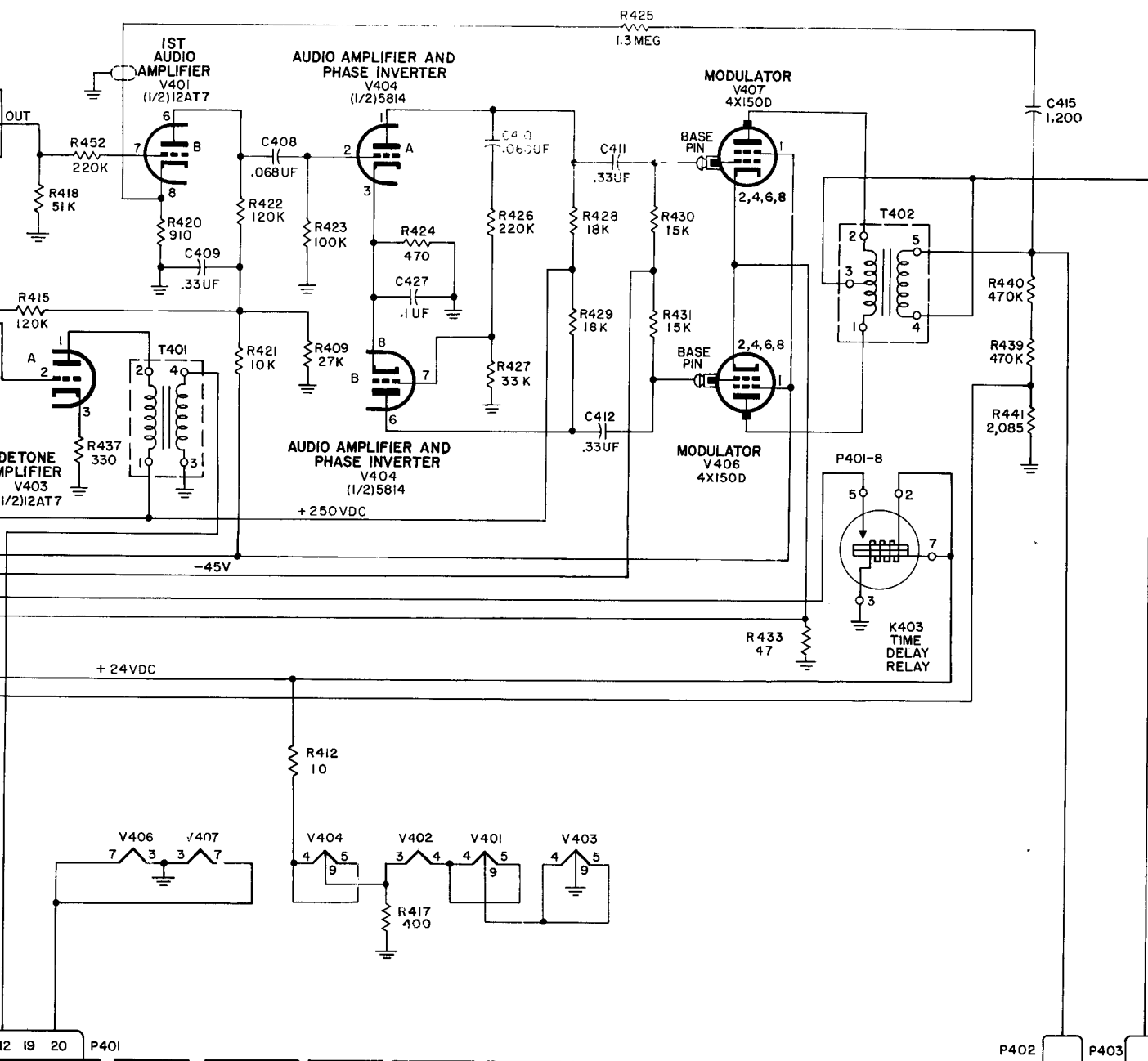


Figure 132. Modulator subchassis



NOTE:
UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS,
CAPACITORS ARE IN U.F.

TO J619
MAIN FRAME

TM806-130

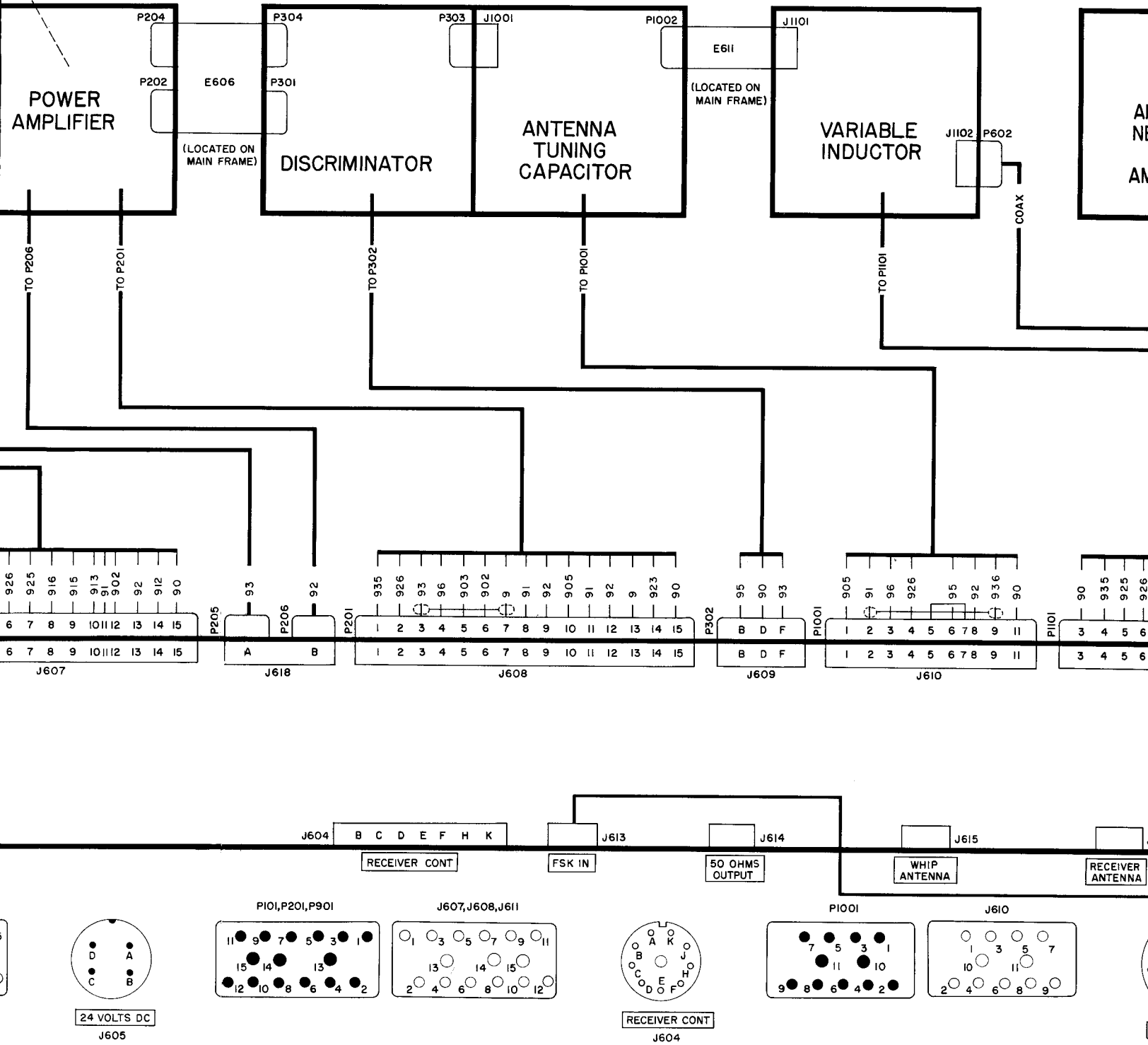
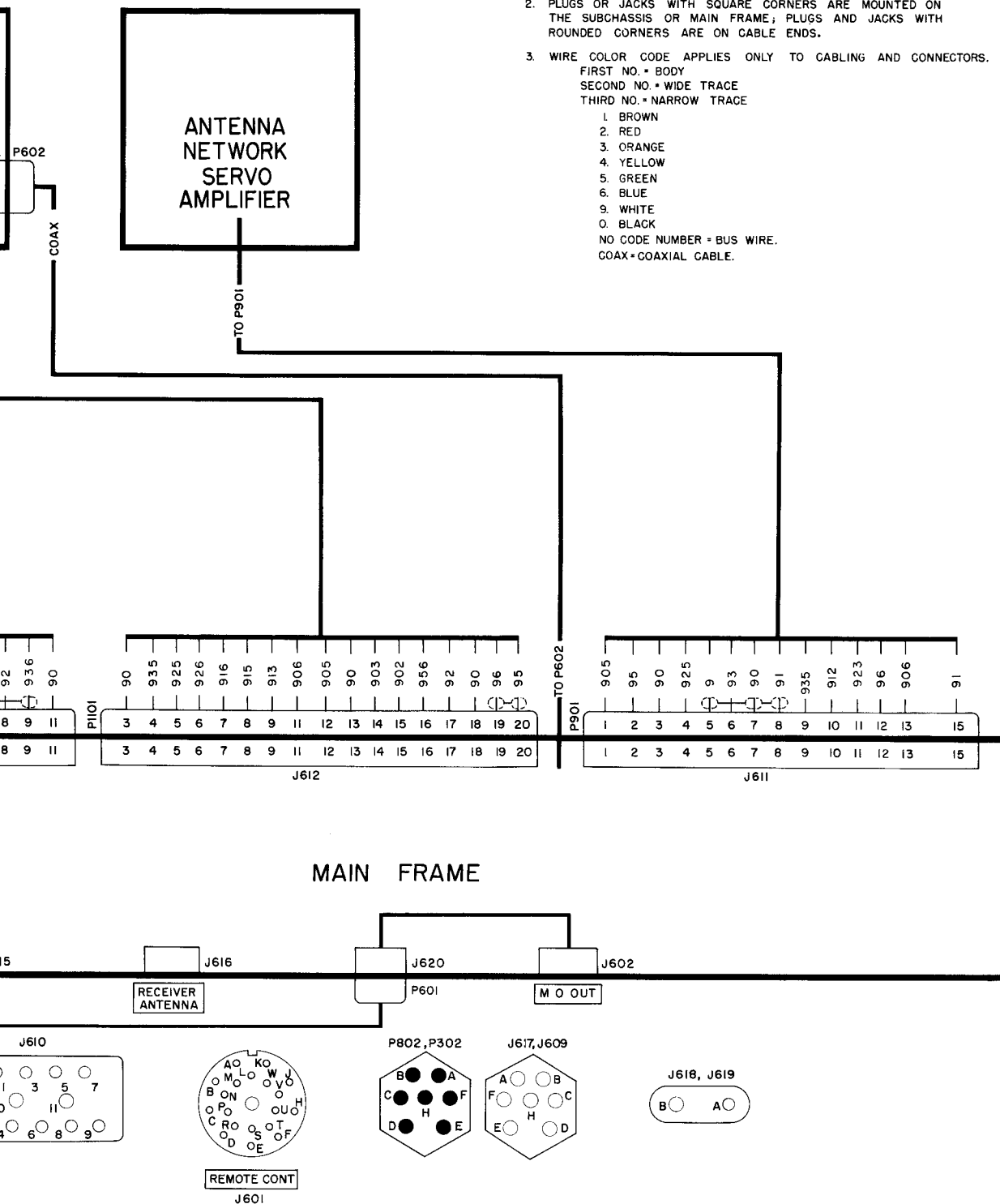


Figure 138. Subchassis interconnection cabling diagram.

NOTES:

1. FOR FSK OPERATION P601 CONNECTS TO J101; P801 TO J620.
2. PLUGS OR JACKS WITH SQUARE CORNERS ARE MOUNTED ON THE SUBCHASSIS OR MAIN FRAME; PLUGS AND JACKS WITH ROUNDED CORNERS ARE ON CABLE ENDS.
3. WIRE COLOR CODE APPLIES ONLY TO CABLING AND CONNECTORS.
 FIRST NO. = BODY
 SECOND NO. = WIDE TRACE
 THIRD NO. = NARROW TRACE
 1. BROWN
 2. RED
 3. ORANGE
 4. YELLOW
 5. GREEN
 6. BLUE
 9. WHITE
 0. BLACK
 NO CODE NUMBER = BUS WIRE.
 COAX = COAXIAL CABLE.

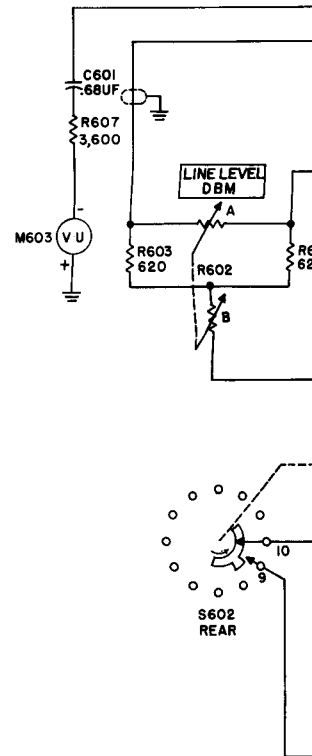
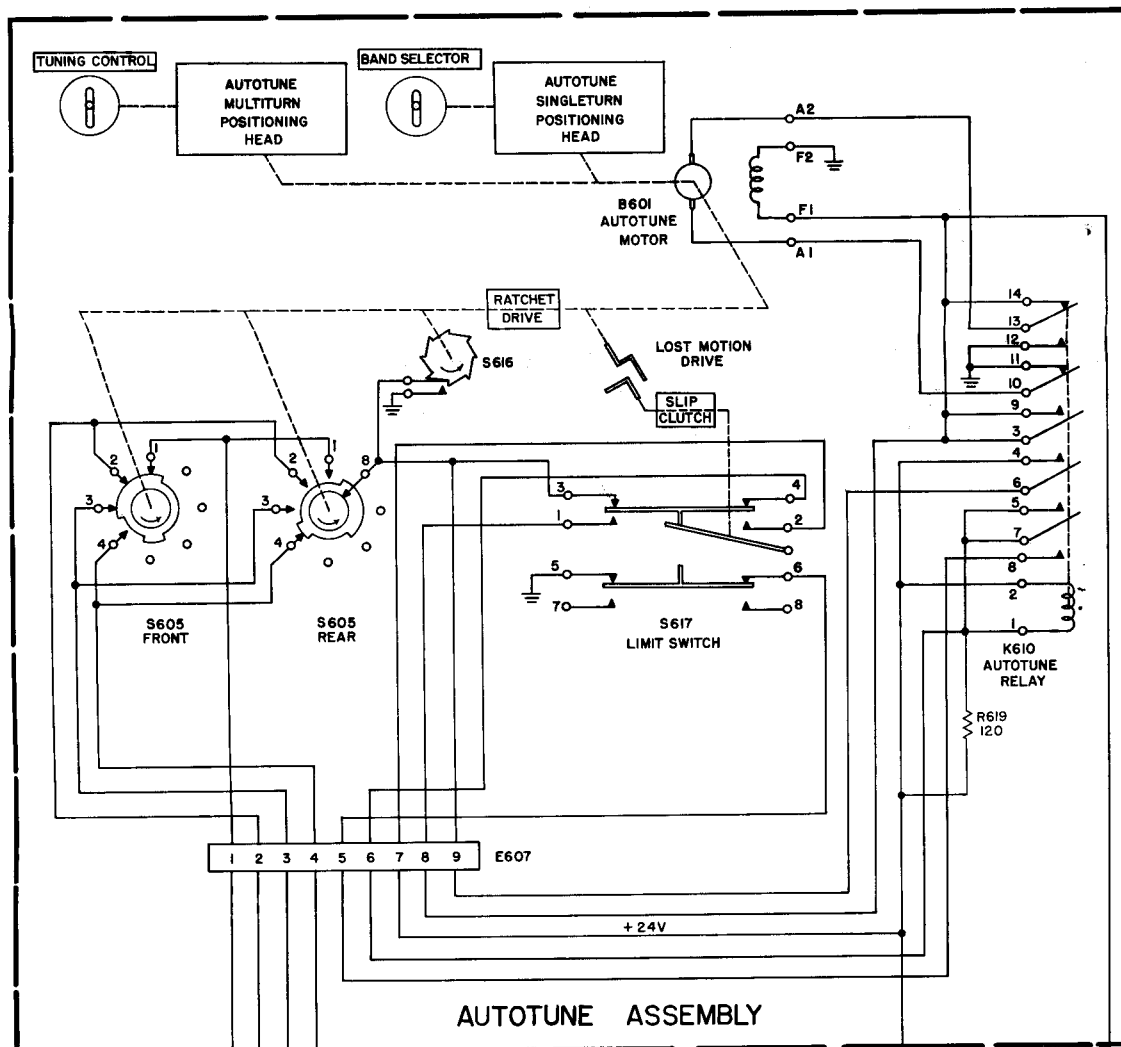


