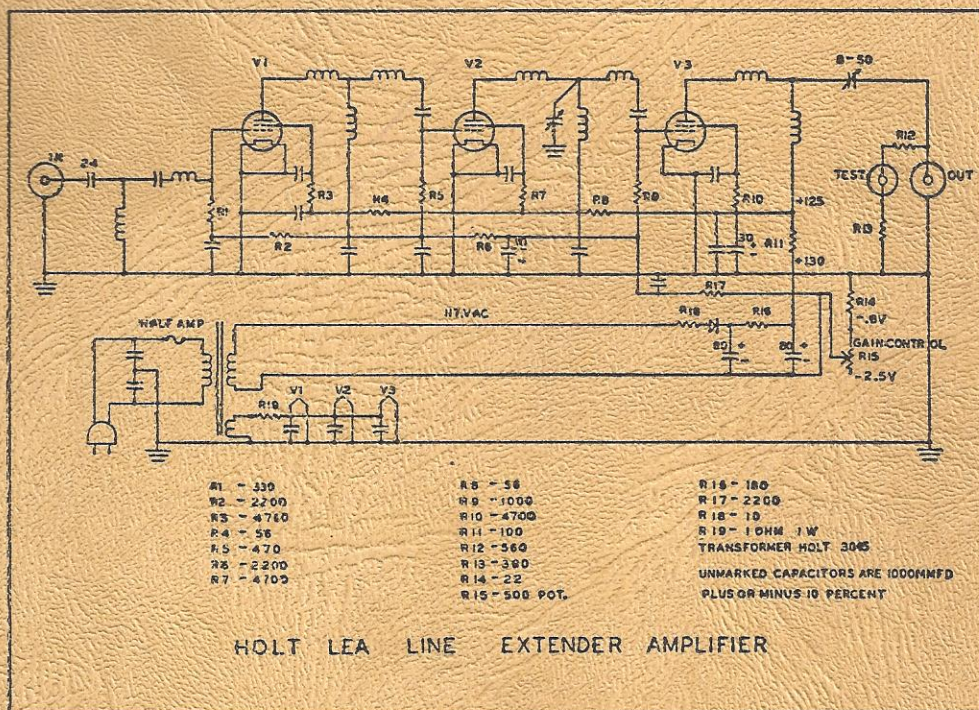


# Holt Electronic Research



## TECHNICAL SCHEMATICS

*Products of Unique Design*

MAIN STREET • NEW BOSTON PENNSYLVANIA 17958



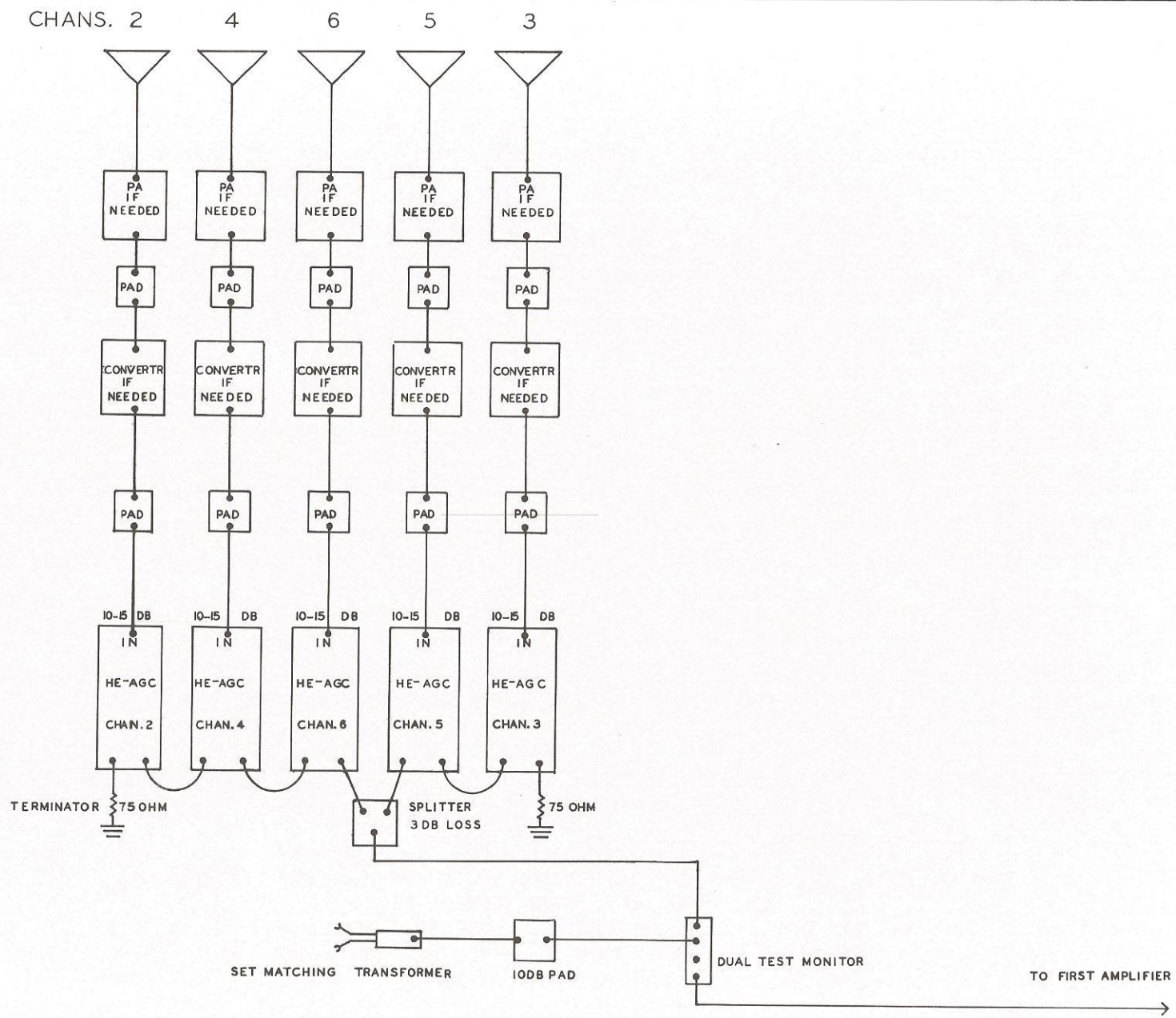
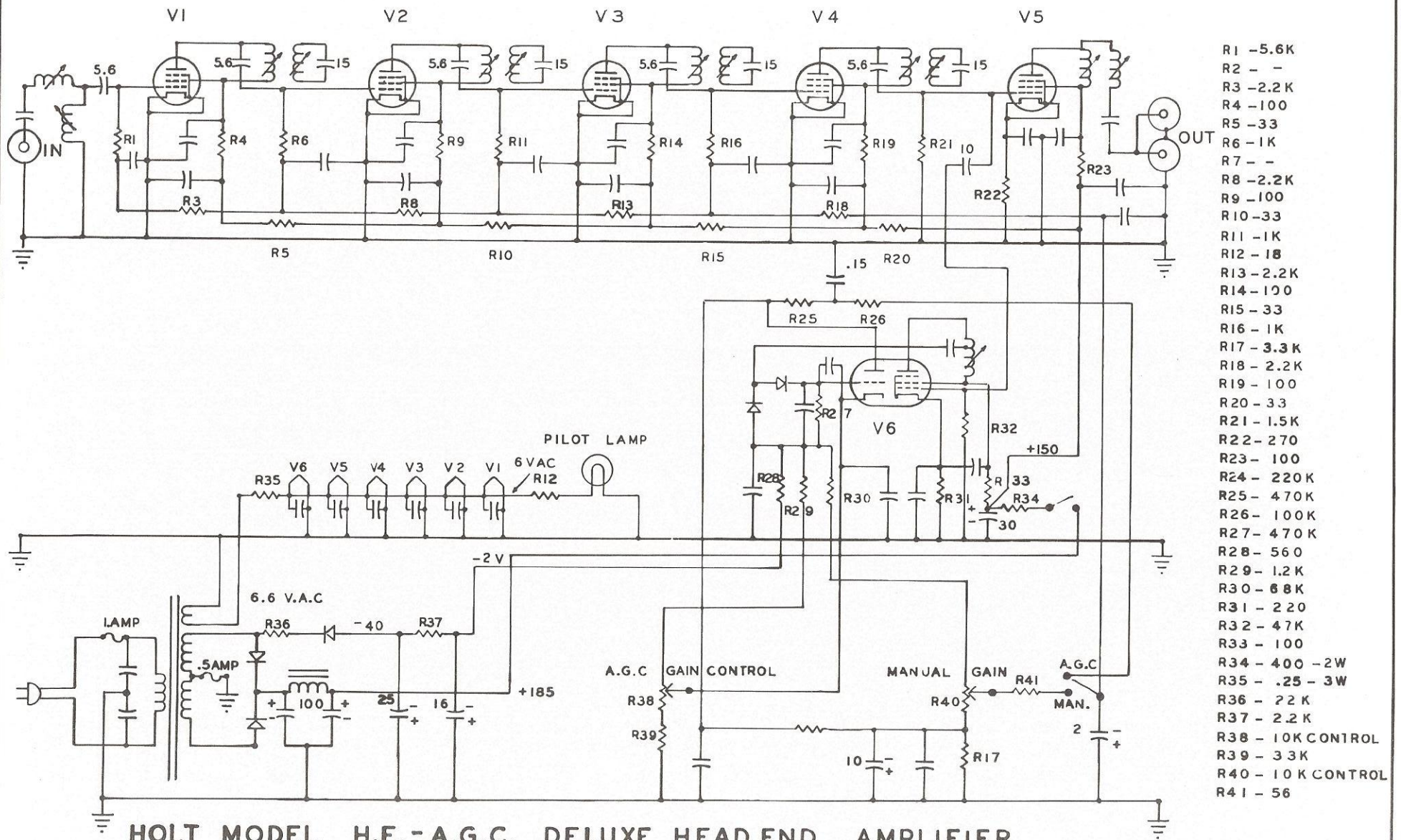