TO P402 AND P403
ON MODULATOR

J619

A B

MAIN FRAME

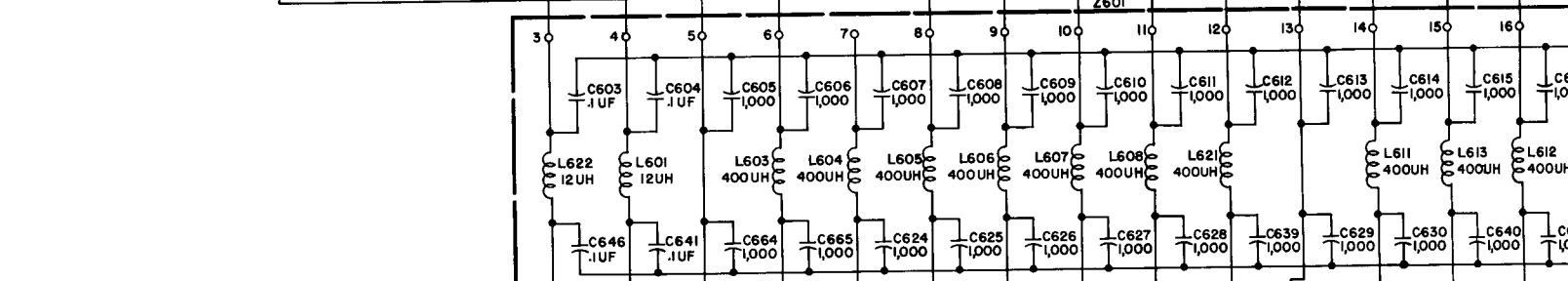
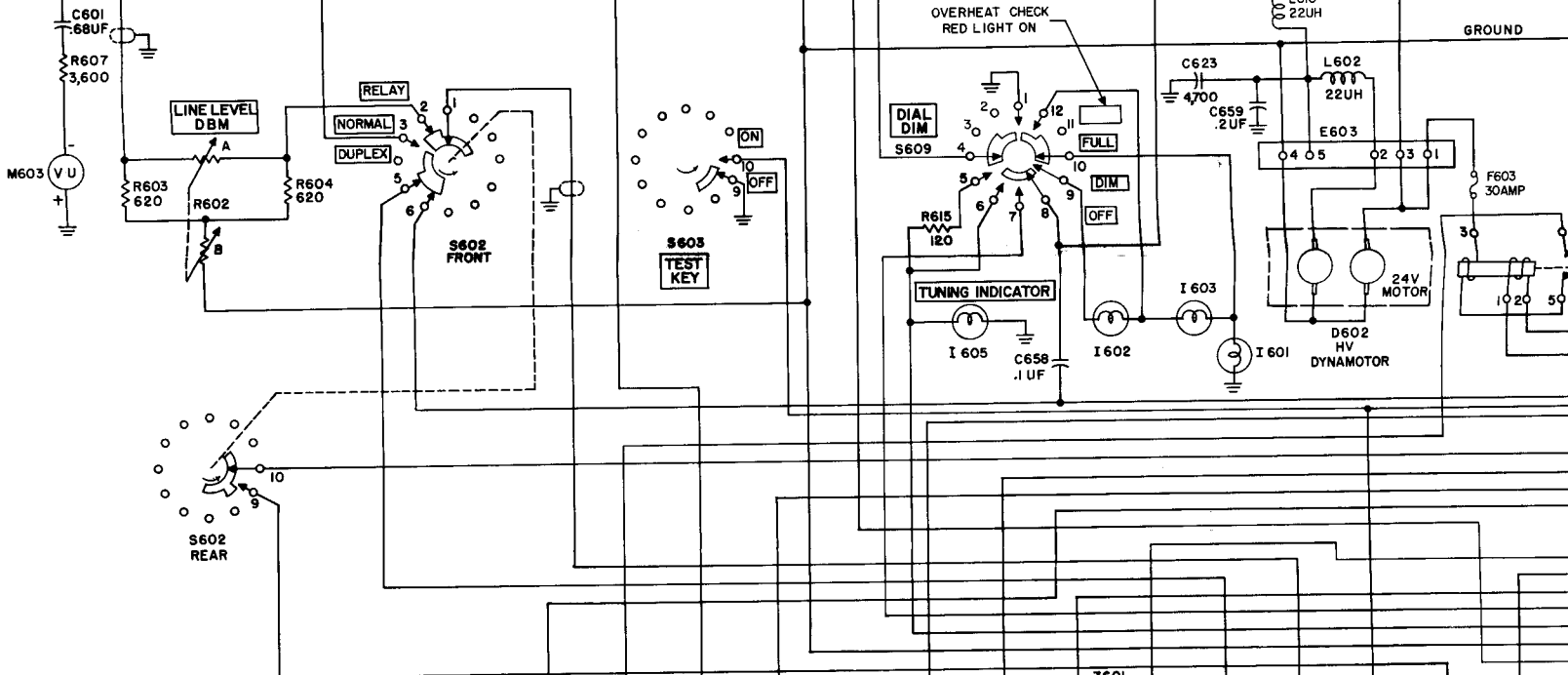
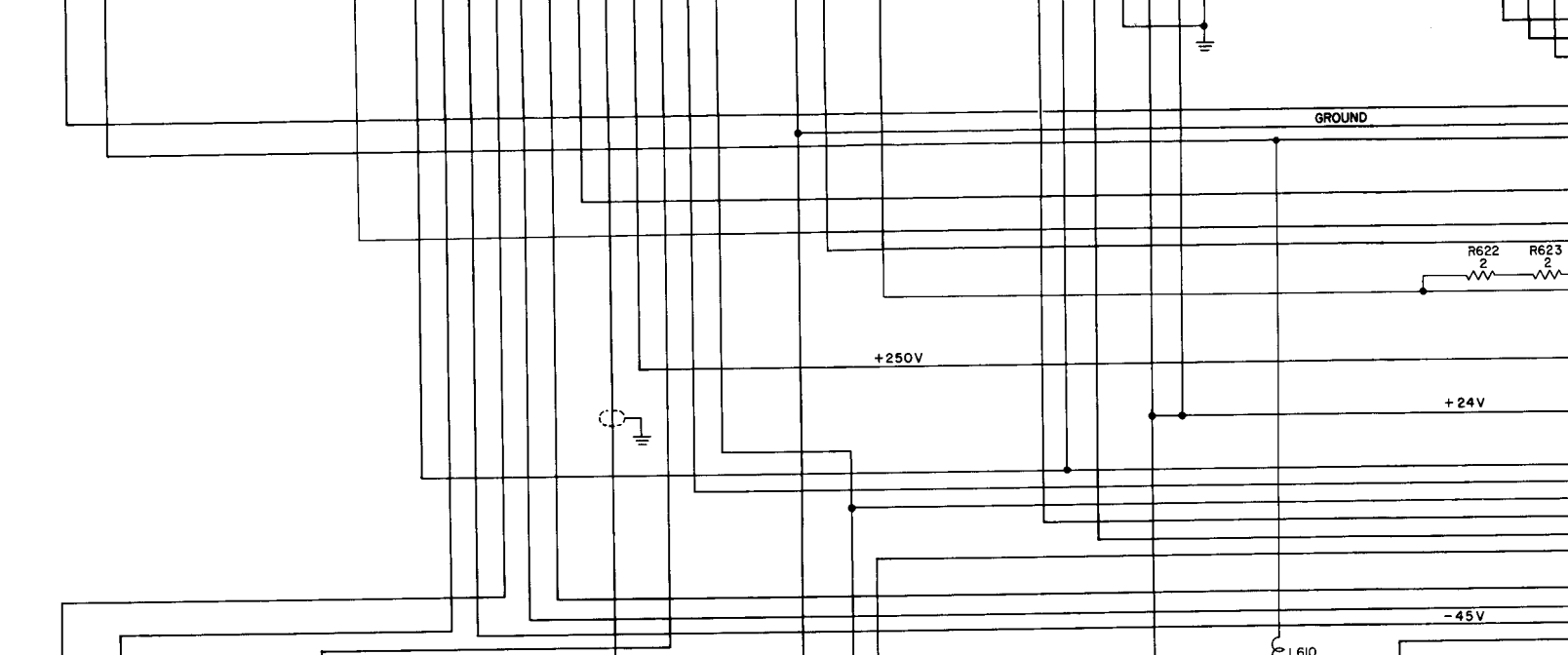


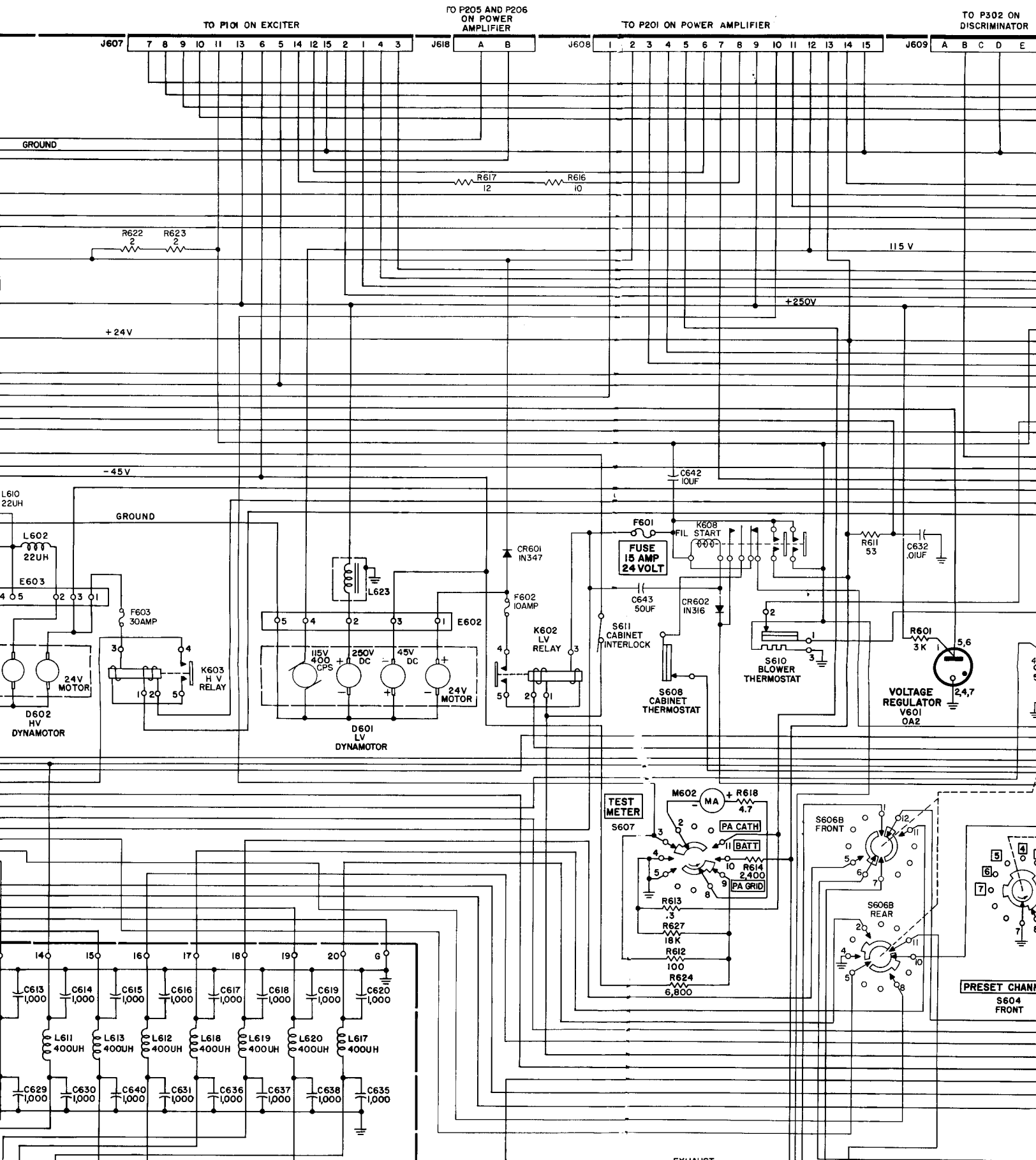
TO P402 AND P403
ON MODULATOR

TO P401 ON MODULATOR

TO P802 ON MASTER OSCILLATOR

619 A B J606 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 J617 A B C D E F H J607 7 8 9



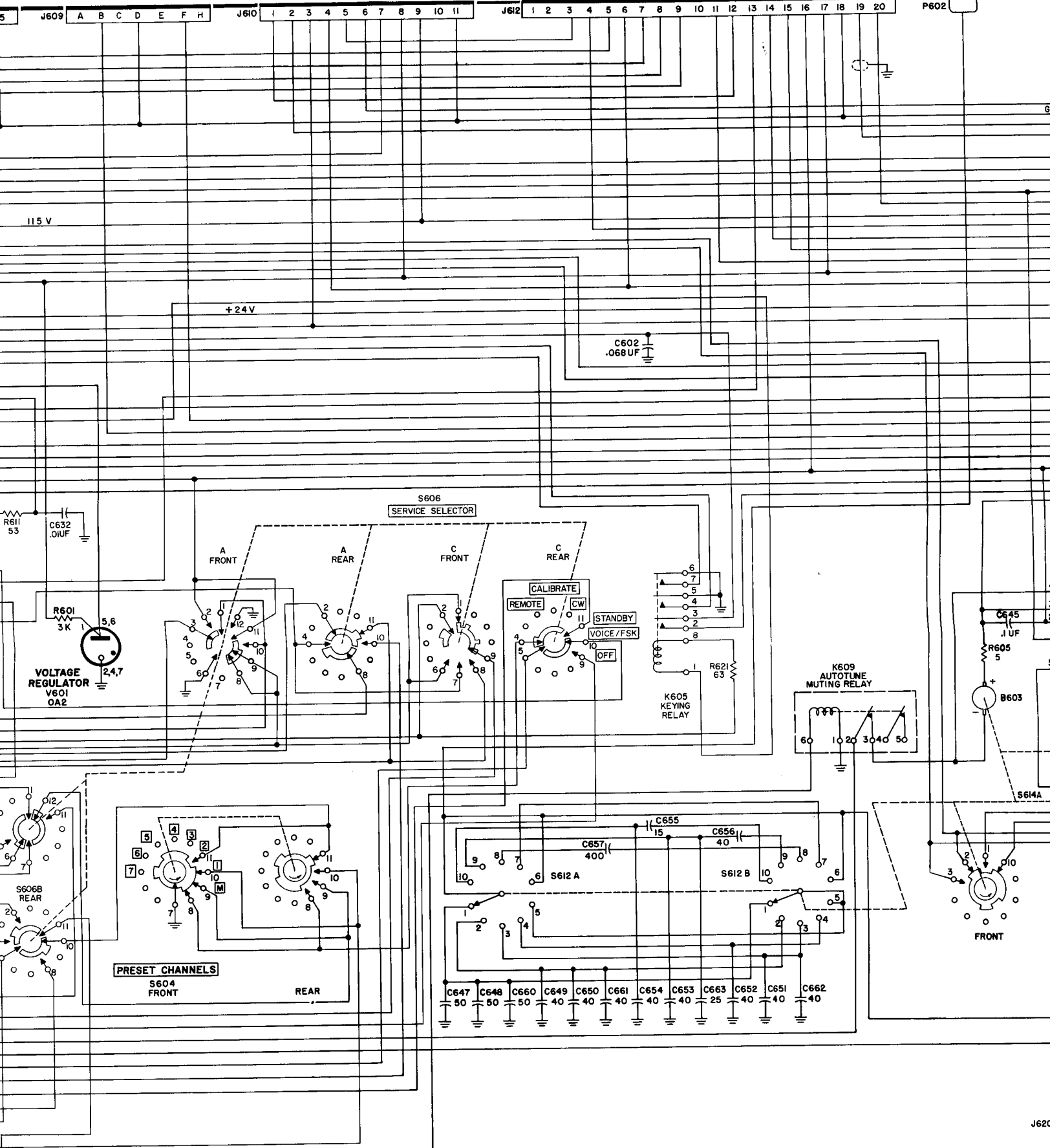


TO P302 ON
DISCRIMINATOR

TO P1001 ON ANTENNA TUNING CAPACITOR

TO P1001 ON VARIABLE INDUCTOR

TO J1102 ON
VARIABLE
INDUCTOR



115 V

+24V

C602
.068UF

S606
SERVICE SELECTOR

A
FRONT

A
REAR

C
FRONT

C
REAR

VOLTAGE
REGULATOR
V601
0A2

CALIBRATE
REMOTE
CW
STANDBY
VOICE/FSK
OFF

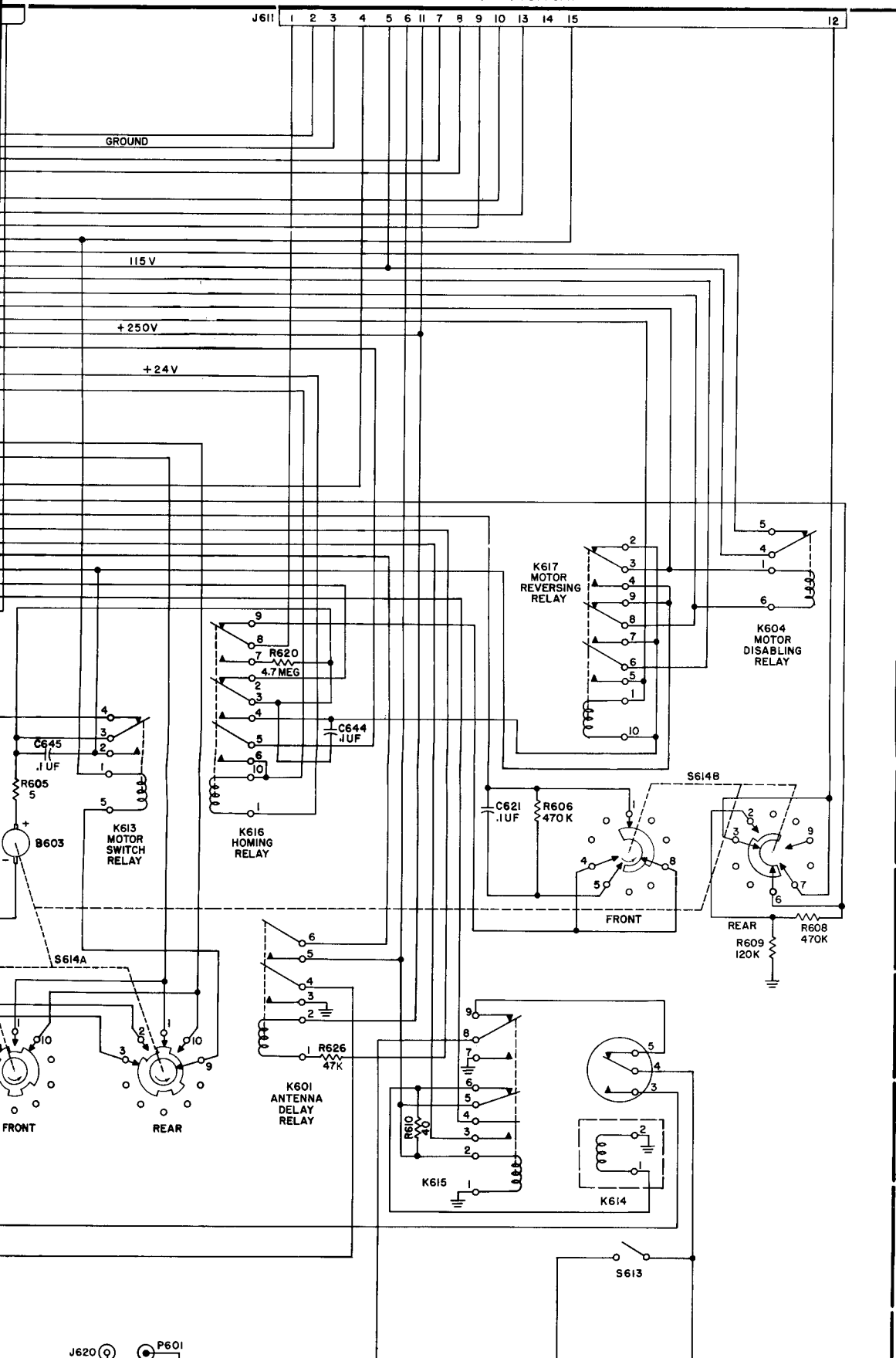
K605
KEYING
RELAY

K609
AUTOTUNE
MUTING RELAY

B603

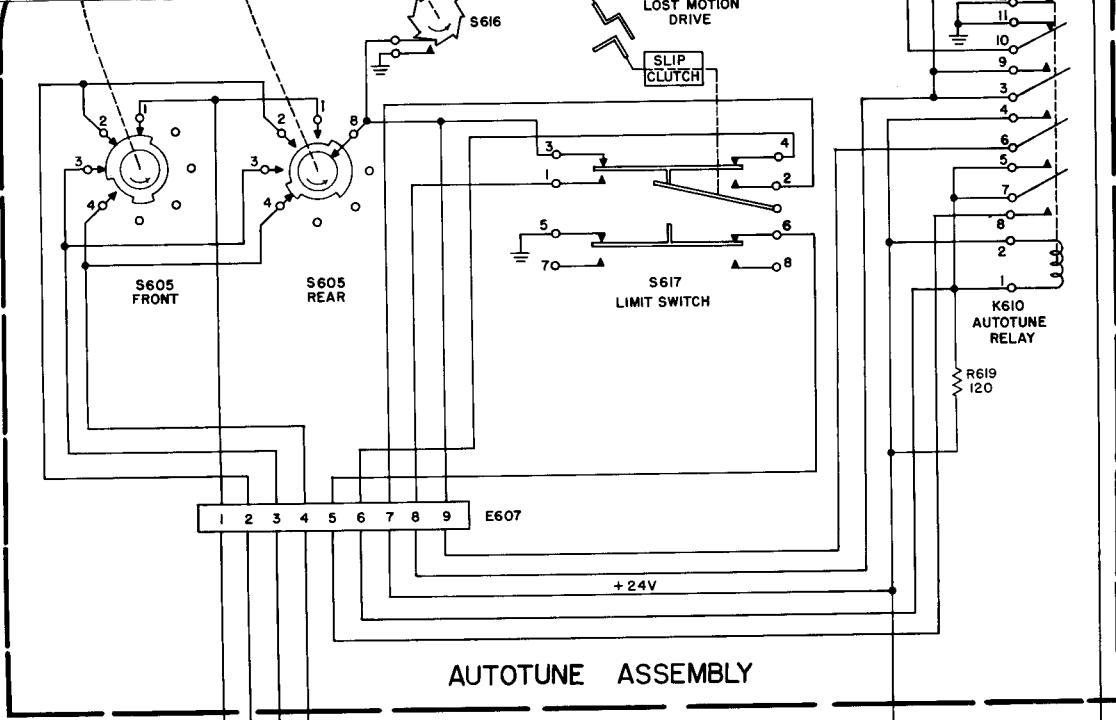
PRESET CHANNELS
S604
FRONT
REAR

C647 50 C648 50 C660 50 C649 40 C650 40 C661 40 C654 40 C653 40 C663 25 C652 40 C651 40 C662 40



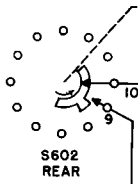
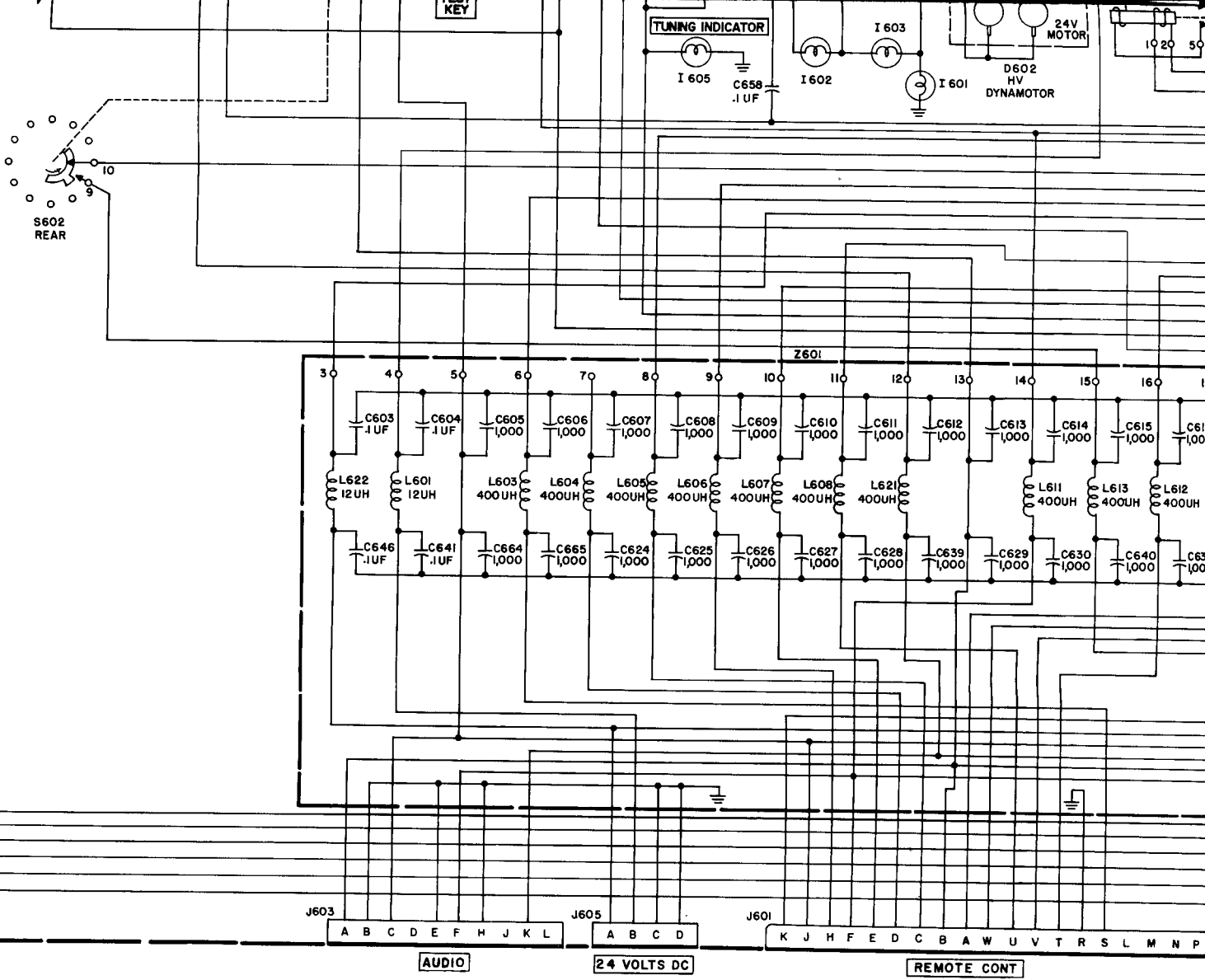
NOTES:

1. UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS,
CAPACITORS ARE IN UUF.
2. ALL SWITCHES ARE VIEWED FROM
THE REAR OF THE EQUIPMENT.
3. SWITCHES ARE SHOWN IN THEIR FULL
COUNTERCLOCKWISE POSITIONS, OR
POSITIONED FOR THE 1.5 TO 1.7 MC
RANGE.
4. RELAYS ARE SHOWN IN THEIR NORMAL
POSITIONS WITH POWER REMOVED.



AUTOTUNE ASSEMBLY

+24V



TUNING INDICATOR

I 605
C658 .1UF

I 603

I 602

I 601

24V MOTOR

D602 HV DYNAMOTOR

Z601

3 4 5 6 7 8 9 10 11 12 13 14 15 16

J603

A B C D E F H J K L

AUDIO

J605

A B C D

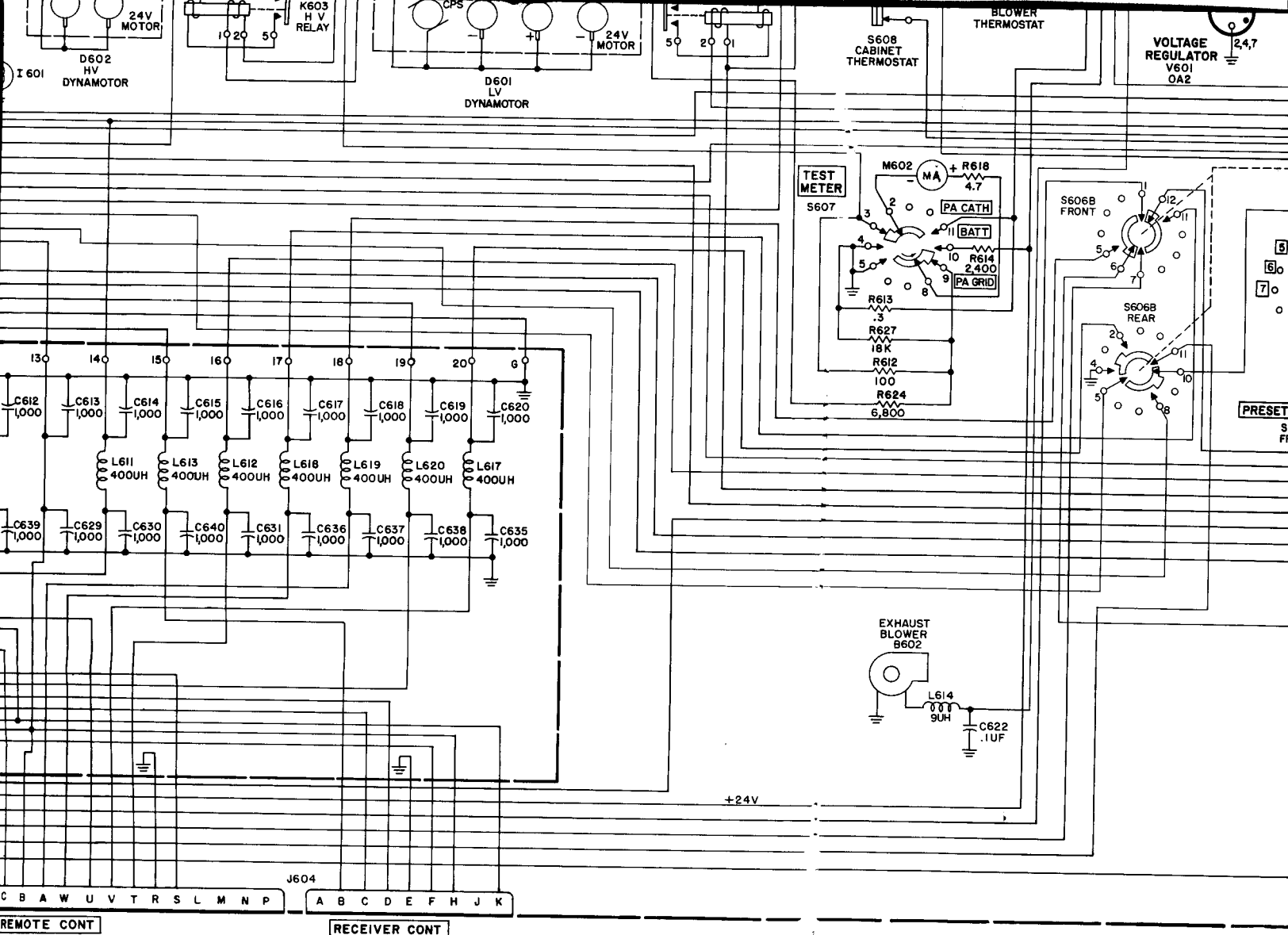
24 VOLTS DC

J601

K J H F E D C B A W U V T R S L M N P

REMOTE CONT

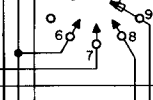
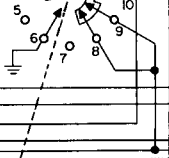
24V



J604

| | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---------------|---|---|---|---|---|---|---|---|---|
| C | B | A | W | U | V | T | R | S | L | M | N | P | A | B | C | D | E | F | H | J | K |
| REMOTE CONT | | | | | | | | | | | | RECEIVER CONT | | | | | | | | | |

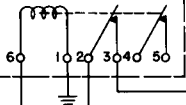
VOLTAGE
REGULATOR
V601
0A2



K605
KEYING
RELAY

R621
63

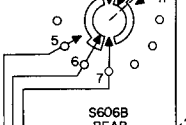
K609
AUTOTUNE
MUTING RELAY



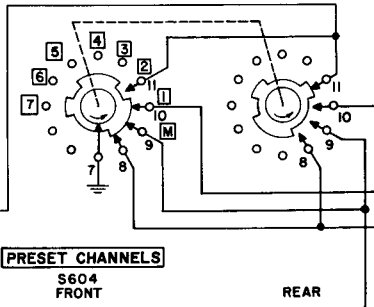
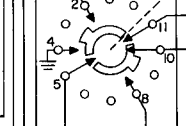
R605
5