DIAGRAM SHOWING PROPER HOOKUP OF HOLT HEADEND EQUIPMENT HE A.G.C.

CONVERTERS ARE SHOWN ON DRAWING. OMIT CONVERTER AND PAD WHEN CHANNEL CONVERSION IS NOT REQUIRED  
 OMIT PREAMPS WHEN SIGNAL STRENGTH WARRANTS OMISSION



- R1 - 5.6K
- R2 - -
- R3 - 2.2K
- R4 - 100
- R5 - 33
- R6 - 1K
- R7 - -
- R8 - 2.2K
- R9 - 100
- R10 - 33
- R11 - 1K
- R12 - 18
- R13 - 2.2K
- R14 - 100
- R15 - 33
- R16 - 1K
- R17 - 3.3K
- R18 - 2.2K
- R19 - 100
- R20 - 33
- R21 - 1.5K
- R22 - 270
- R23 - 100
- R24 - 220K
- R25 - 470K
- R26 - 100K
- R27 - 470K
- R28 - 560
- R29 - 1.2K
- R30 - 68K
- R31 - 220
- R32 - 47K
- R33 - 100
- R34 - 400 - 2W
- R35 - .25 - 3W
- R36 - 22K
- R37 - 2.2K
- R38 - 10K CONTROL
- R39 - 33K
- R40 - 10K CONTROL
- R41 - 56