96

S606B
FRONT



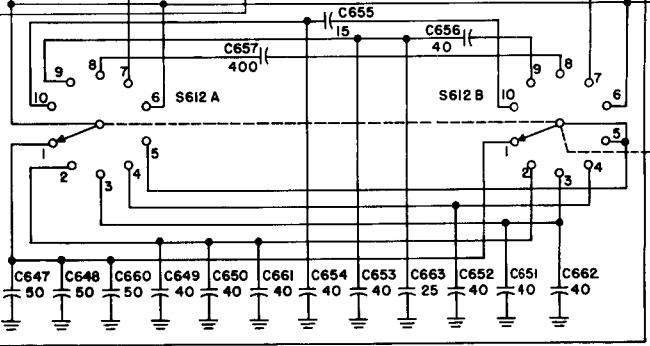
S606B
REAR



PRESET CHANNELS

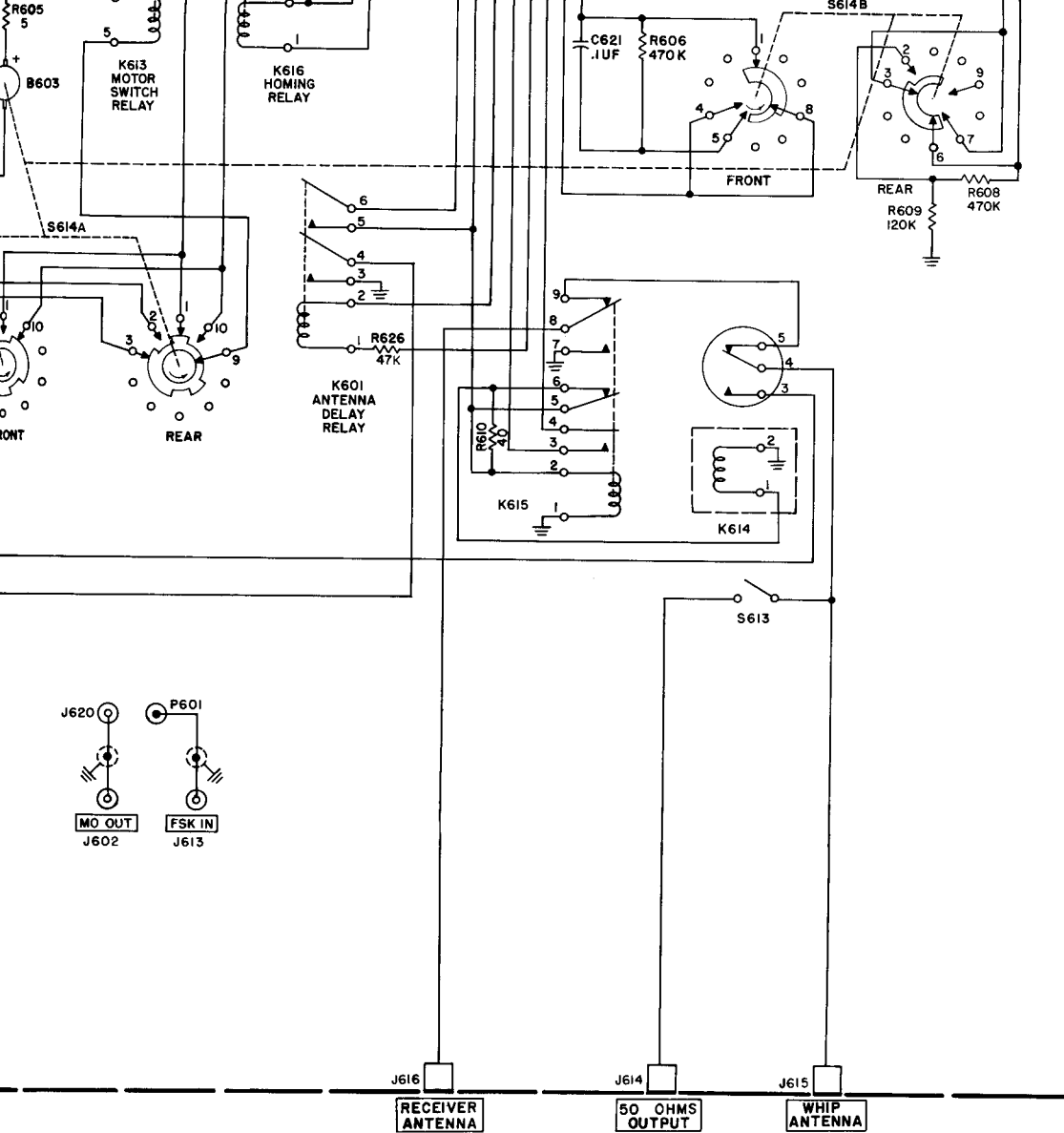
S604
FRONT

REAR



C647 50
C648 50
C660 50
C649 40
C650 40
C661 40
C654 40
C653 40
C663 25
C652 40
C651 40
C662 40

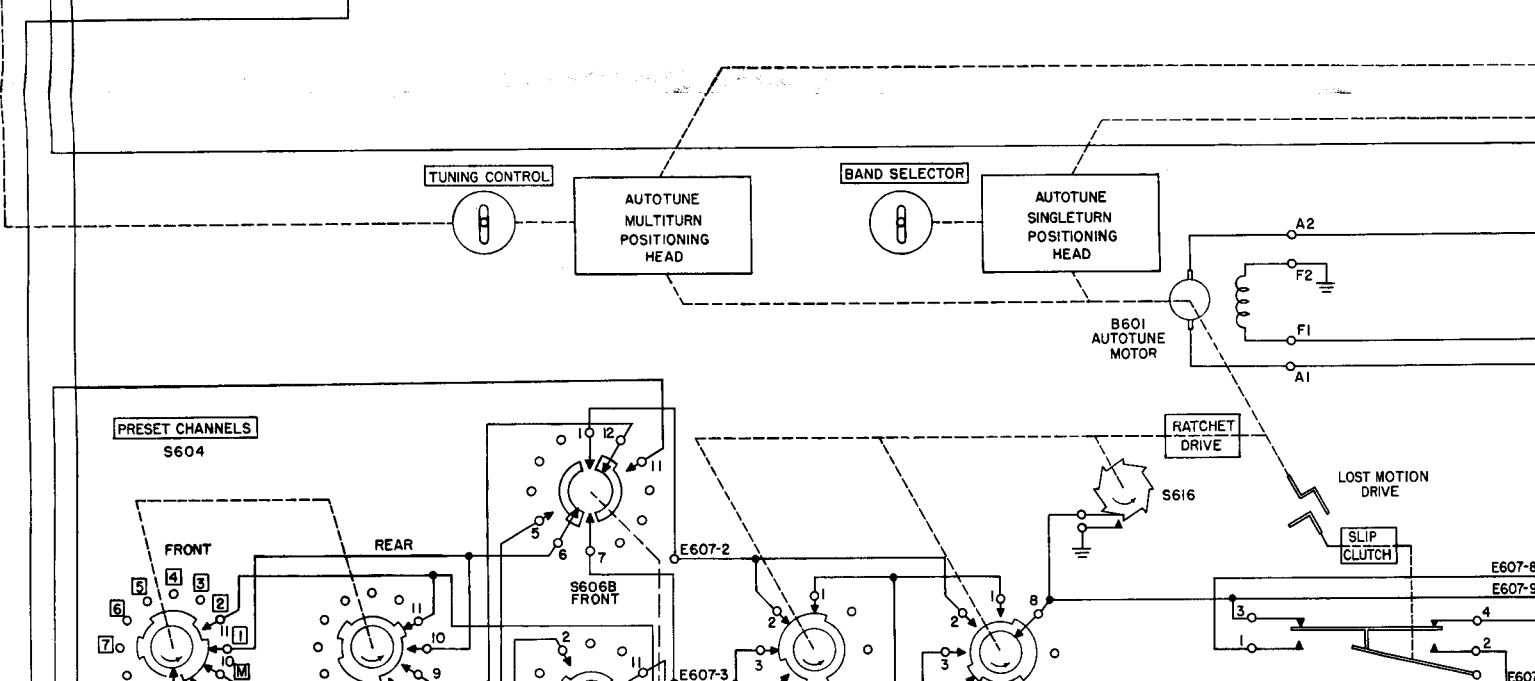
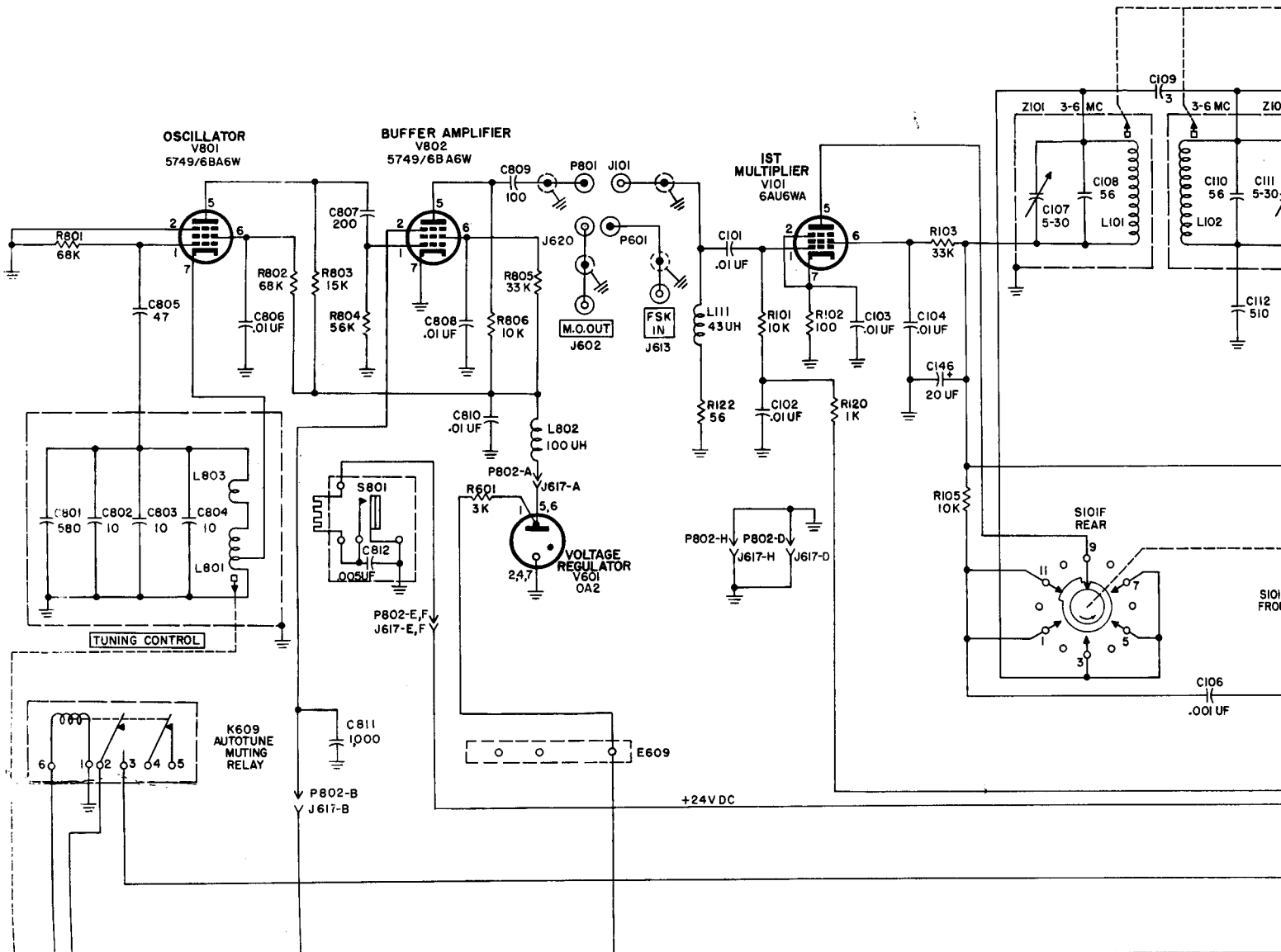
FRONT

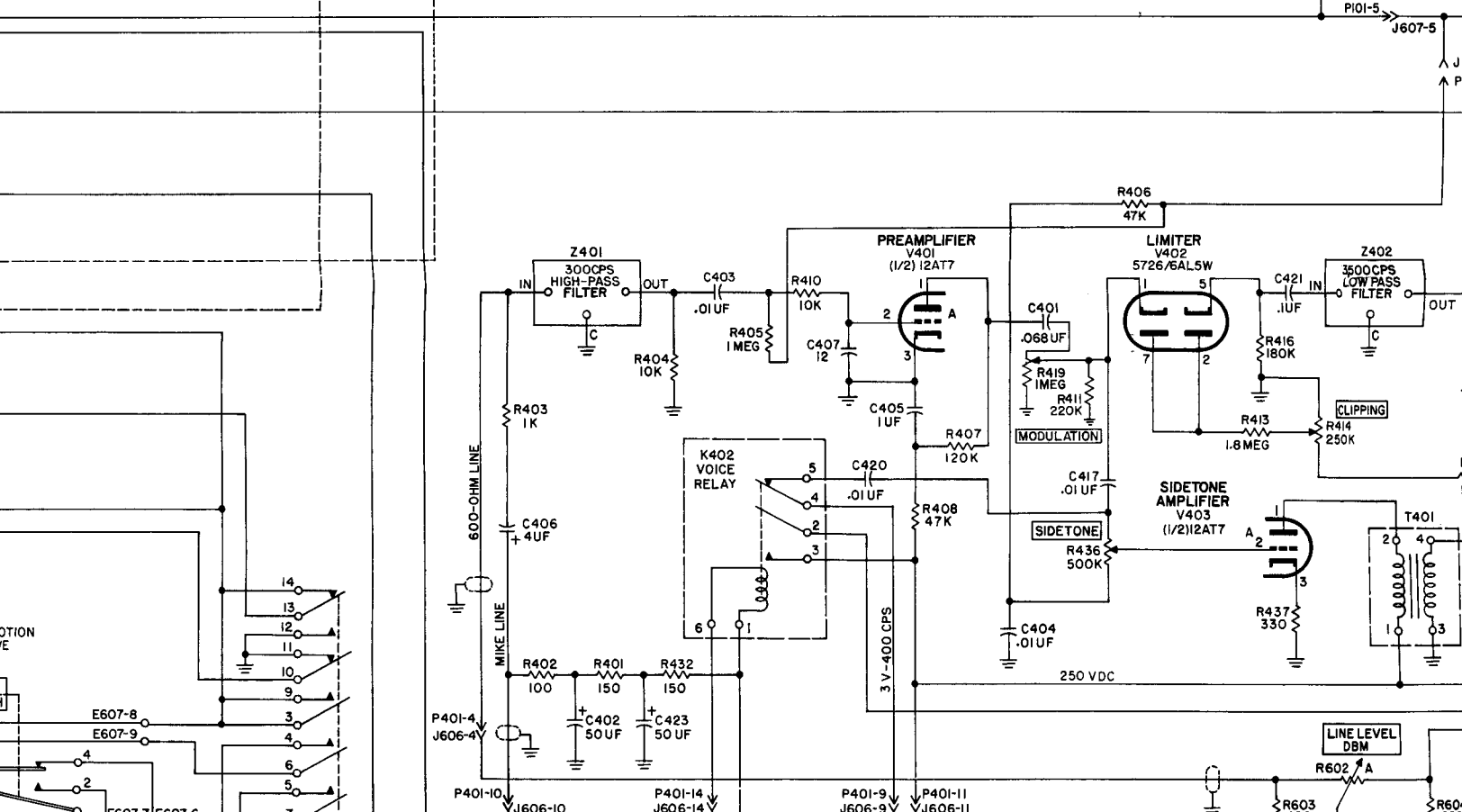
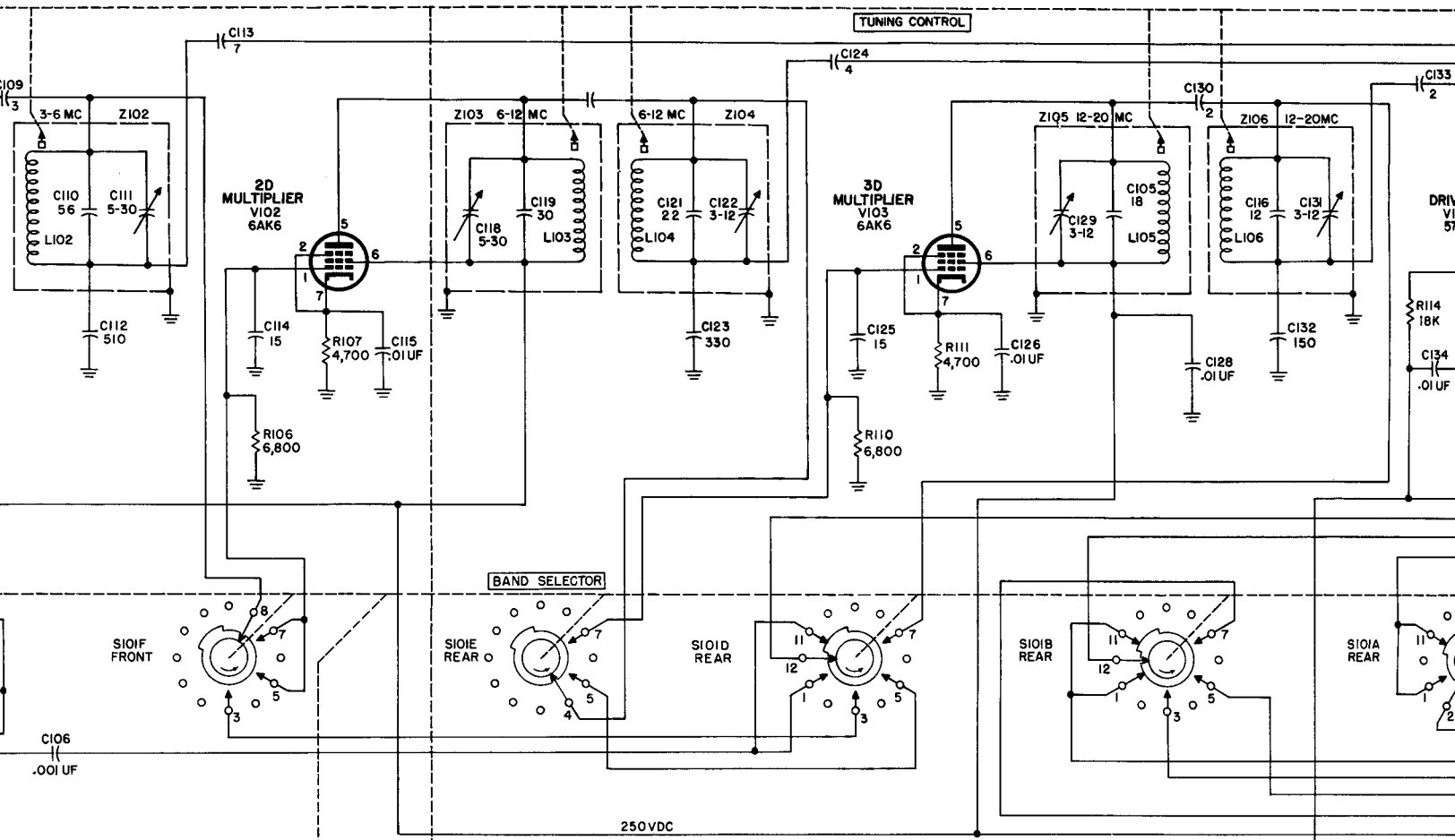


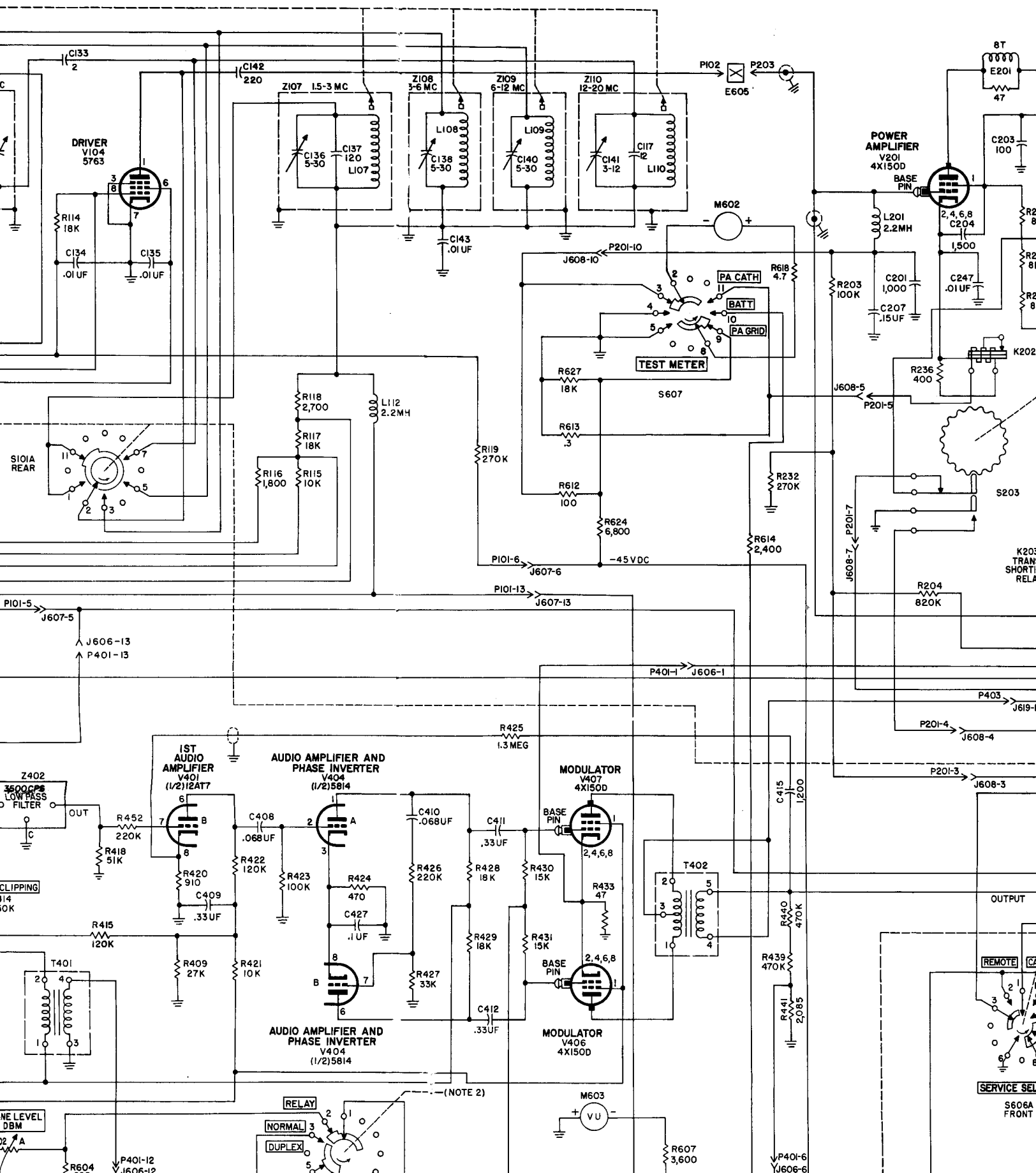
1. UNLESS OTHERWISE SHOWN, RESISTORS ARE IN OHMS, CAPACITORS ARE IN UUF.
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3. SWITCHES ARE SHOWN IN THEIR FULL COUNTERCLOCKWISE POSITIONS, OR POSITIONED FOR THE 1.5 TO 1.7 MC RANGE.
4. RELAYS ARE SHOWN IN THEIR NORMAL POSITIONS WITH POWER REMOVED.

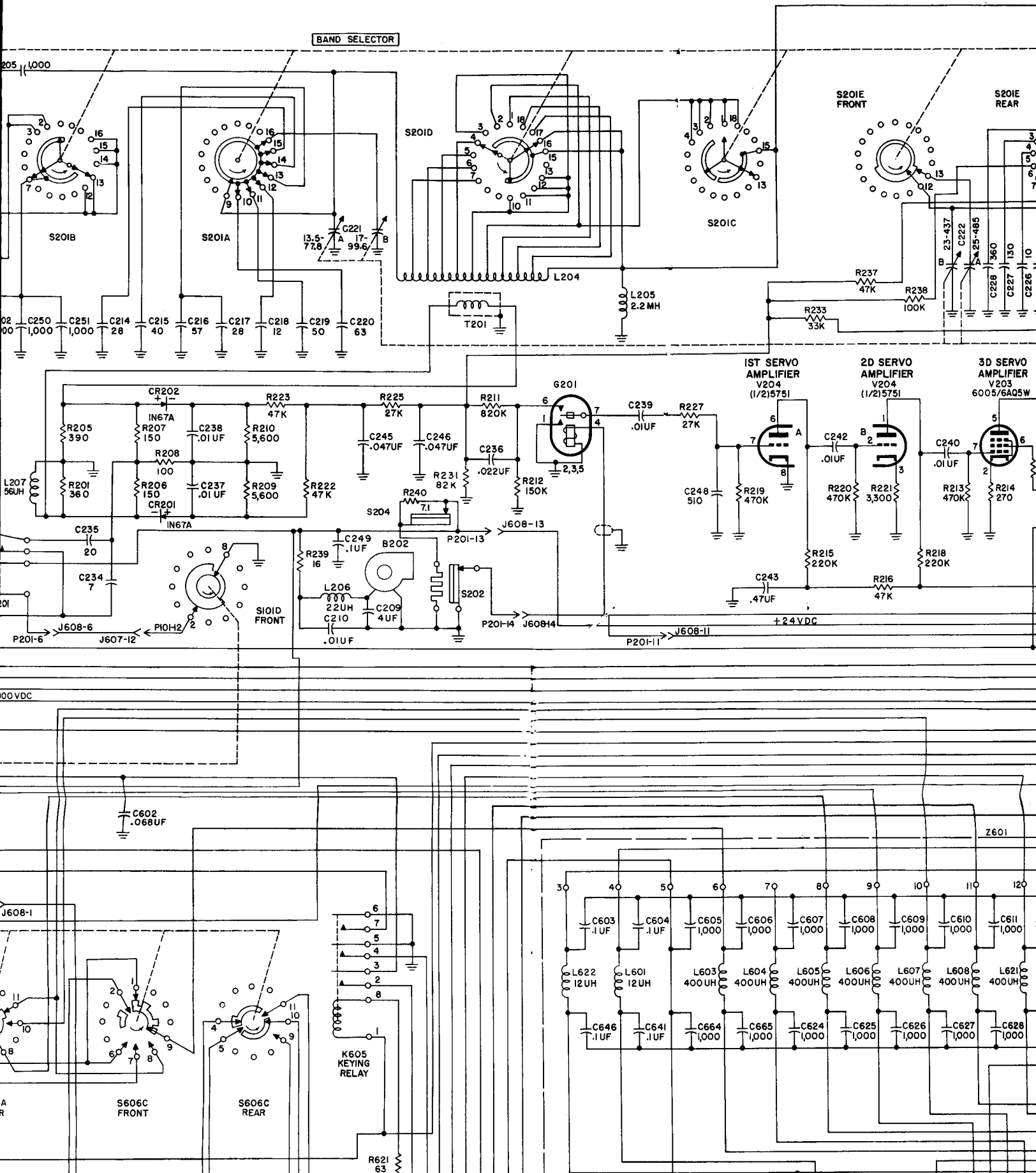
TM806-131

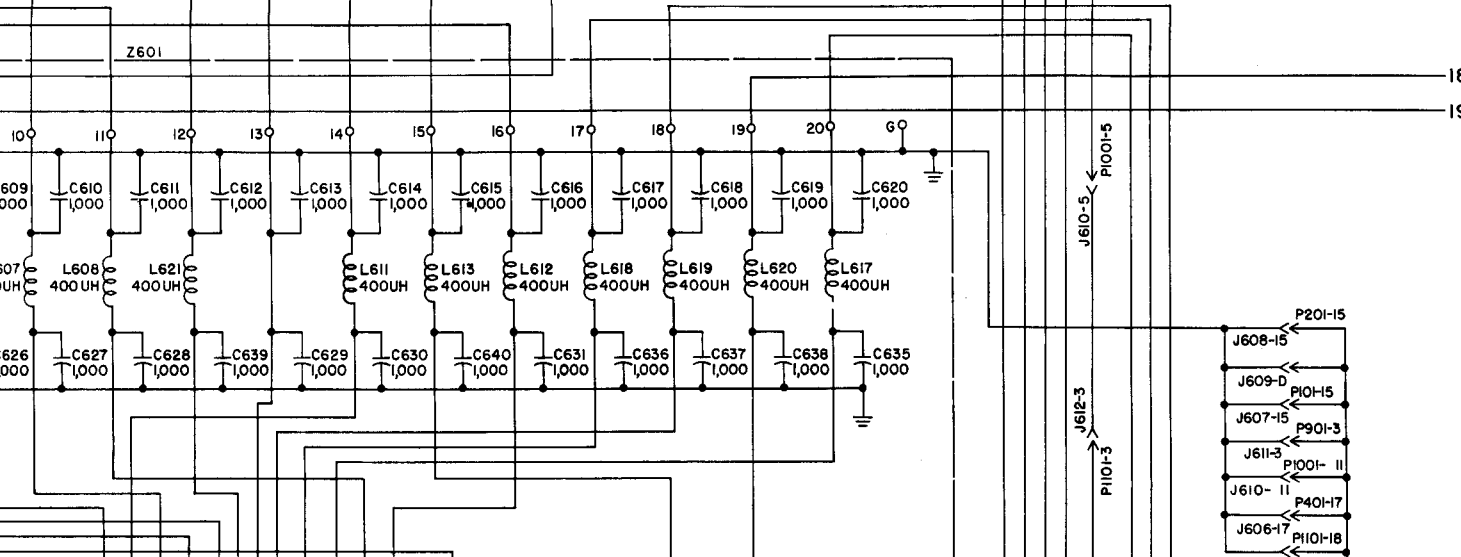
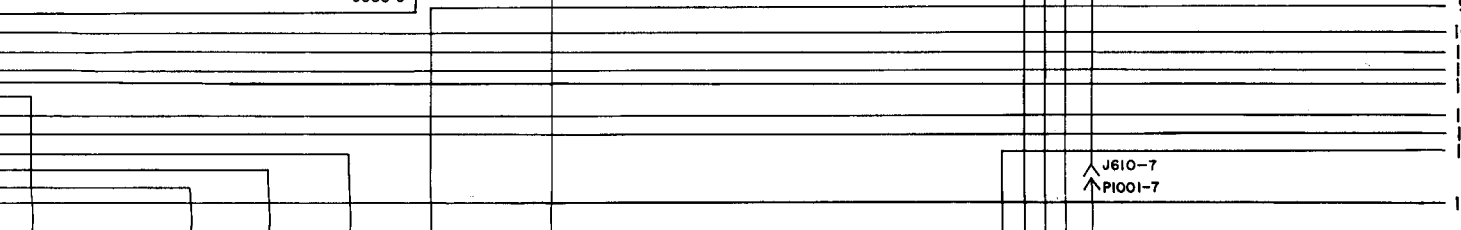
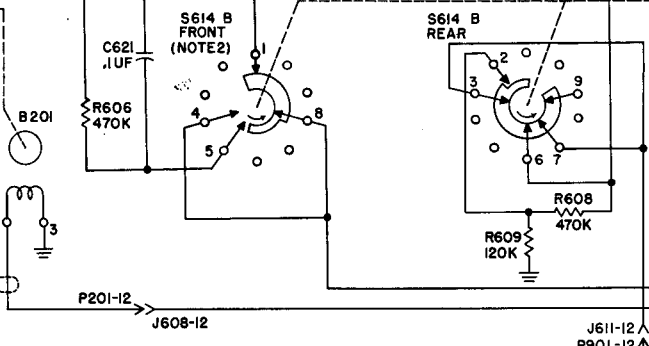
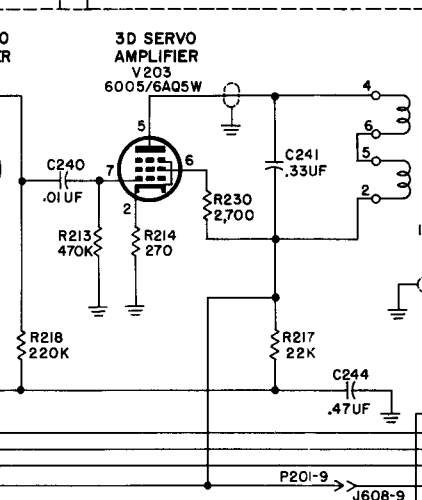
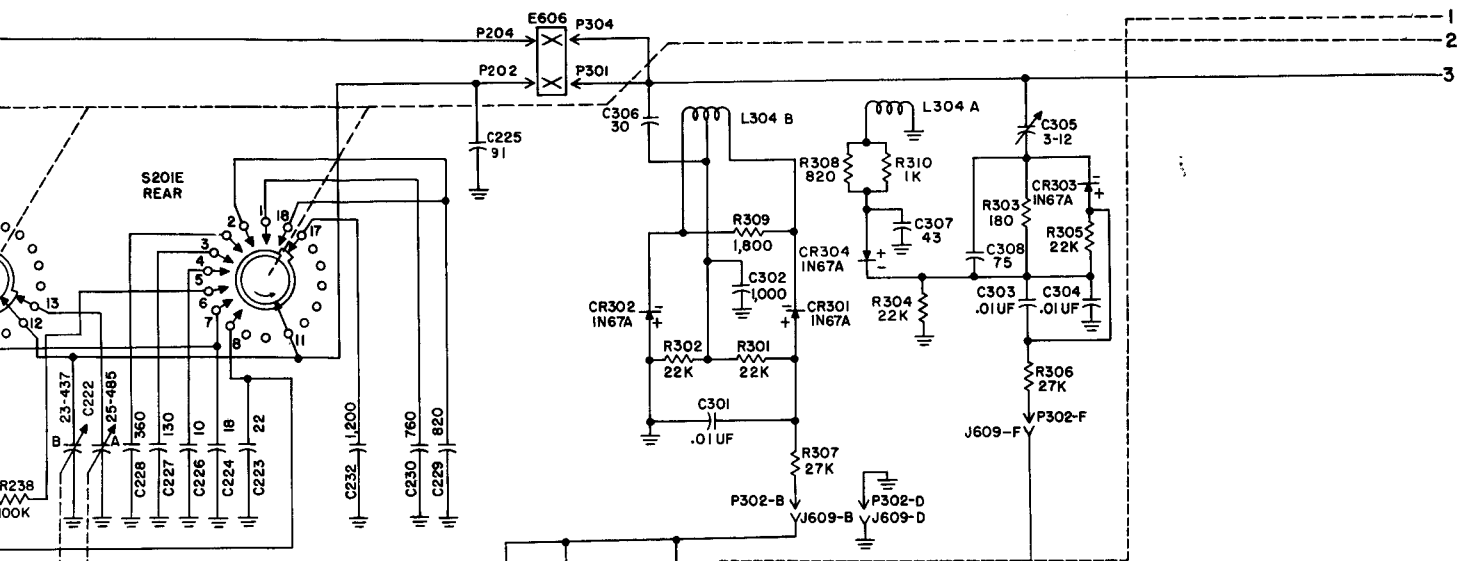
390412 O - 56 (In pocket) No. 21