ALL CAPACITORS UNMARKED ARE 1000MMFD PLUS OR MINUS 10 PERCENT

ALL RESISTORS UNMARKED ARE ONE HALF WATT. POWER TRANSFORMER IS HOLT NO. 7079

RECTIFIERS ARE SARKES TARZIAN 108 OR EQUIVALENT



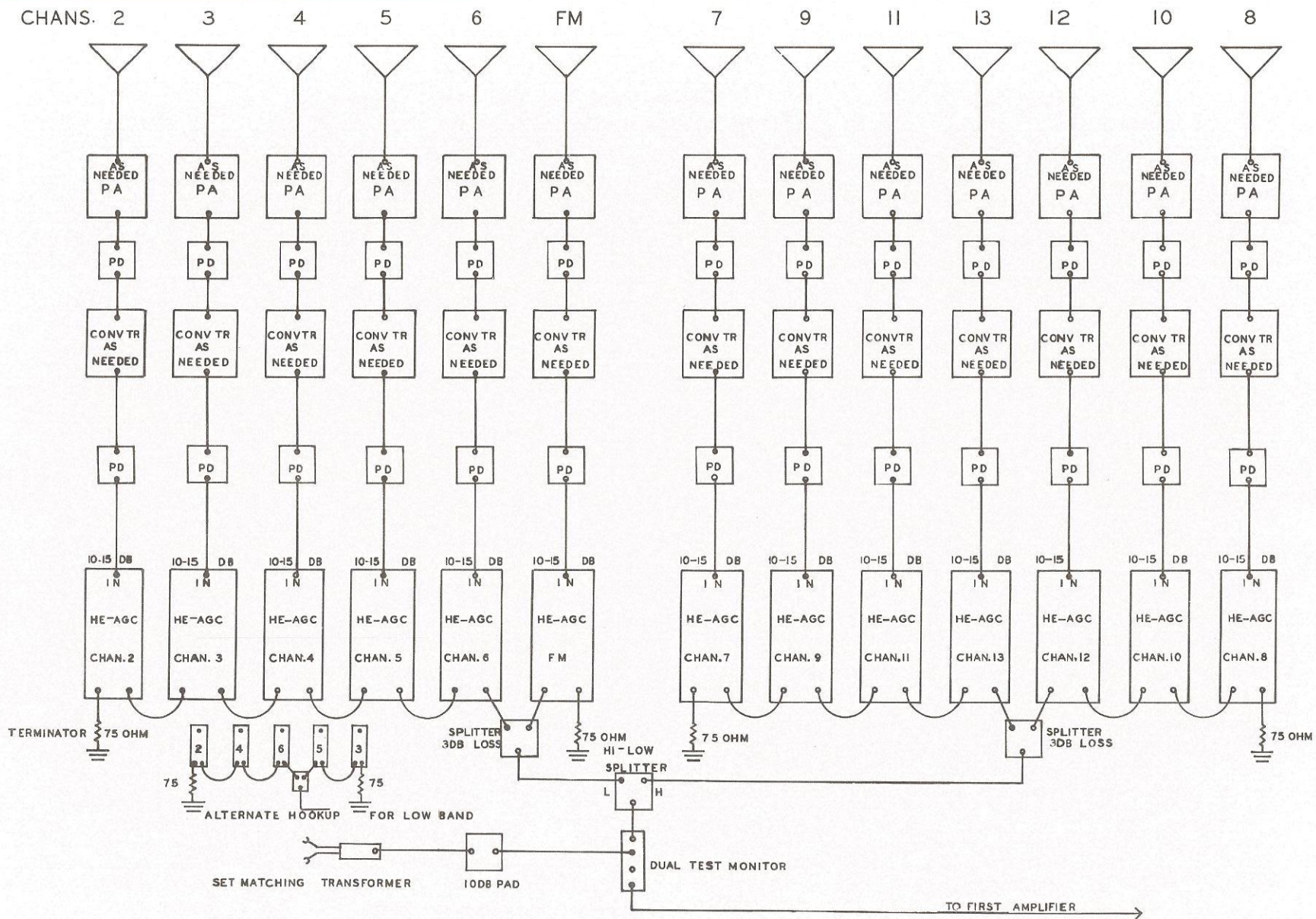


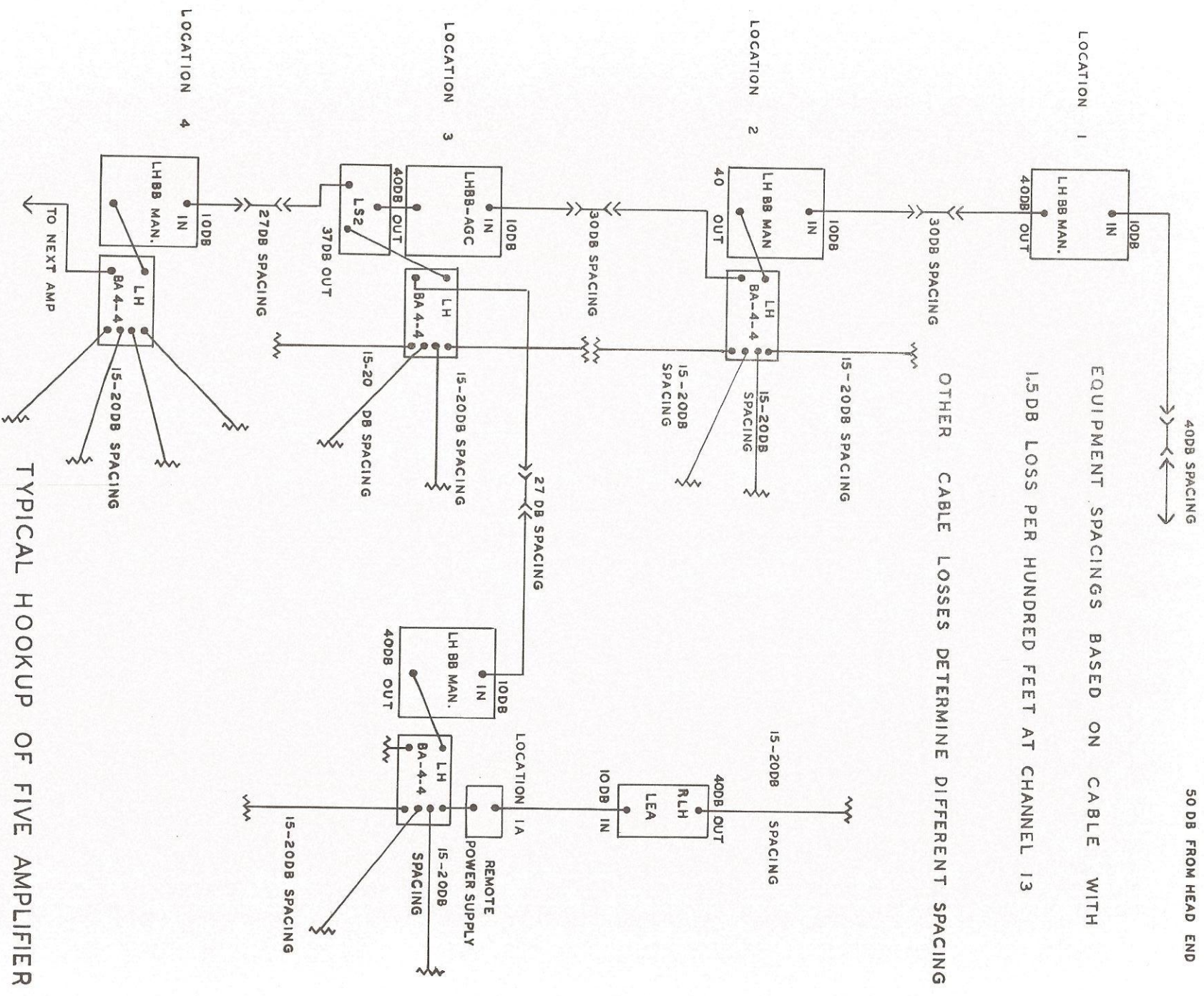
DIAGRAM SHOWING PROPER HOOKUP OF HOLT HEADEND EQUIPMENT H.E.A.G.C.

CONVERTERS ARE SHOWN ON DRAWING. OMIT CONVERTER AND PAD WHEN CHANNEL CONVERSION IS NOT REQUIRED

ABBREVIATIONS PAD - PD PREAMP - PA CONVERTER - CONVTR.

OMIT PREAMPS WHEN SIGNAL STRENGTH WARRANTS OMISSION

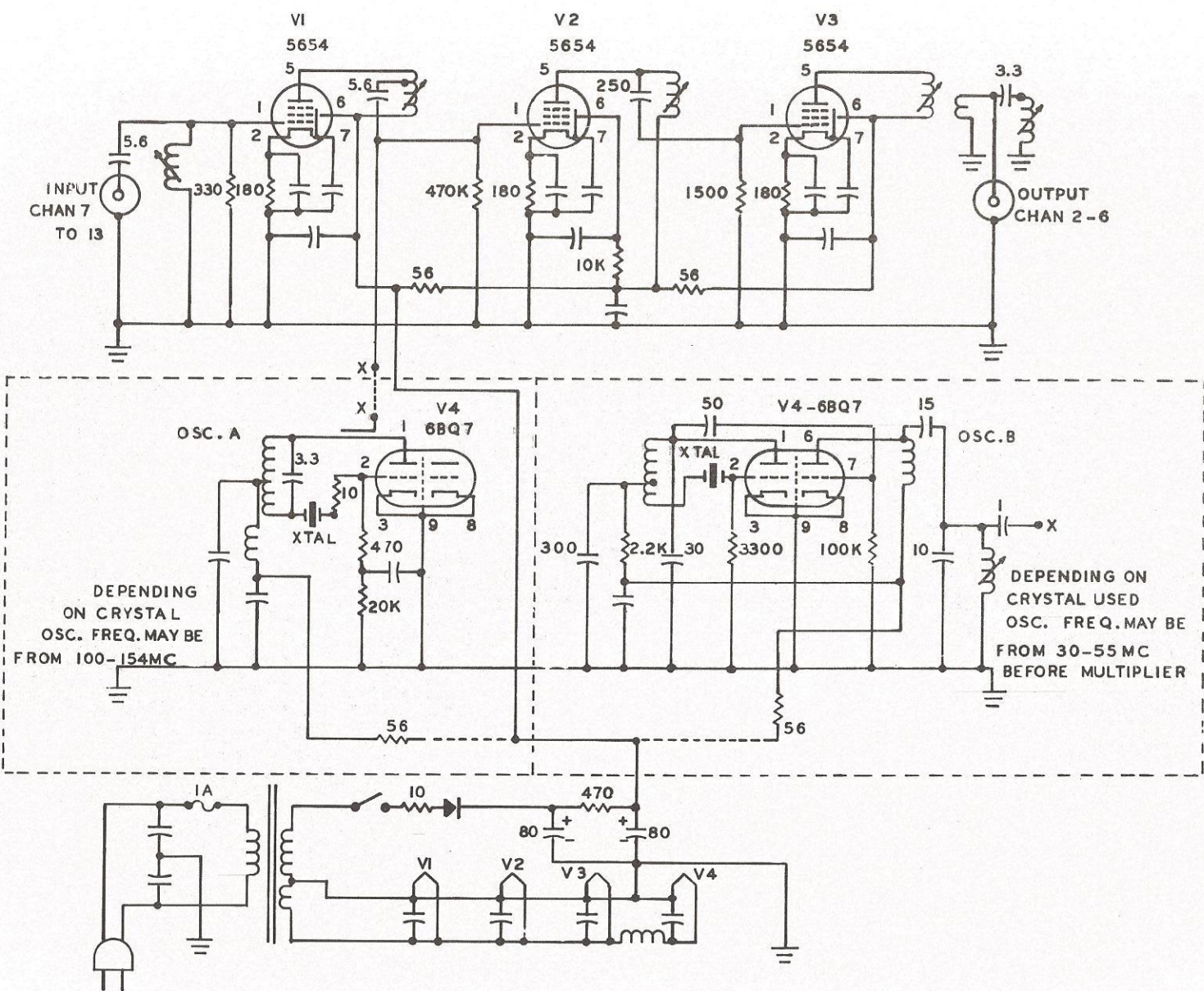




TYPICAL HOOKUP OF FIVE AMPLIFIER  
LOCATIONS, USING HOLT

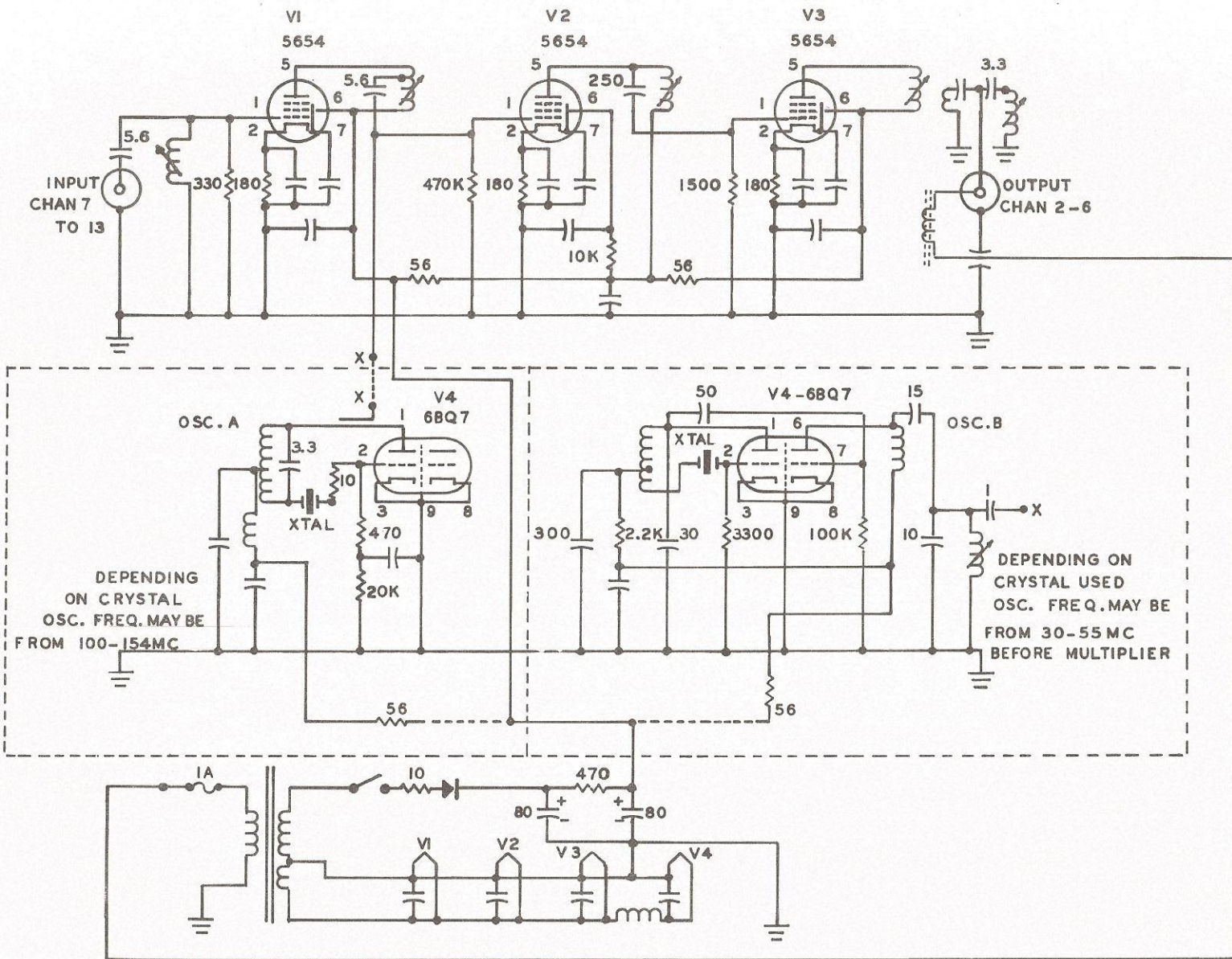
LINE EQUIPMENT





HOLT VHF CONVERTER WITH OSCILLATORS SHOWN SEPERATELY FOR DIFFERENT CONVERSIONS



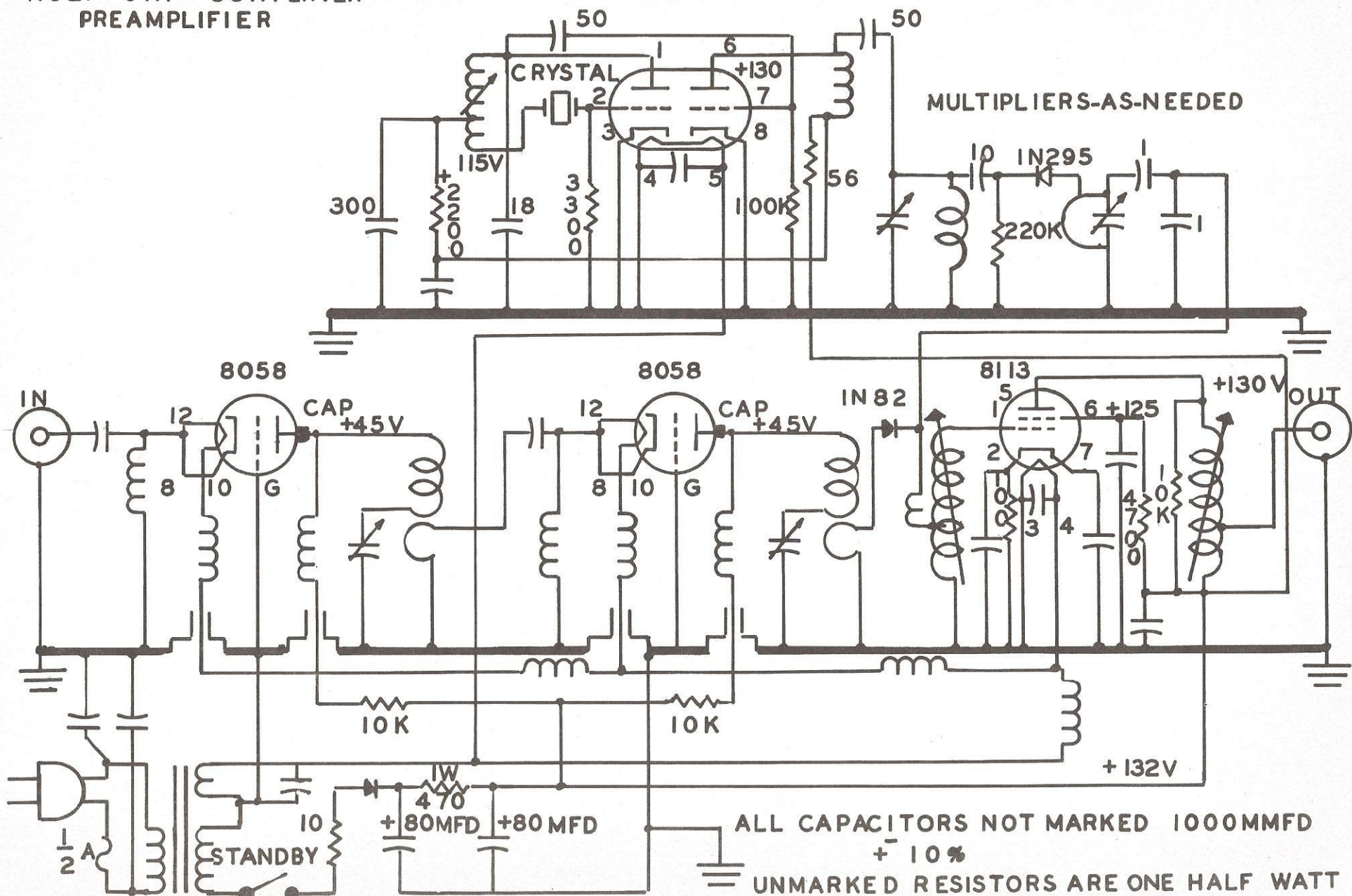


HOLT VHF CONVERTER WITH OSCILATORS SHOWN SEPERATELY FOR DIFFERENT CONVERSIONS  
 REMOTELY POWERED

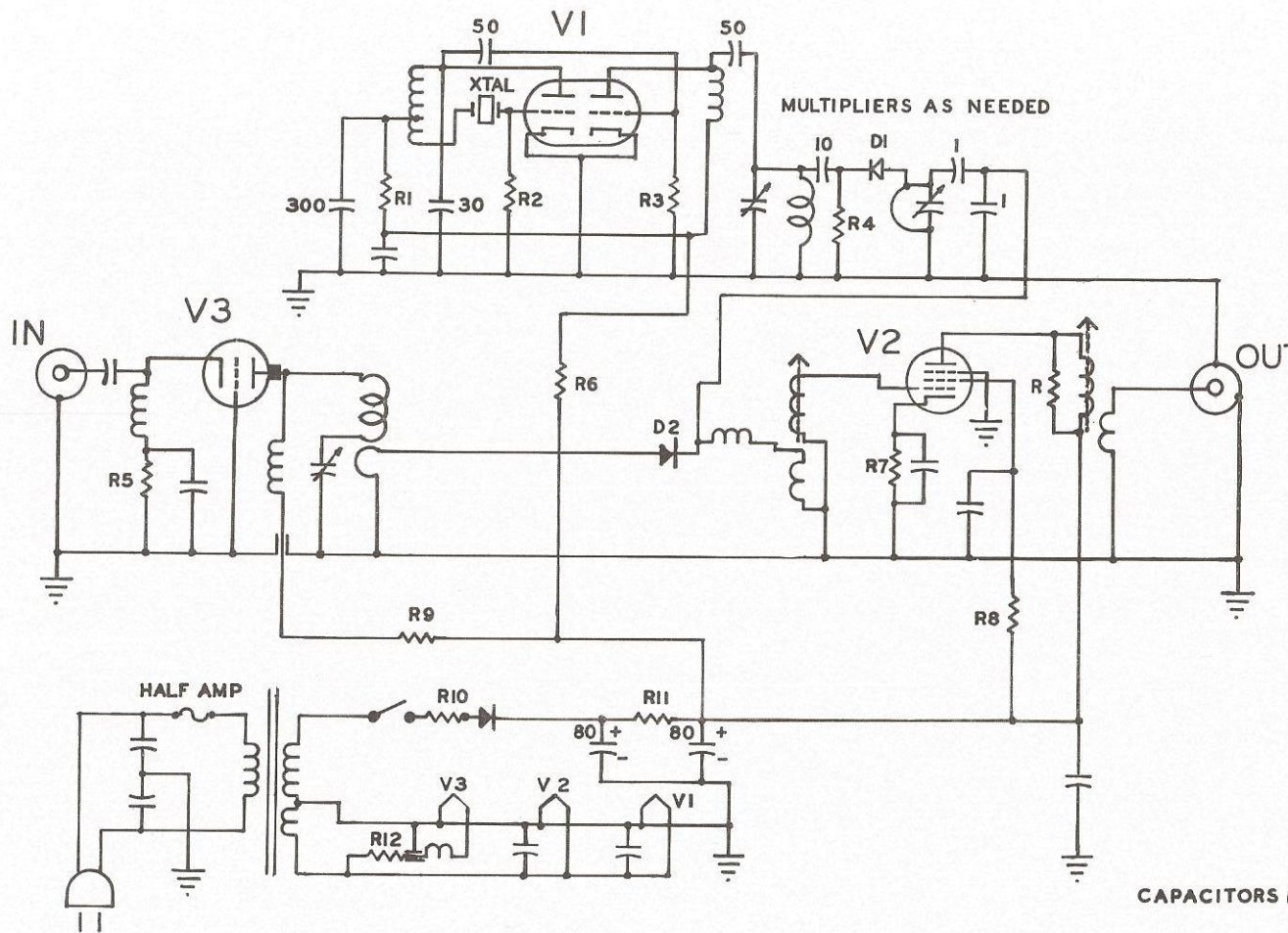


**CONVERTER  
HOLT UHF CONVERTER  