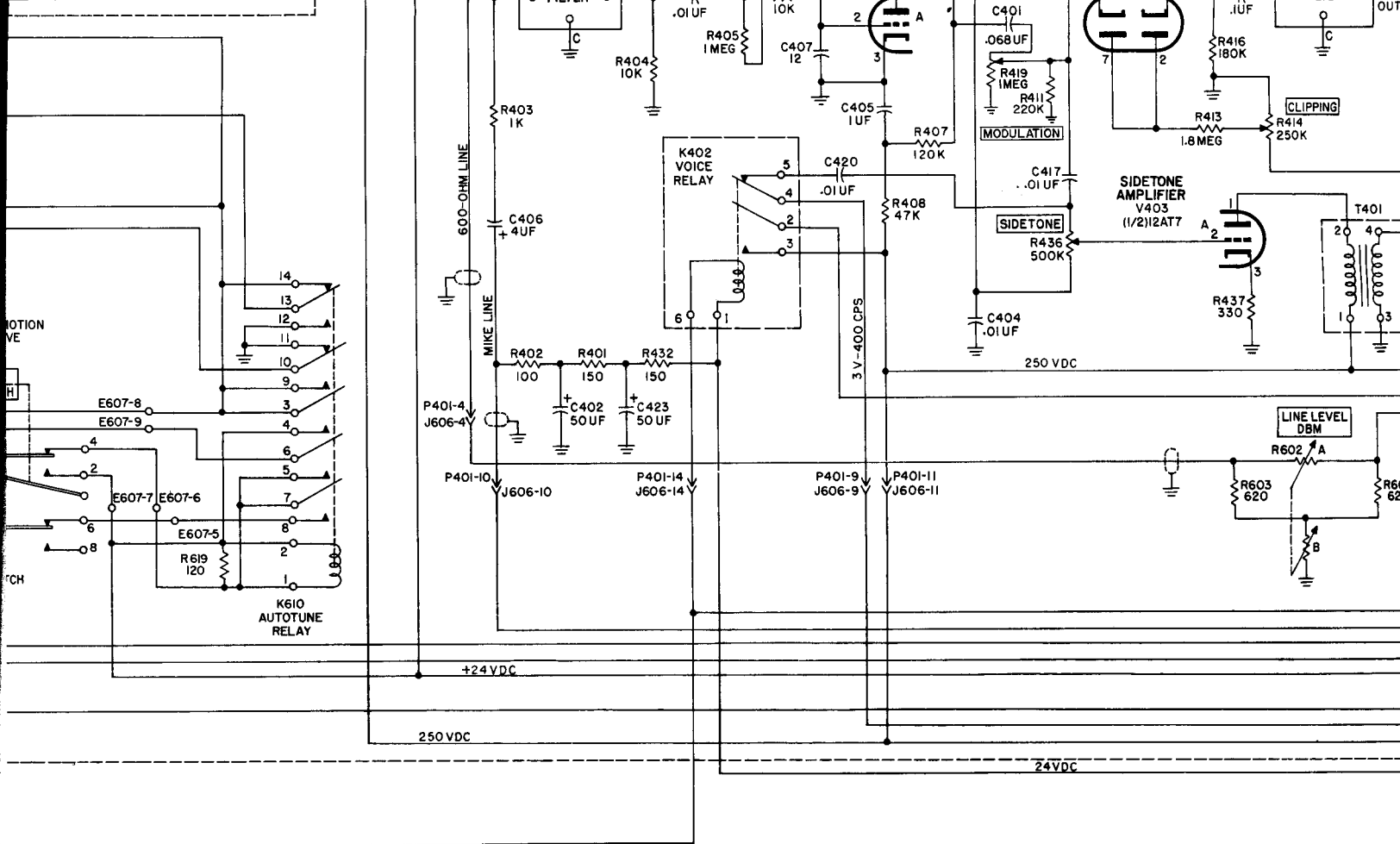




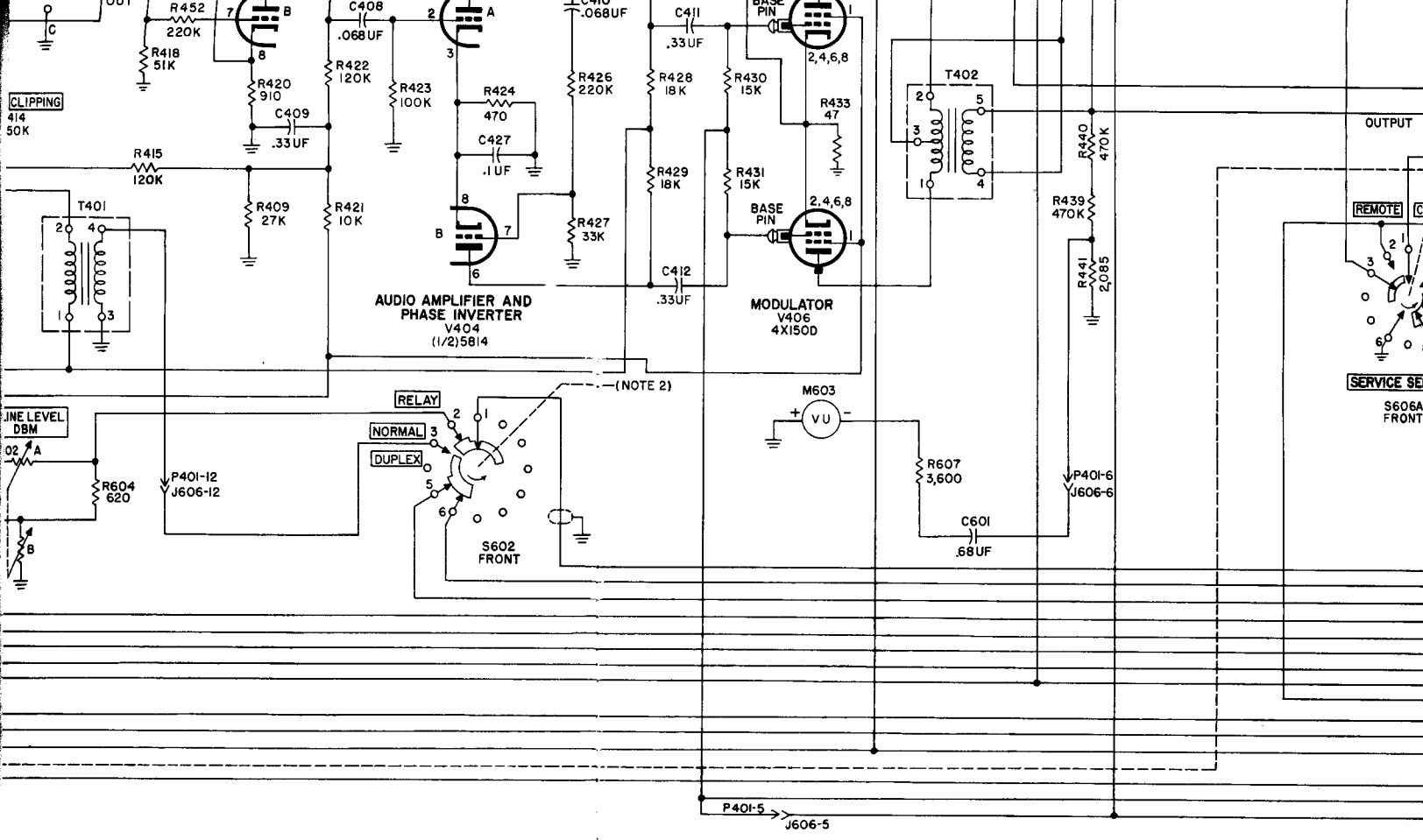






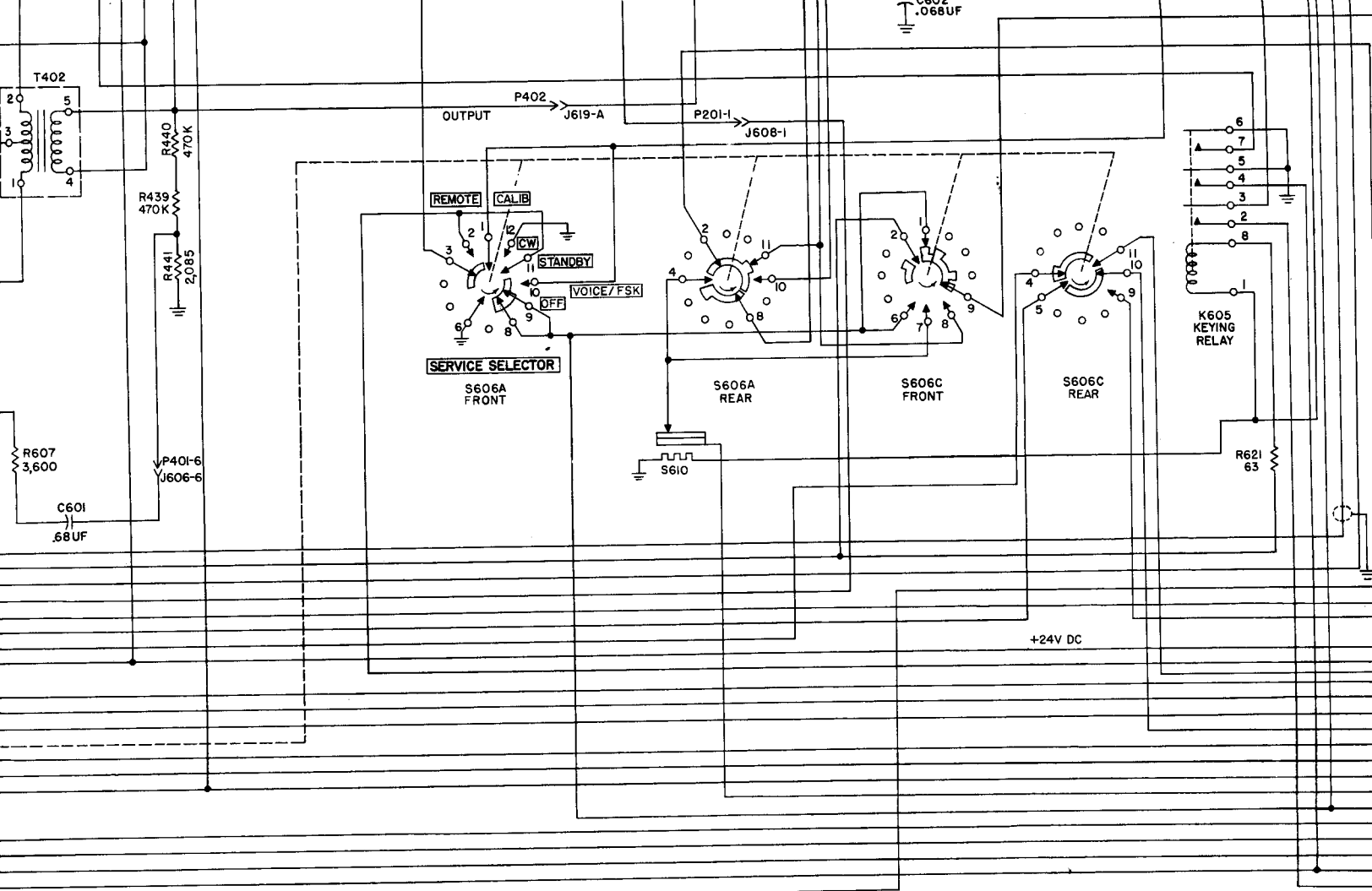


24VDC



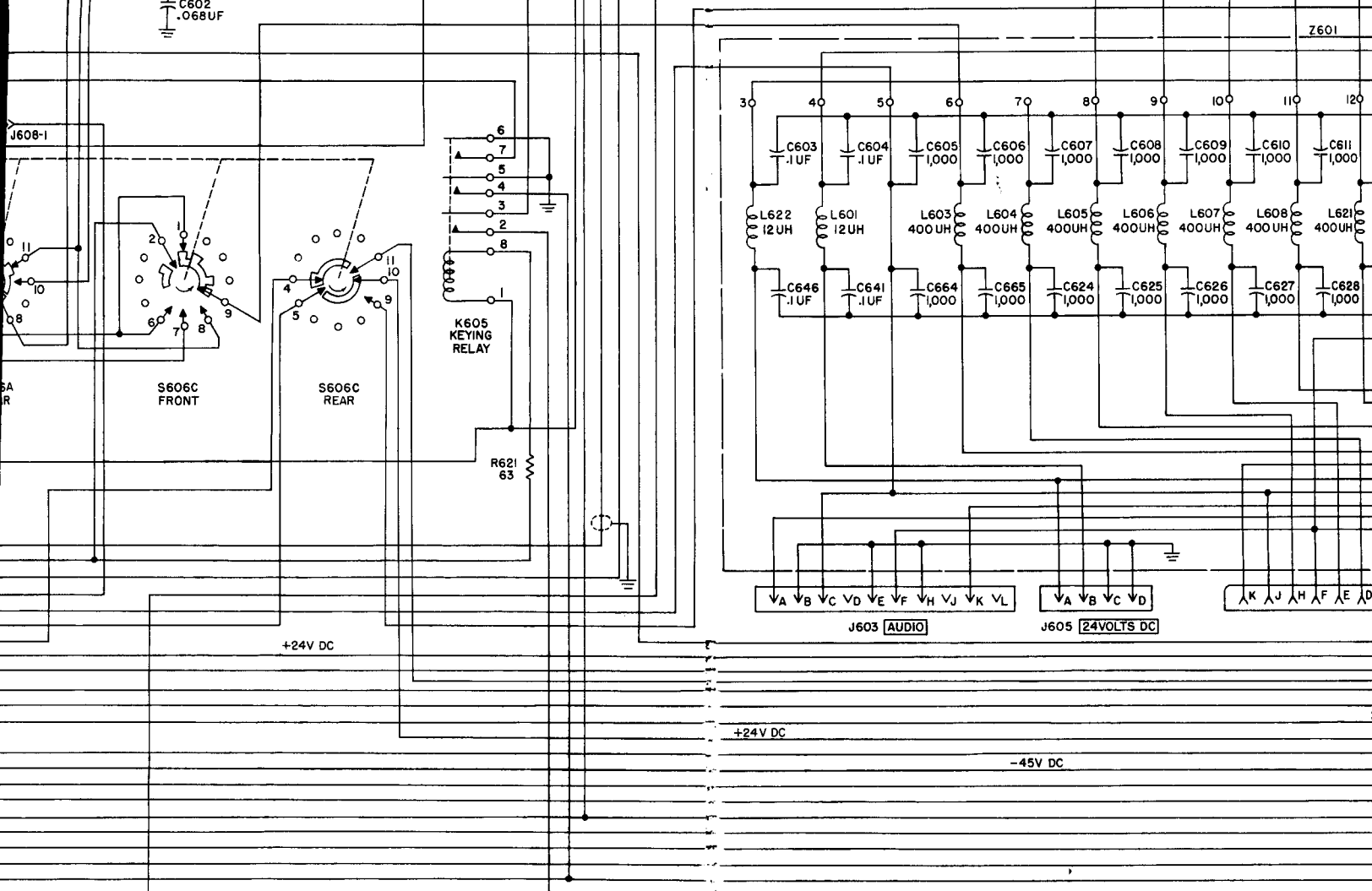
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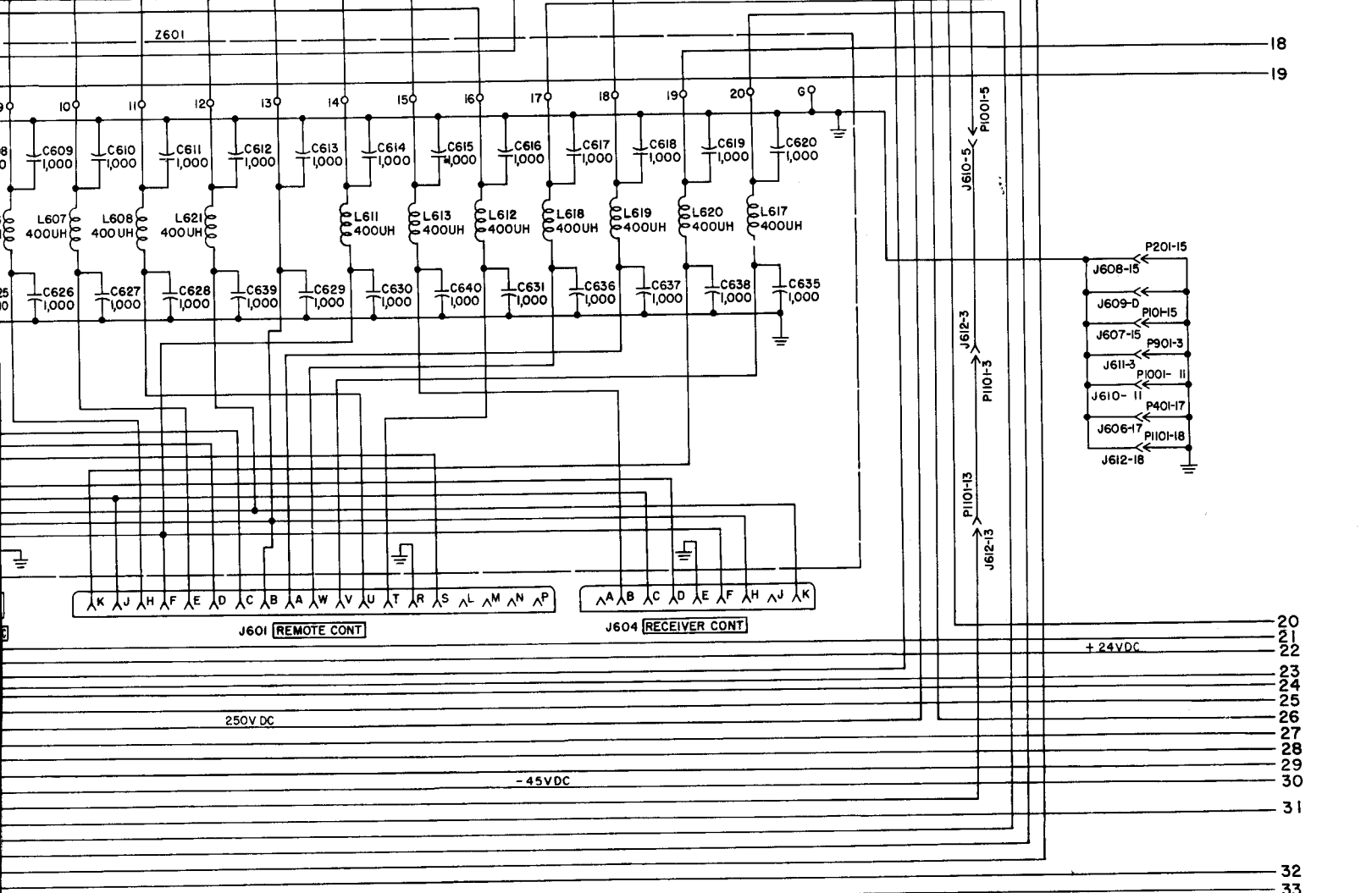
Figure 139. Radio Transmitter T-195/GRC-19, schematic



①

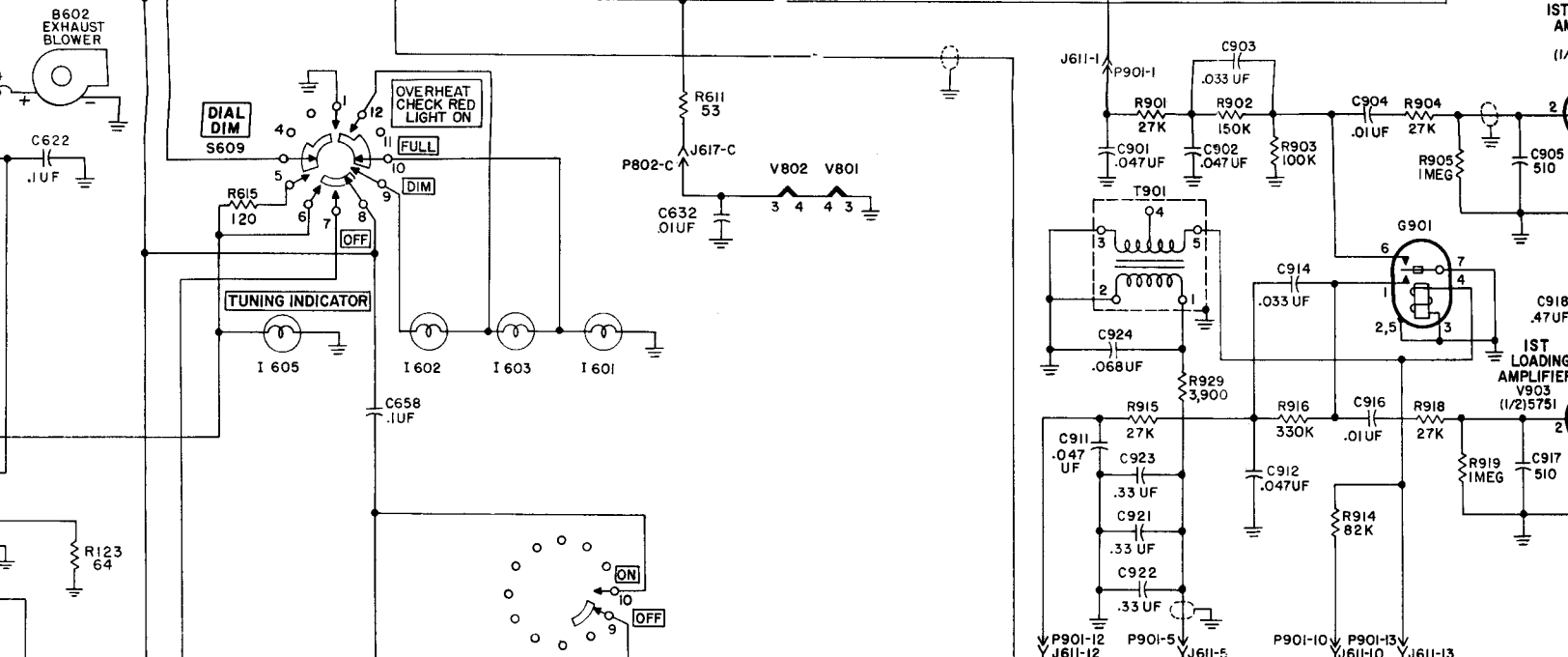
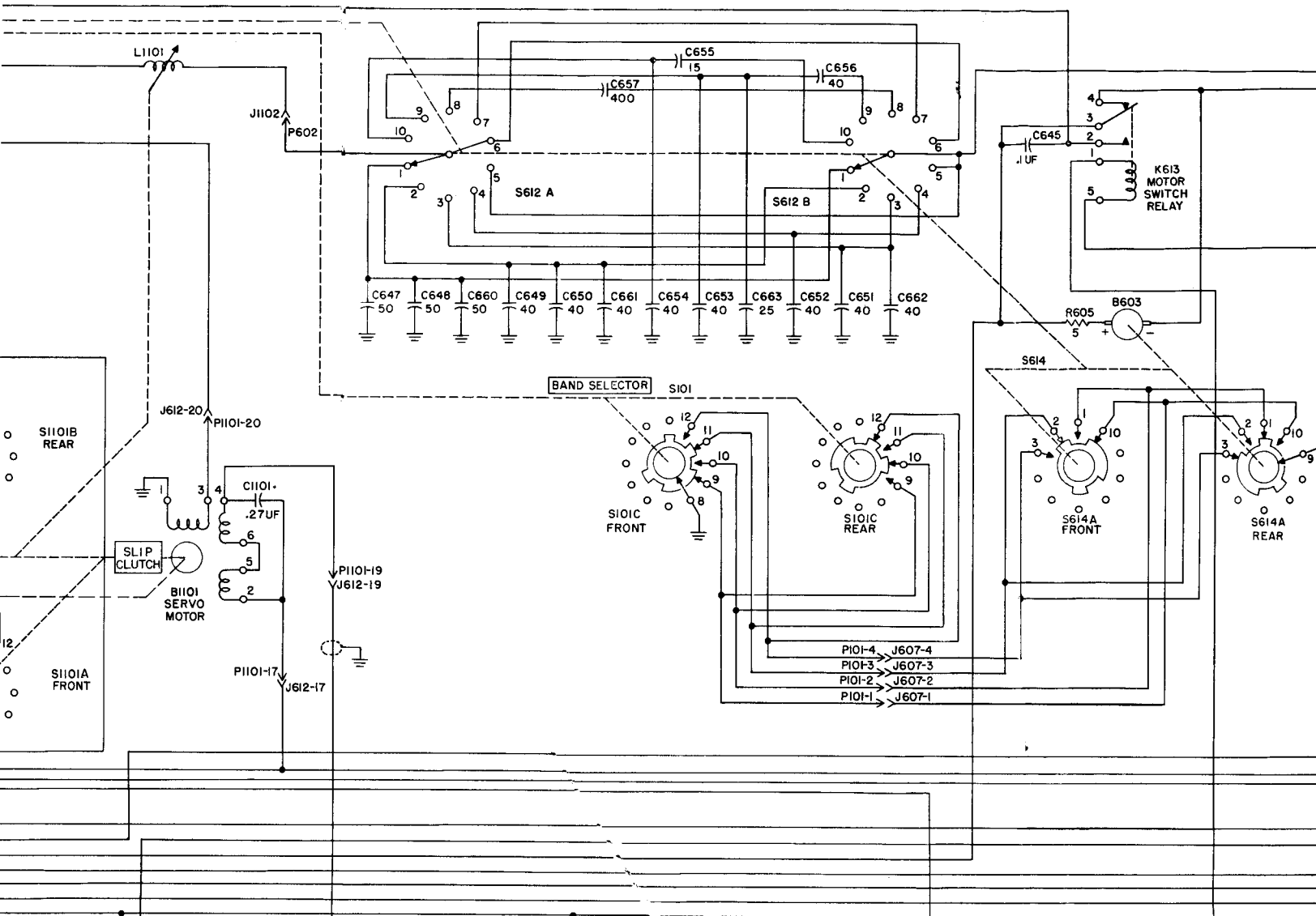
Figure 139. Radio Transmitter T-195/GRC-19, schematic diagram.

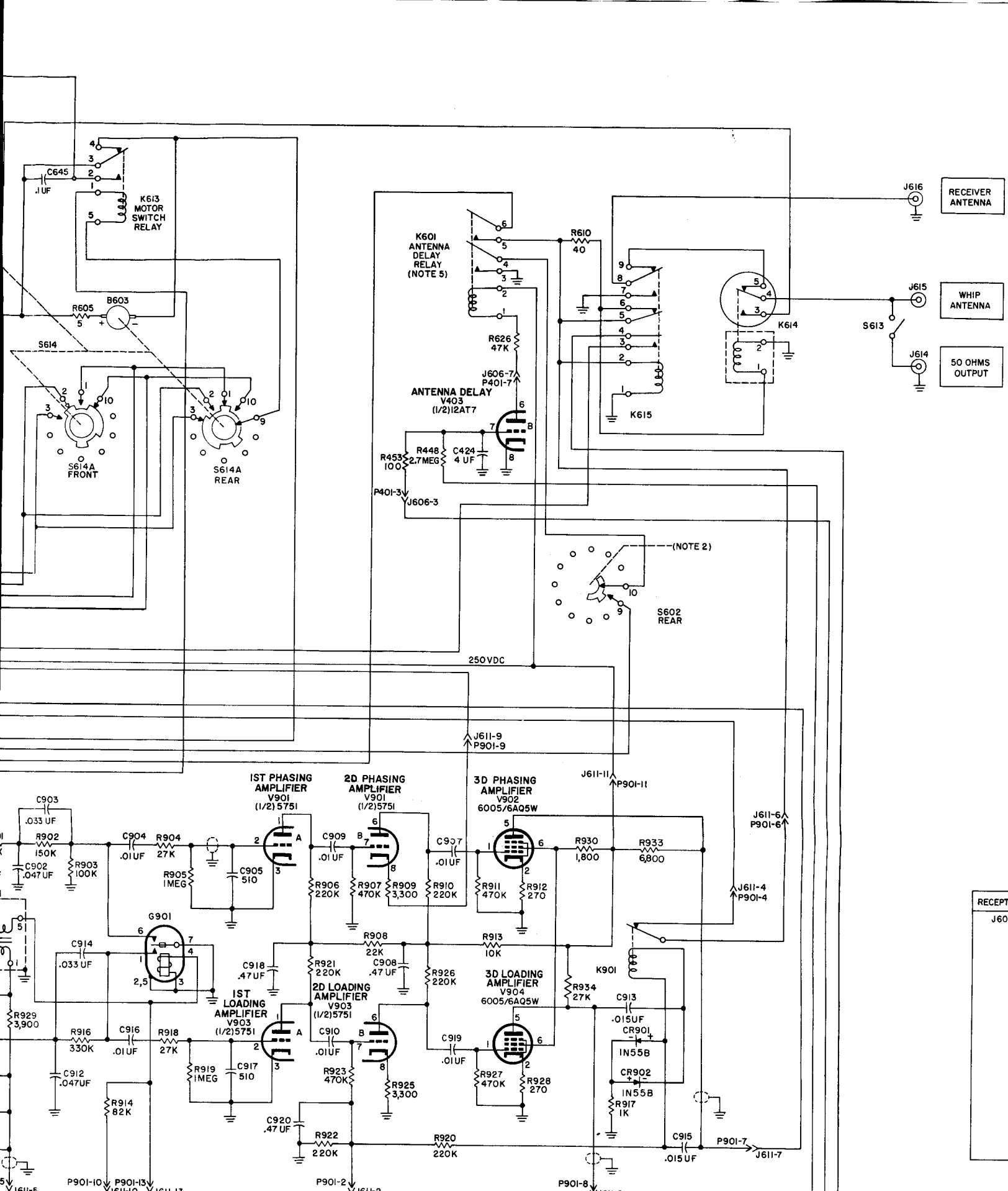




TM 806-108(1)

EMATIC DIAGRAM (SHEET 1 OF 2).





RECEIVER ANTENNA

WHIP ANTENNA

50 OHMS OUTPUT

RECEPT
J60

K601 ANTENNA DELAY RELAY (NOTE 5)

ANTEENNA DELAY V403 (1/2)2AT7

1ST PHASING AMPLIFIER V901 (1/2)5751

2D PHASING AMPLIFIER V901 (1/2)5751

3D PHASING AMPLIFIER V902 6005/6AQ5W

1ST LOADING AMPLIFIER V903 (1/2)5751

2D LOADING AMPLIFIER V903 (1/2)5751

3D LOADING AMPLIFIER V904 6005/6AQ5W

IN55B
CR902
IN55B
R917 1K

250VDC

(NOTE 2)

S602 REAR

P901-10 P901-13 P901-17

P901-2 J611-2

P901-8

P901-7 J611-7

J611-6 P901-6

J611-4 P901-4

J611-9 P901-9

K613 MOTOR SWITCH RELAY

S614A FRONT

S614A REAR

S613

K614

K615

S602 REAR

R610 40

R626 47K

J606-7A P401-7

R453 100

R448 2.7MEG

C424 4 UF

P401-3V J606-3

C645 .1UF

R605 5

B603

S614

S614A FRONT

S614A REAR

J616

J615

J614

RECEIVER ANTENNA

WHIP ANTENNA

50 OHMS OUTPUT

RECEPT
J60

K601 ANTENNA DELAY RELAY (NOTE 5)

ANTEENNA DELAY V403 (1/2)2AT7

1ST PHASING AMPLIFIER V901 (1/2)5751

2D PHASING AMPLIFIER V901 (1/2)5751

3D PHASING AMPLIFIER V902 6005/6AQ5W

1ST LOADING AMPLIFIER V903 (1/2)5751

2D LOADING AMPLIFIER V903 (1/2)5751

3D LOADING AMPLIFIER V904 6005/6AQ5W

IN55B
CR902
IN55B
R917 1K

250VDC

(NOTE 2)

S602 REAR

P901-10 P901-13 P901-17

P901-2 J611-2

P901-8

P901-7 J611-7

J611-6 P901-6

J611-4 P901-4

J611-9 P901-9

K613 MOTOR SWITCH RELAY

S614A FRONT

S614A REAR

S613

K614

K615

S602 REAR

R610 40

R626 47K

J606-7A P401-7

R453 100

R448 2.7MEG

C424 4 UF

P401-3V J606-3

C645 .1UF

R605 5

B603

S614

S614A FRONT

S614A REAR

J616

J615

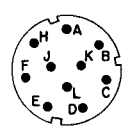
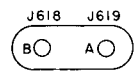
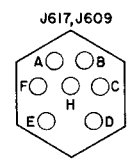
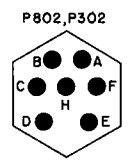
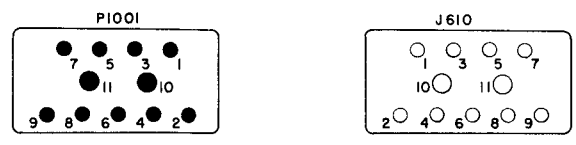
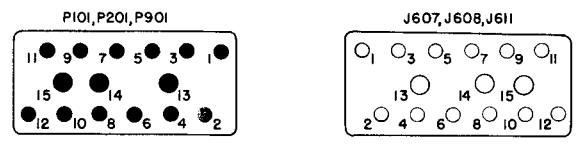
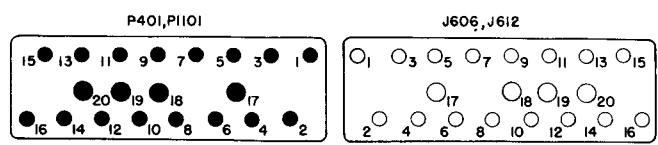
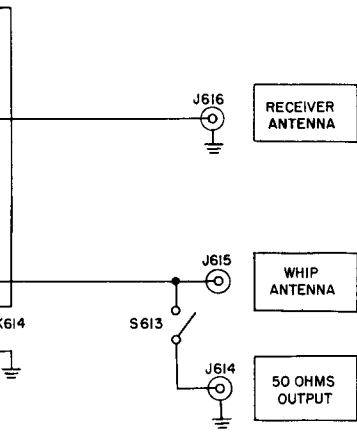
J614

RECEIVER ANTENNA

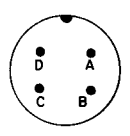
WHIP ANTENNA

50 OHMS OUTPUT

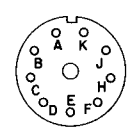
RECEPT
J60



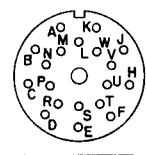
AUDIO
J603



24 VOLTS DC
J605



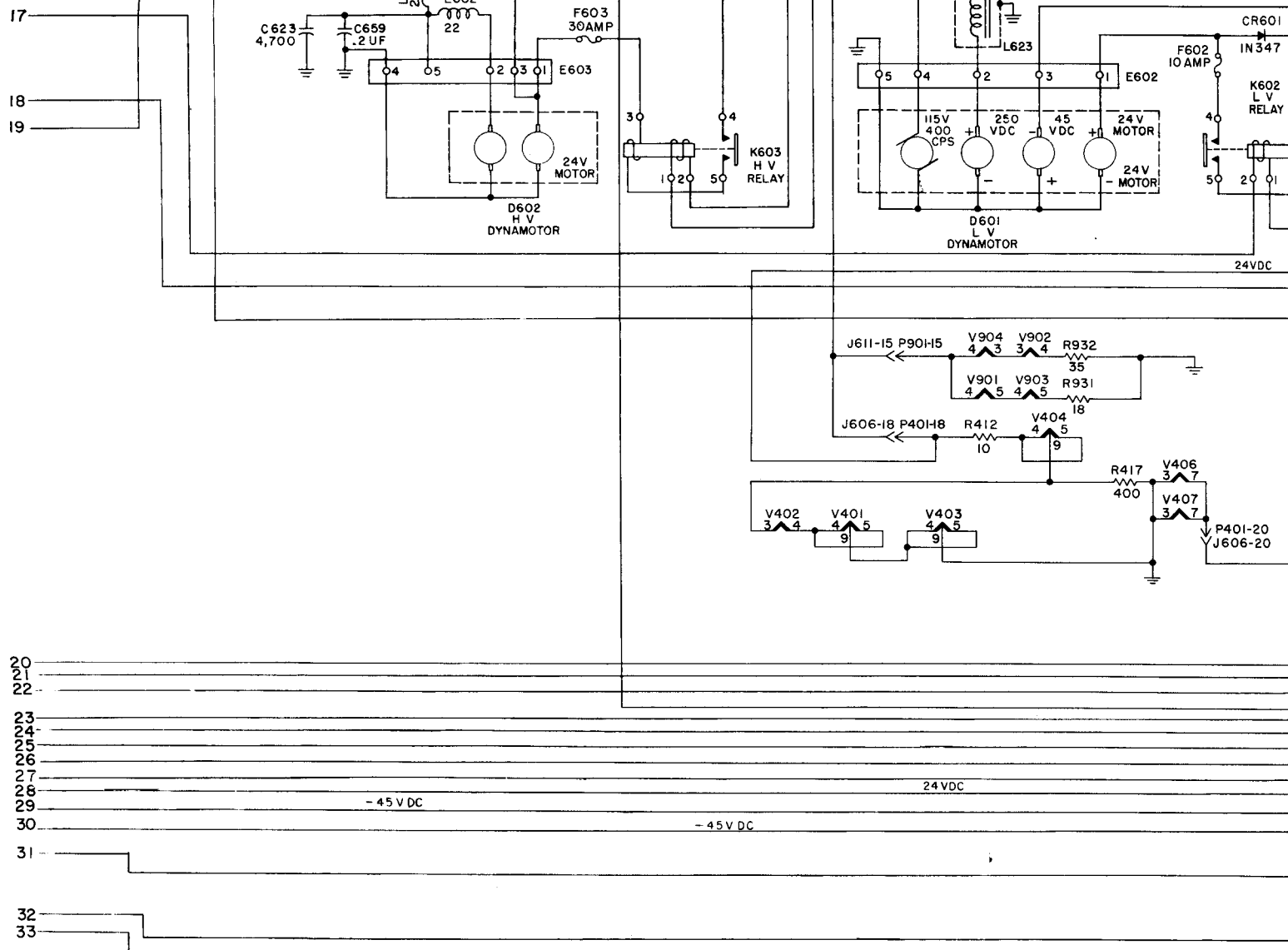
RECEIVER CONT
J604



REMOTE CONT
J601

THE FOLLOWING LEGEND IDENTIFIES RECEPTACLE CONTACTS.