PREAMPLIFIER**

**U.H.F TO HIGH CHANNEL VHF  
6BQ7**







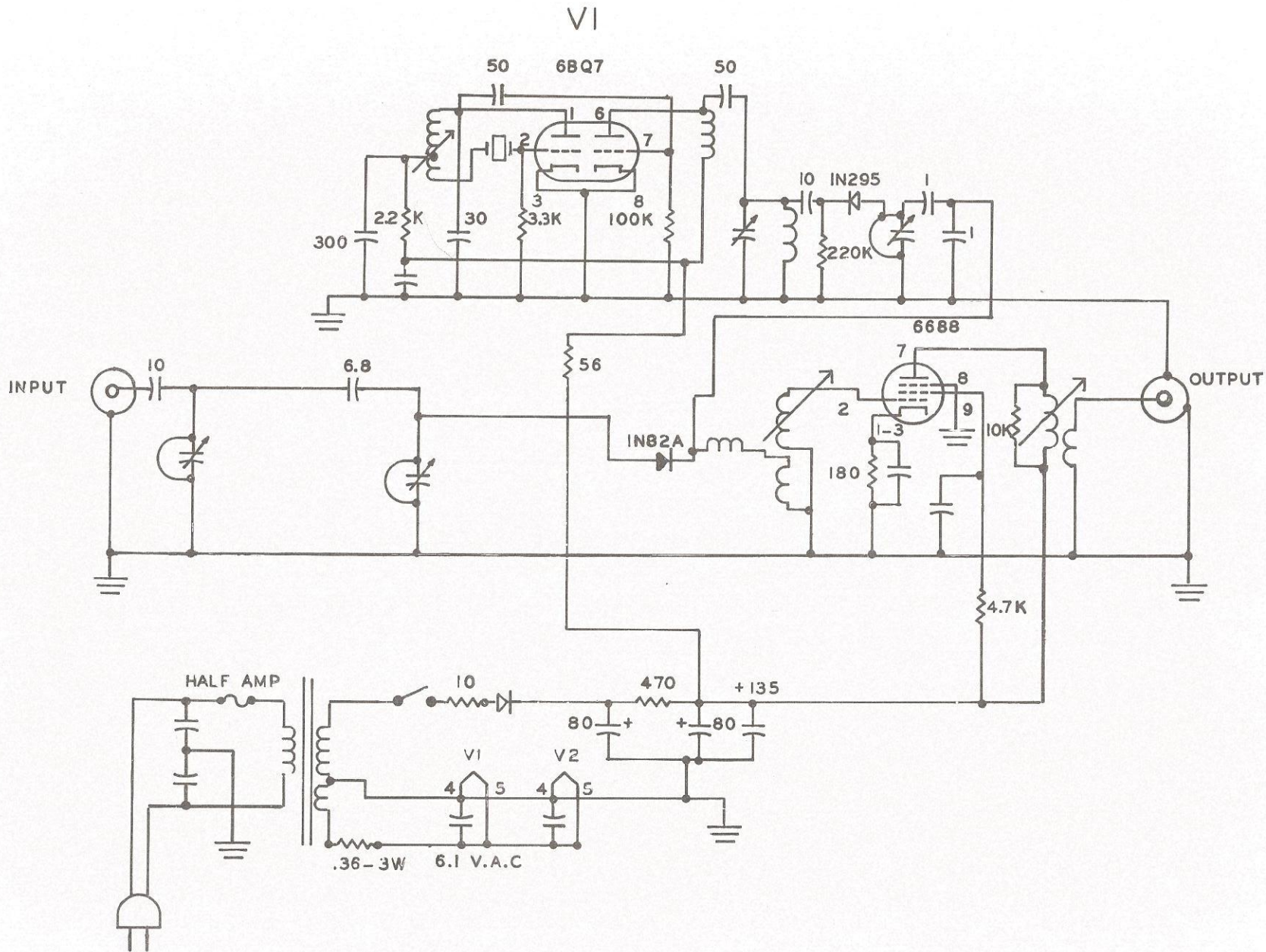
- R - 10,000
- R1 - 220 $\Omega$
- R2 - 3300
- R3 - 100,000
- R4 - 250,000
- R5 - 47
- R6 - 56
- R7 - 180
- R8 - 4700
- R9 - 10,000 1W
- R10 - 10
- R11 - 470 1W
- R12 - 2.2
- D1 - IN 295
- D2 - IN 82A

CAPACITORS NOT MARKED ARE 1000MMFD + OR - 10%

RESISTORS " " " ONE HALF WATT

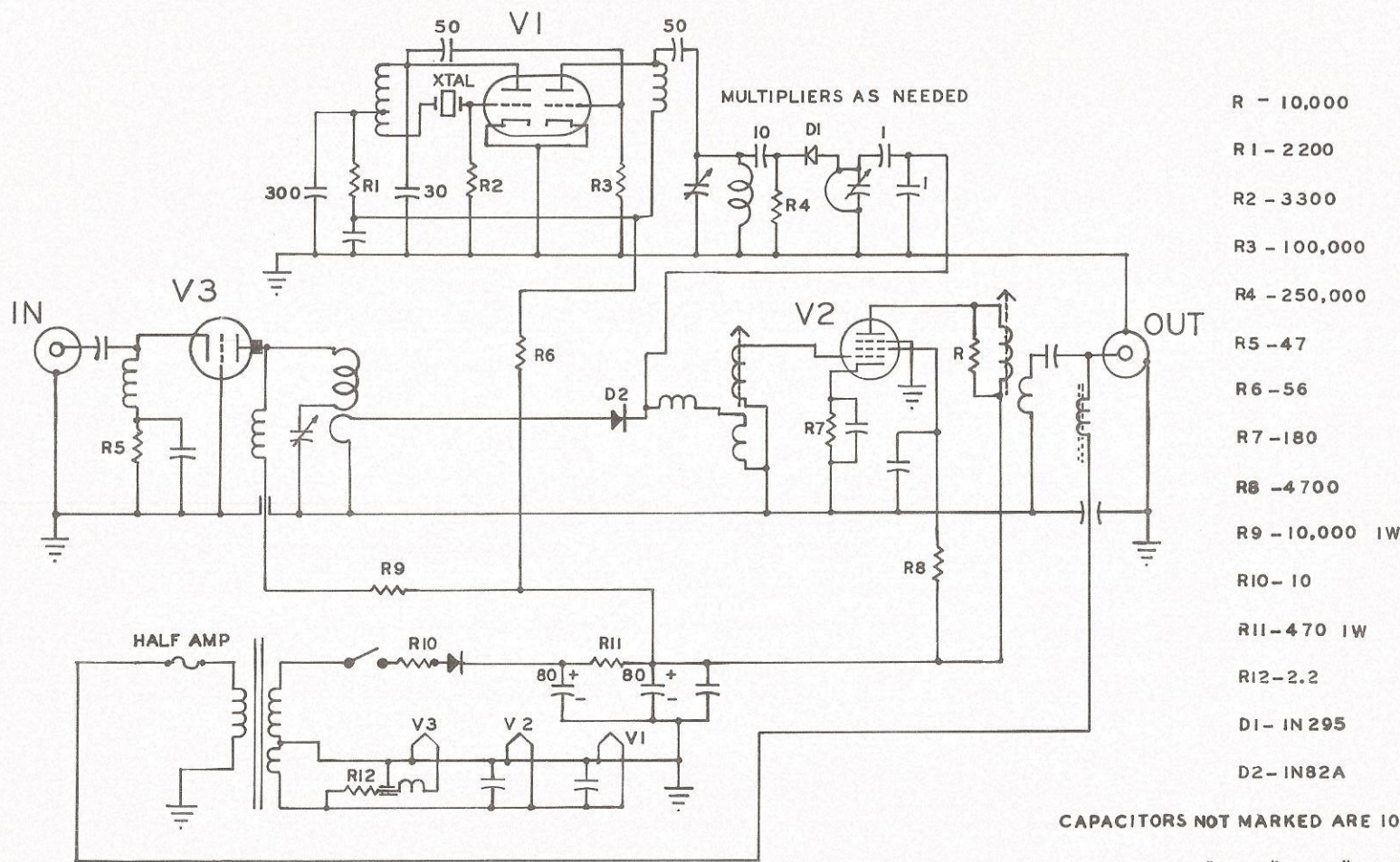
**HOLT UHF 3 CRYSTAL CONTROLLED CONVERTER WITH 8058 OR WITH 6299 TUBES**  
 ALSO AVAILABLE REMOTELY POWERED





HOLT UHF 2 UHF TO LOW CHANNEL CONVERTER



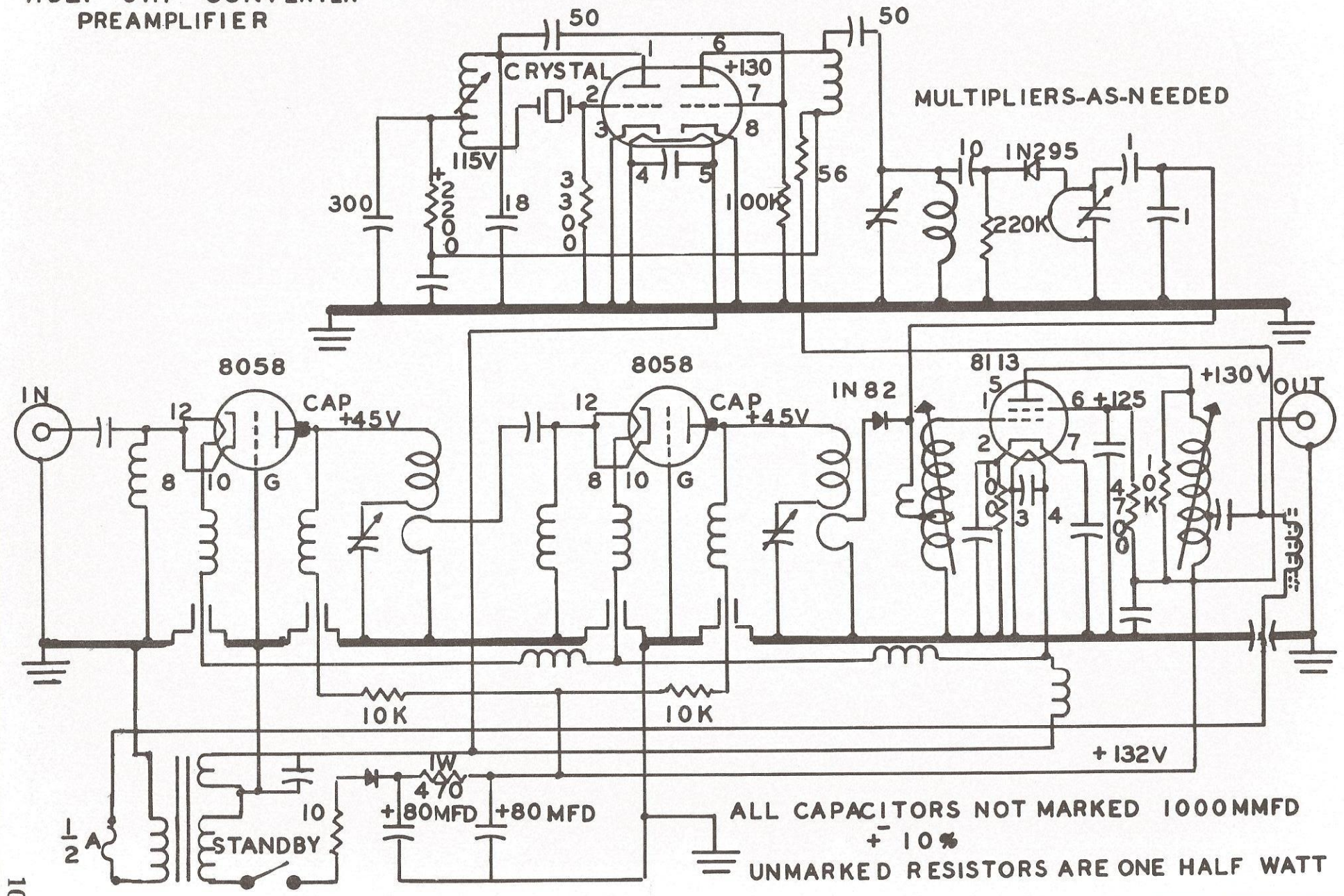


HOLT UHF 3 CRYSTAL CONTROLLED CONVERTER WITH 8058 OR WITH 6299 TUBES  
 REMOTELY POWERED



**CONVERTER U.H.F TO HIGH CHANNEL VHF**  
**HOLT UHF CONVERTER PREAMPLIFIER**

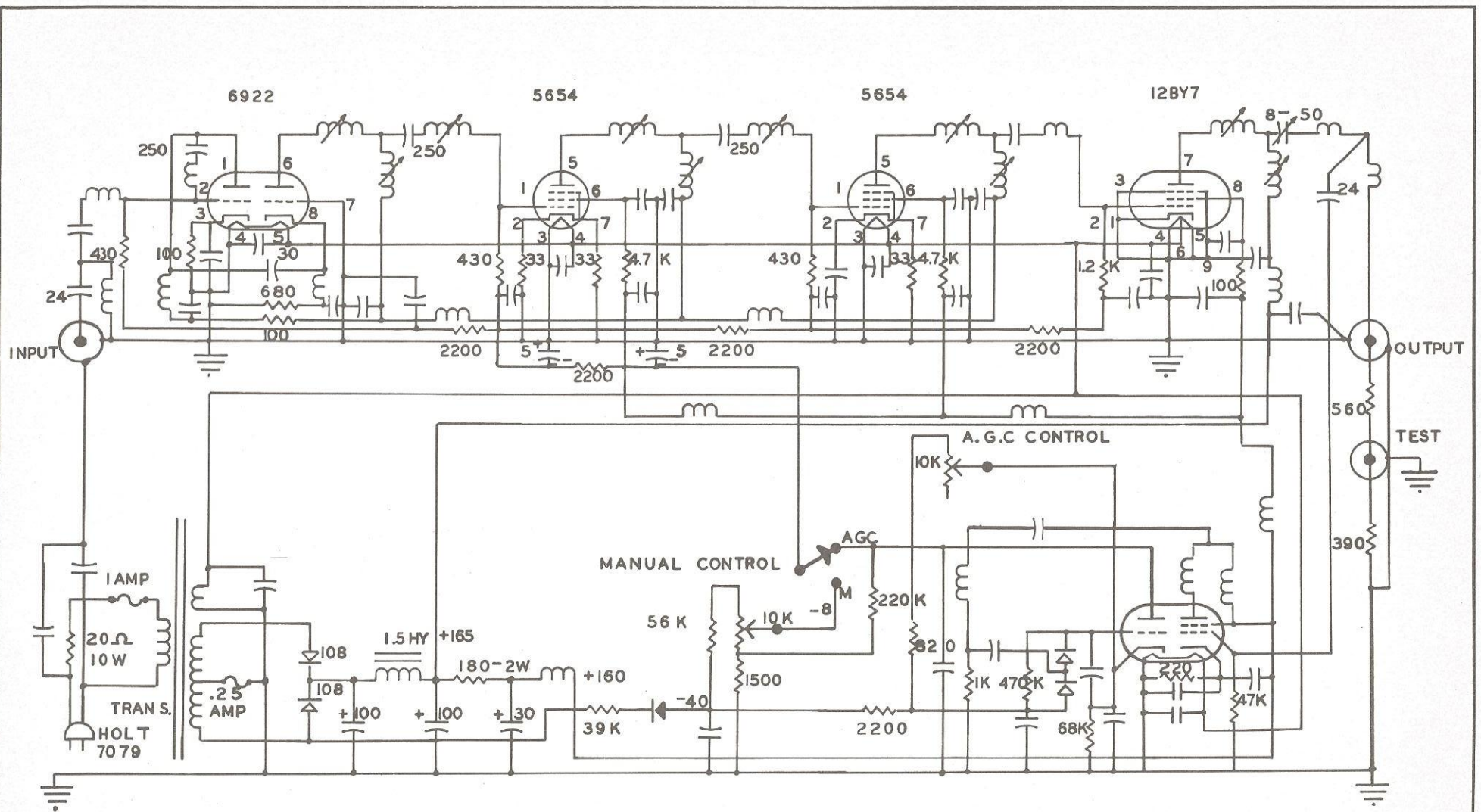
6BQ7



MULTIPLIERS-AS-NEEDED

ALL CAPACITORS NOT MARKED 1000MMFD  
 + 10%  
 UNMARKED RESISTORS ARE ONE HALF WATT



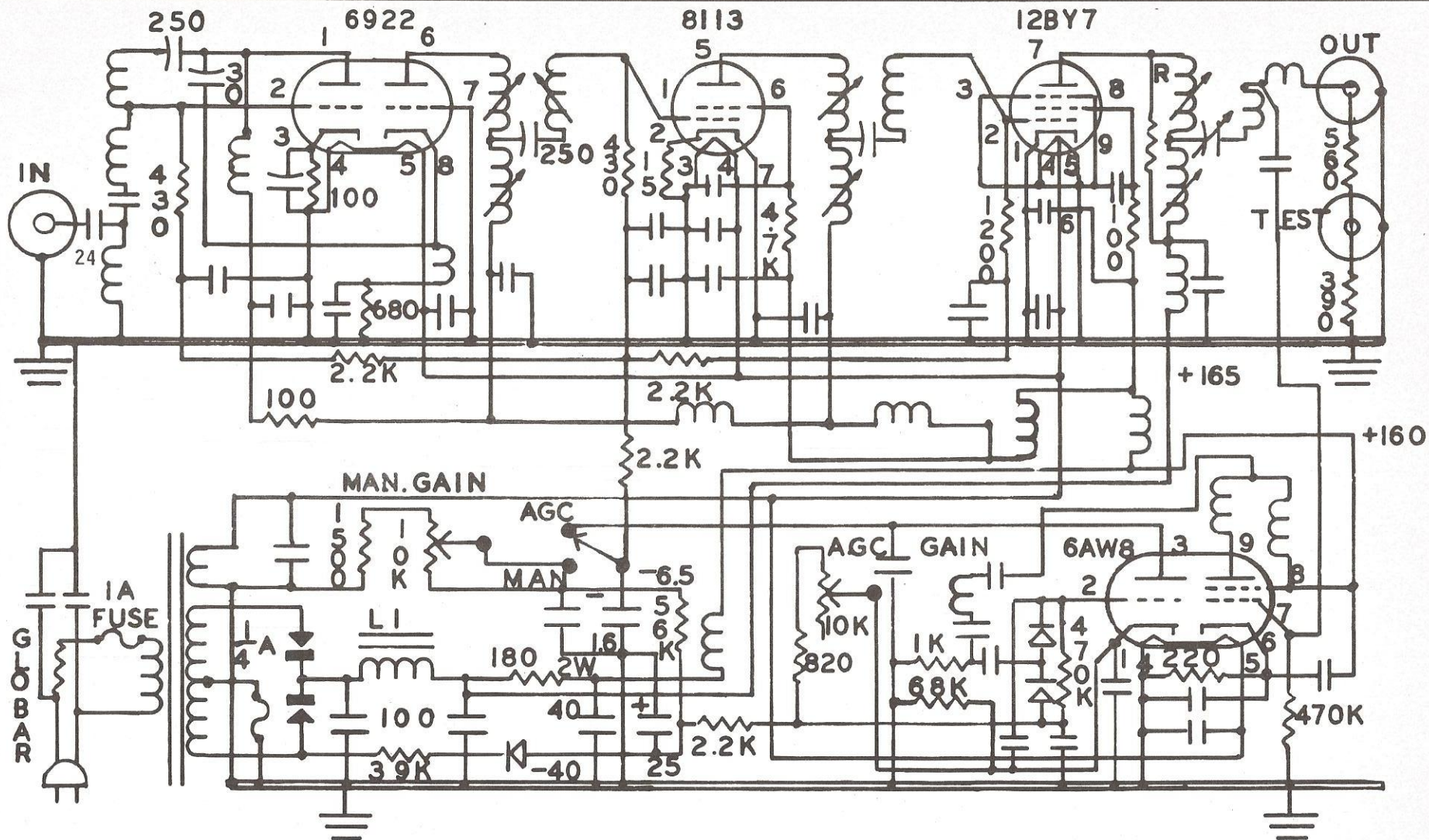