| RECEPTACLE | CONTACT | FUNCTION | RECEPTACLE | CONTACT | FUNCTION | |
|------------|----------------------|----------------------------------|-----------------|---------|--------------------------|-------------------|
| J601 | K | TUNING INDICATOR | J603 | A | 600-OHM LINE | |
| | J | MICROPHONE | | B | GROUND | |
| | H | L-V DYNAMOTOR START | | C | MICROPHONE | |
| | F | KEY OR MICROPHONE SWITCH | | E | GROUND | |
| | E | FSK RELAY CONTROL | | F | KEY OR MICROPHONE SWITCH | |
| | D | SERVICE SELECTOR SW CONTROL +24V | | H | GROUND | |
| | C | SERVICE SELECTOR SW CONTROL GND | | K | CARRIER CONTROL | |
| | B | 600-OHM LINE | | J604 | B | BREAK-IN CIRCUIT |
| | A | AUTOTUNE CONTROL | | | C | MICROPHONE |
| | W | AUTOTUNE CONTROL | | | D | +24V |
| | V | AUTOTUNE CONTROL | | | E | GROUND |
| | U | VOICE RELAY | | | F | KEY OR MICROPHONE |
| | T | AUTOTUNE CONTROL | | | H | 600-OHM LINE |
| R | GROUND | K | CARRIER CONTROL | | | |
| S | FILAMENT START RELAY | J605 | A | +24V | | |
| | | | B | +24V | | |
| | | | C | GROUND | | |
| | | | D | GROUND | | |



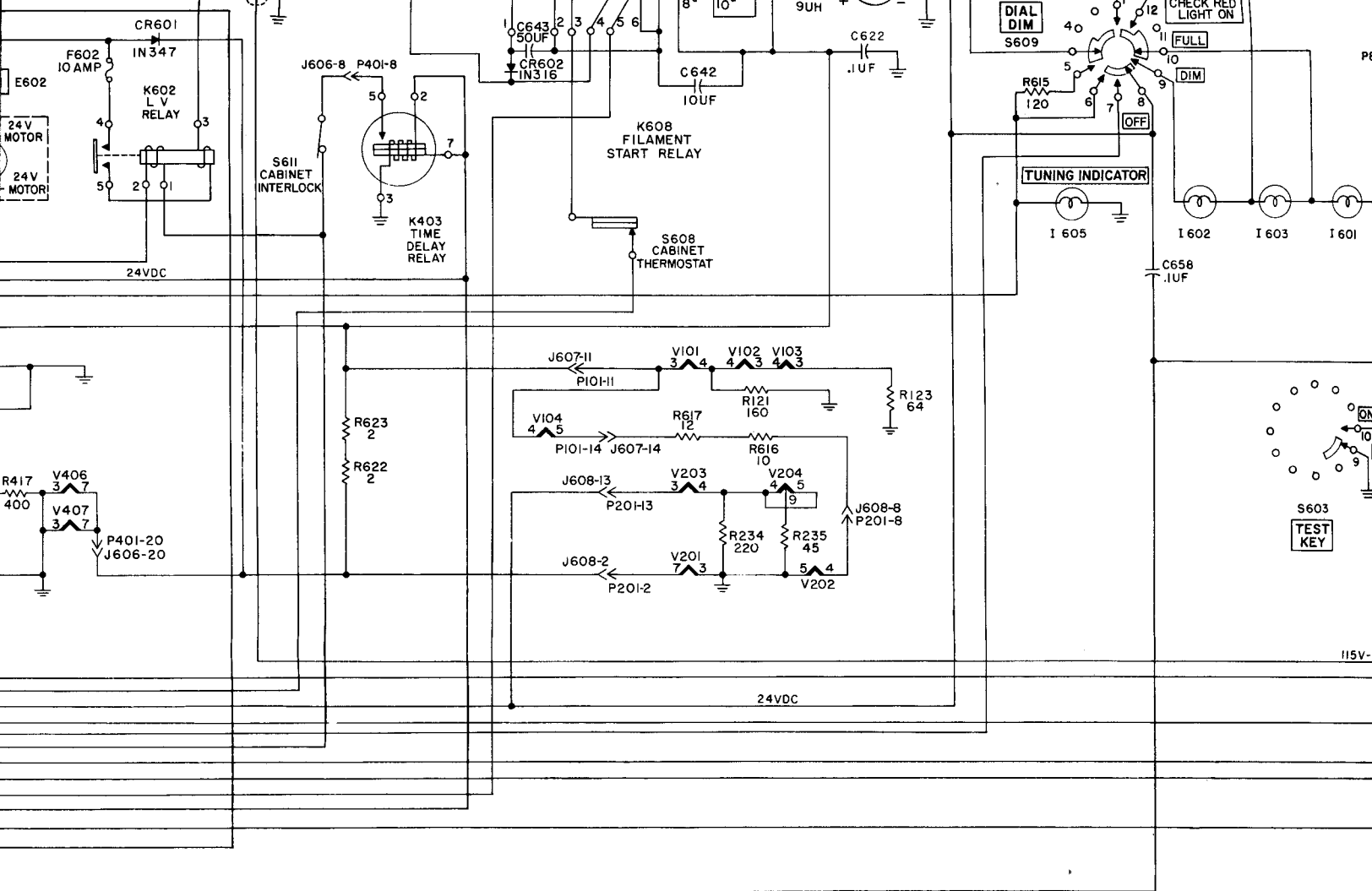
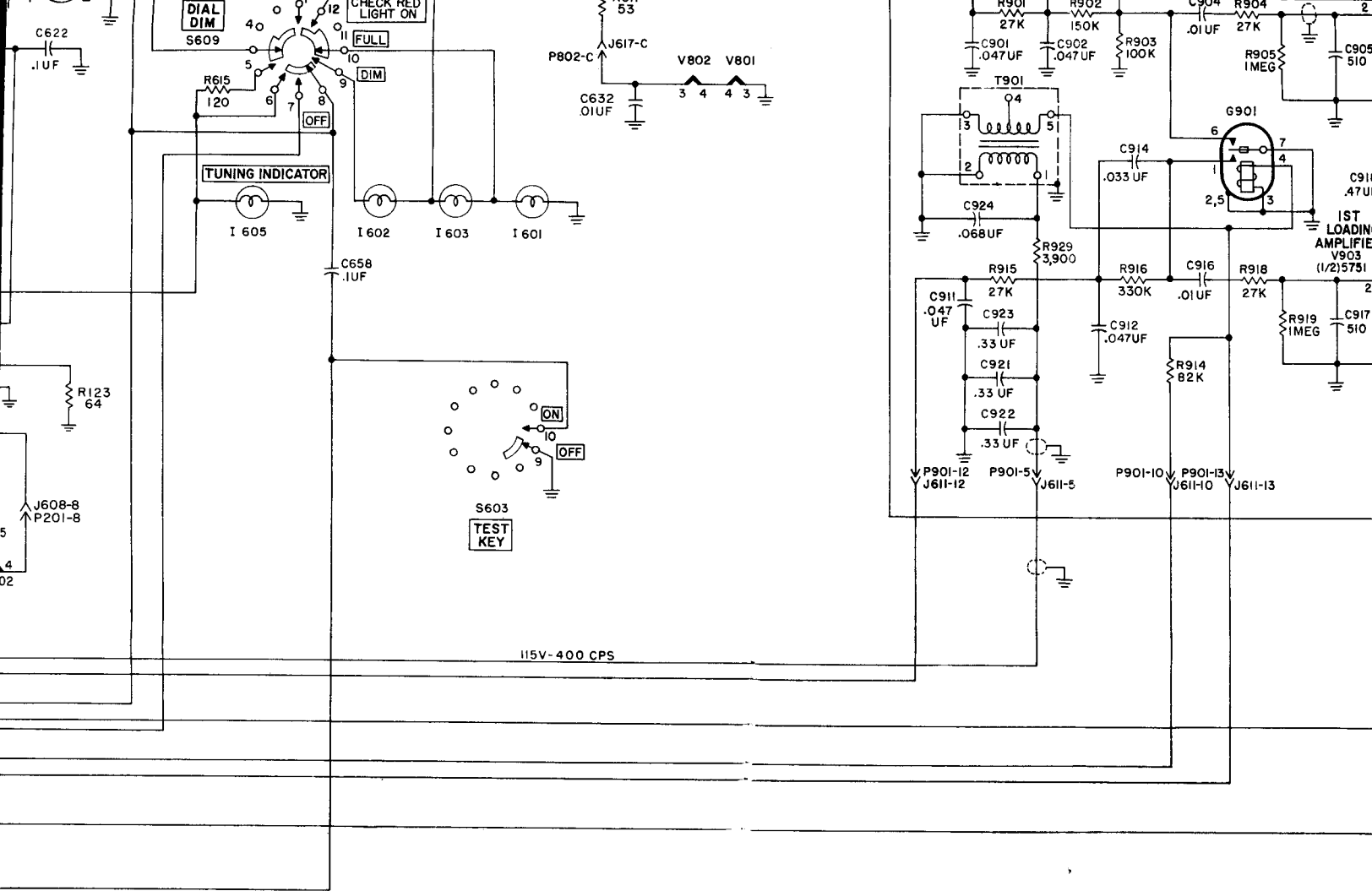
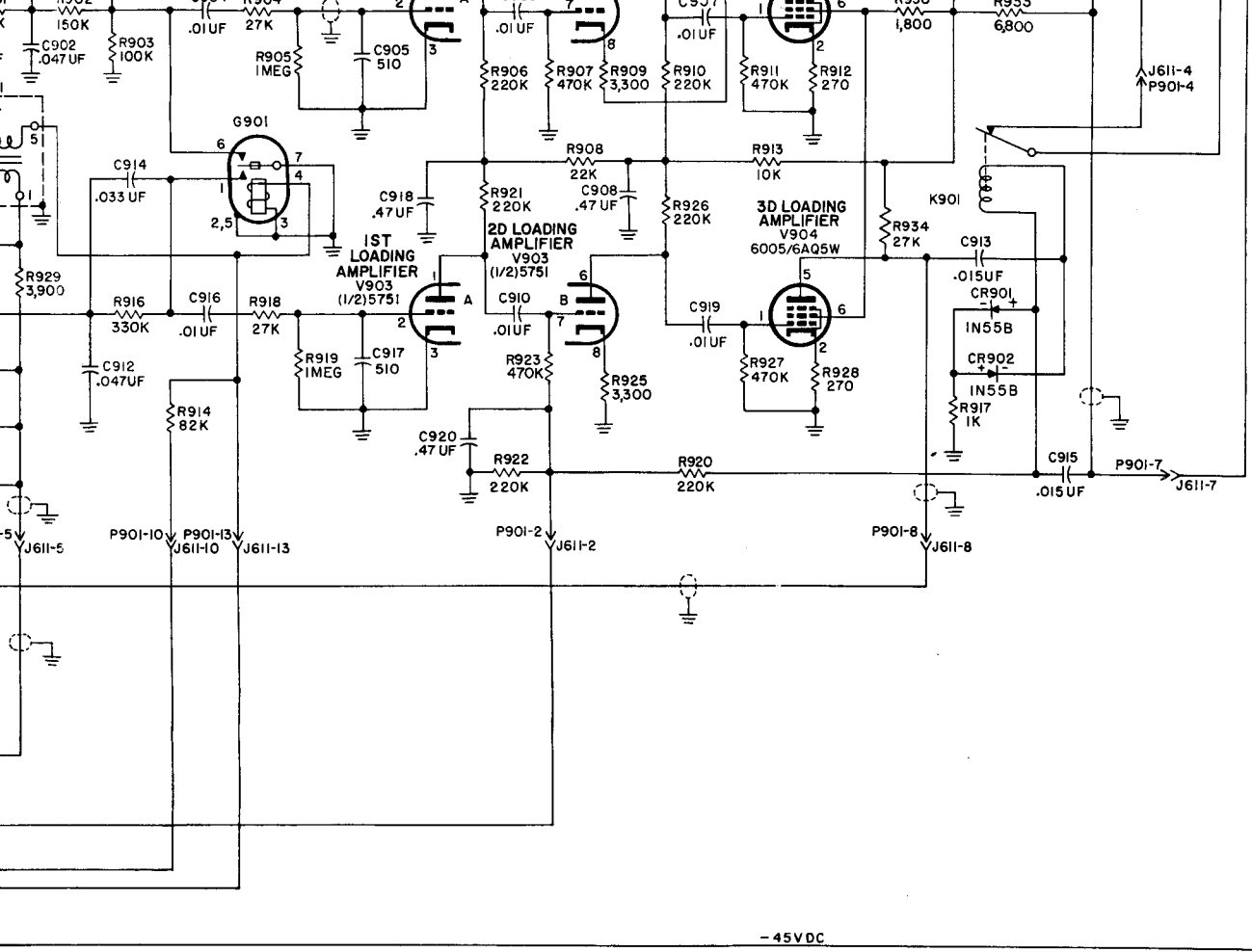


Figure 139. Radio Transmitter T-



©

Figure 139. Radio Transmitter T-195/GRC-19, schematic diagram—Continued.



- 45V DC

RECEPT
J601

THE FOLLOWING LEGEND IDENTIFIES RECEPTACLE CONTACTS.

| RECEPTACLE | CONTACT | FUNCTION | RECEPTACLE | CONTACT | FUNCTION | |
|------------|----------------------|----------------------------------|-----------------|-------------------|--------------------------|------------------|
| J601 | K | TUNING INDICATOR | J603 | A | 600-OHM LINE | |
| | J | MICROPHONE | | B | GROUND | |
| | H | L-V DYNAMOTOR START | | C | MICROPHONE | |
| | F | KEY OR MICROPHONE SWITCH | | E | GROUND | |
| | E | FSK RELAY CONTROL | | F | KEY OR MICROPHONE SWITCH | |
| | D | SERVICE SELECTOR SW CONTROL +24V | | H | GROUND | |
| | C | SERVICE SELECTOR SW CONTROL GND | | K | CARRIER CONTROL | |
| | B | 600-OHM LINE | | J604 | B | BREAK-IN CIRCUIT |
| | A | AUTOTUNE CONTROL | | | C | MICROPHONE |
| | W | AUTOTUNE CONTROL | D | | +24V | |
| | V | AUTOTUNE CONTROL | E | | GROUND | |
| | U | VOICE RELAY | F | KEY OR MICROPHONE | | |
| | T | AUTOTUNE CONTROL | H | 600-OHM LINE | | |
| R | GROUND | K | CARRIER CONTROL | | | |
| S | FILAMENT START RELAY | J605 | A | +24V | | |
| | | | B | +24V | | |
| | | | C | GROUND | | |
| | | | D | GROUND | | |

NOTES:

1. UNLESS OTHERWISE SHOWN:
RESISTORS ARE IN OHMS,
CAPACITORS ARE IN UUF.

2. S602 FRONT AND REAR SECTIONS ARE
SEPARATED FOR SCHEMATIC PURPOSES.

3. ALL SWITCHES ARE VIEWED FROM THE
REAR OF THE EQUIPMENT. SECTIONS
DESIGNATED A ARE CLOSEST TO THE
FRONT PANEL.

4. ALL SWITCHES ARE SHOWN IN THEIR
OFF OR COUNTERCLOCKWISE POSITION,
AS VIEWED FROM THE FRONT PANEL,
OR POSITIONED FOR 1.5 TO 1.7 MC
RANGE

5. ALL SWITCHES AND RELAYS ARE
SHOWN IN THEIR NORMAL POSITION
WITH POWER REMOVED.

6. THE PHYSICAL LOCATION OF COMPONENTS
CAN BE DETERMINED FROM THE FOLLOWING
SYMBOL GROUPS:

| SUBCHASSIS | GROUP |
|------------------------------------|-------|
| EXCITER | 100 |
| POWER AMPLIFIER | 200 |
| DISCRIMINATOR | 300 |
| MODULATOR | 400 |
| MAIN FRAME AND FRONT PANEL | 600 |
| MASTER OSCILLATOR | 800 |
| ANTENNA NETWORK SERVO AMPLIFIER | 900 |
| ANTENNA TUNING CAPACITOR | 1000 |
| VARIABLE INDUCTOR | 1100 |

TM806-108(2)

390412 O - 56 (In pocket) No. 24