## HOLT LOW BRD.BAND A.G.C. 50 LINE AMPLIFIER

ALL CAPACITORS UNMARKED ARE 1000 MMFD  $\pm$  10 %

ALL RESISTORS UNMARKED ARE ONE HALF WATT





### HOLT LOW BB A.G.C. 40 LINE AMPLIFIER

IN SOME MODELS RESISTOR R MAY BE CHANGED IN VALUE OR OMITTED.  
 THE 15 OHM RESISTOR FROM PIN NO. 2 ON 8113 SOCKET IS USED WHEN 6CB6 TUBE IS USED.

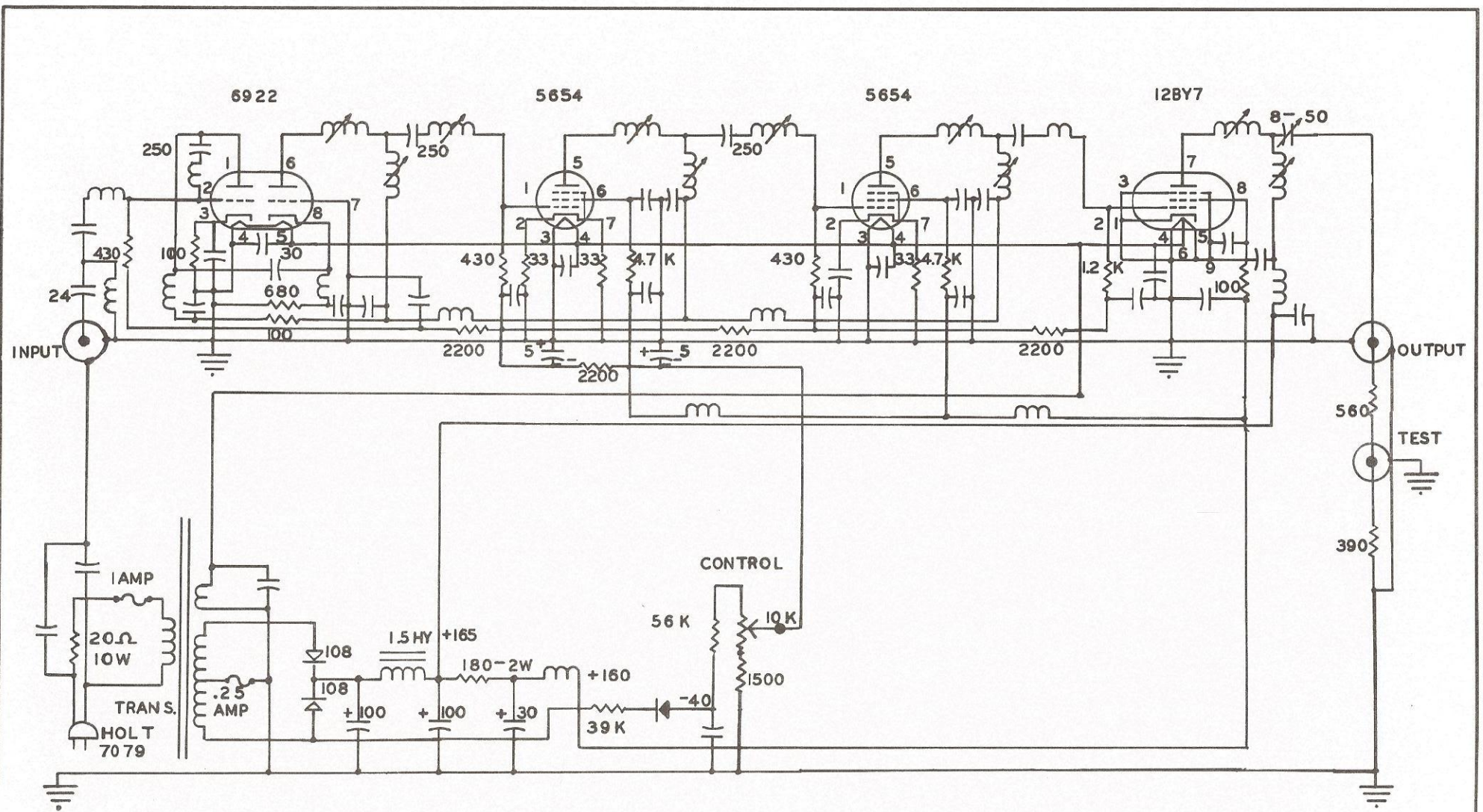
ALL RESISTORS NOT MARKED ARE 1/2 WATT.

ALL CAPACITORS NOT MARKED ARE 1000 MMFD ± 10% 600 VOLT.

HOLT POWER TRANSFORMER NO. 7079 FILTER CHOKE 1.5 HENRYS.

SELENIUM RECTIFIERS ARE SARKES TARZIAN MODEL 108 OR EQUIVALENT.



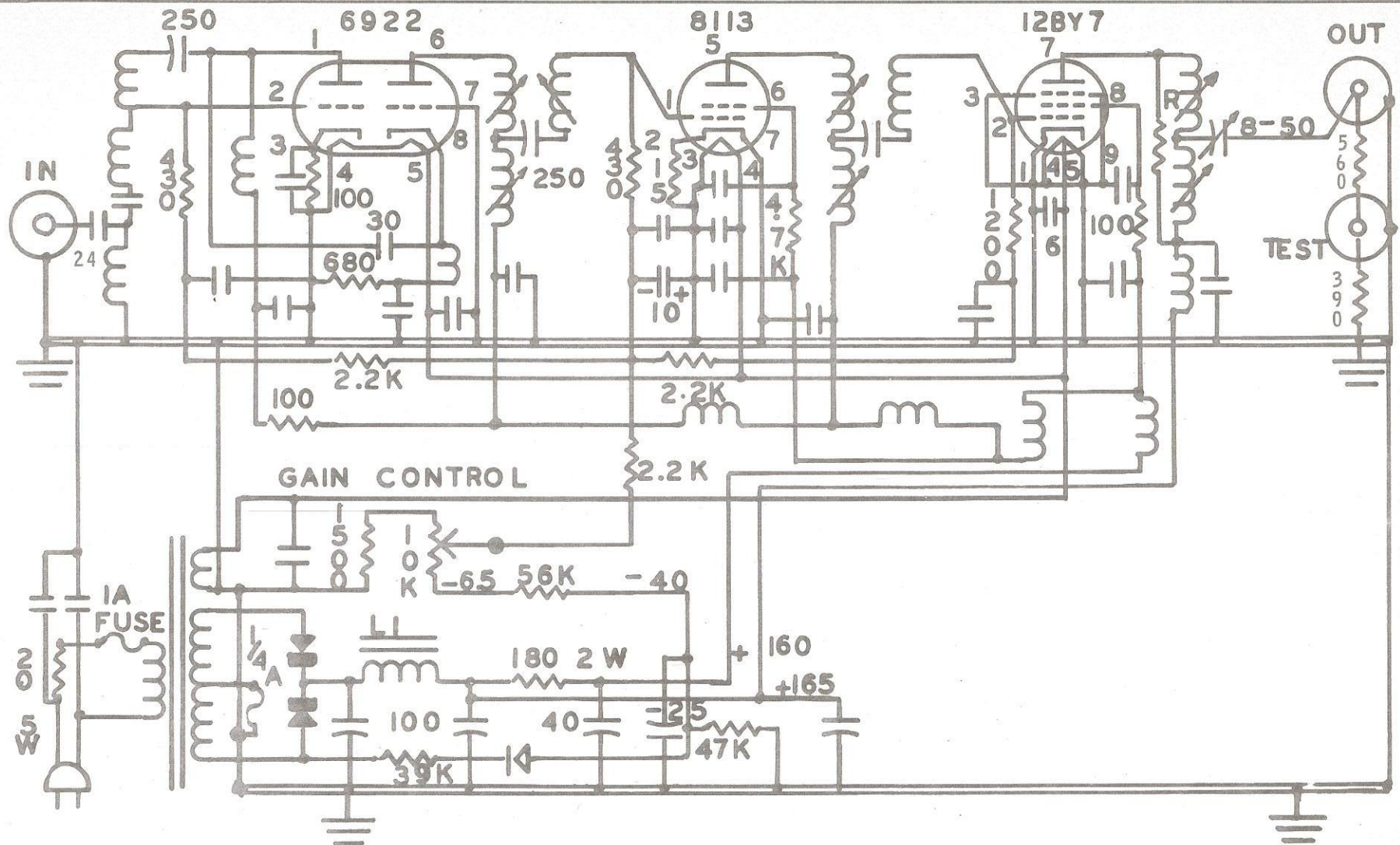


## HOLT LOW BRD. BAND MAN. 50 LINE AMPLIFIER

ALL CAPACITORS UNMARKED ARE 1000 MMFD  $\pm 10\%$

ALL RESISTORS UNMARKED ARE ONE HALF WATT





### HOLT LOW BB MANUAL 40 LINE AMPLIFIER

THE 15 OHM RESISTOR ON PIN NO. 2 ON 8113 SOCKET IS IN CIRCUIT WHEN 6CB6 IS USED.

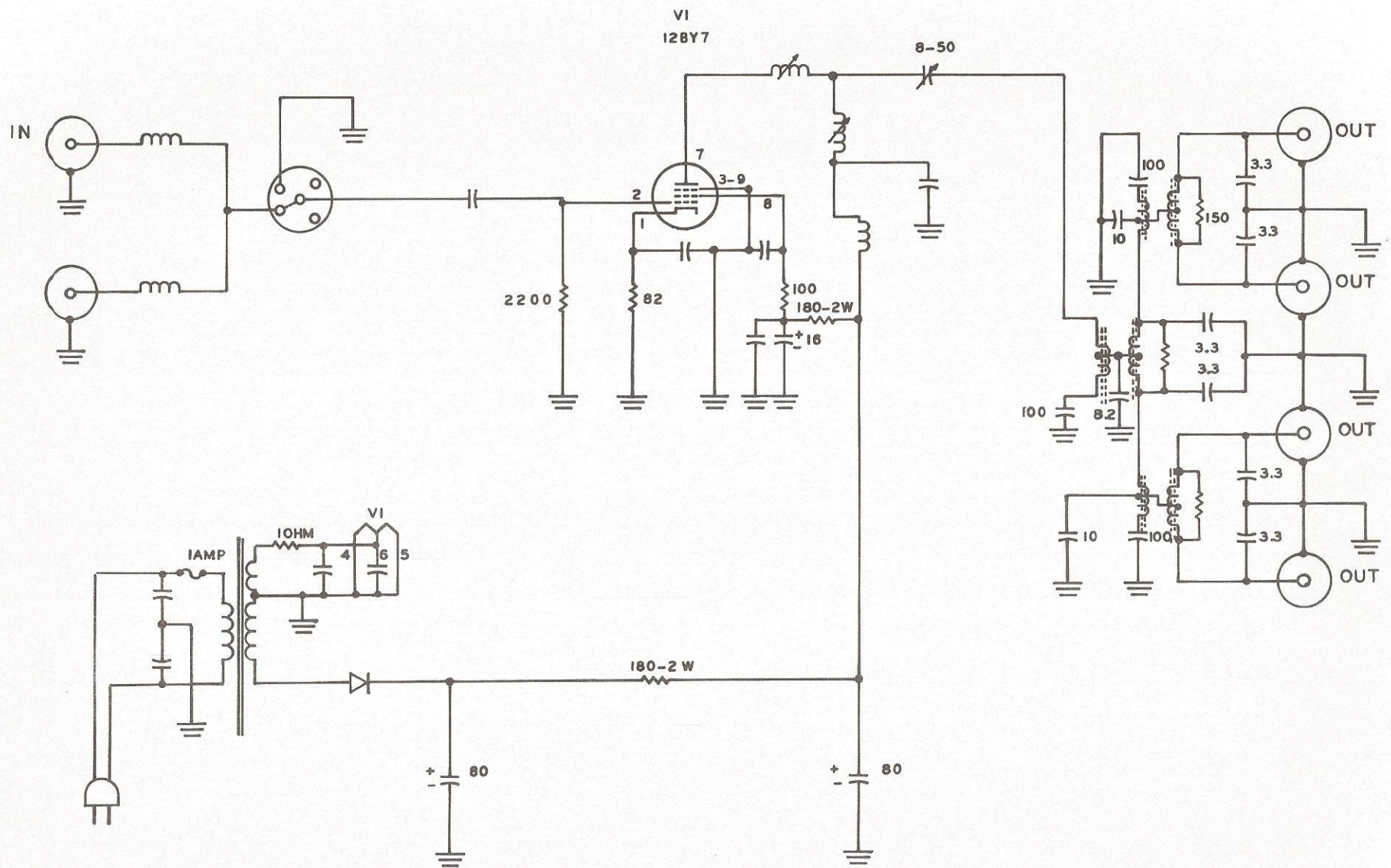
ALL RESISTORS NOT MARKED ARE  $\frac{1}{2}$  WATT.

ALL CAPACITORS NOT MARKED ARE 1000 MMFD  $\pm 10\%$  600 VOLTS.

HOLT POWER TRANSFORMER NO. 7079 FILTER CHOKE 1.5 HENRYS.

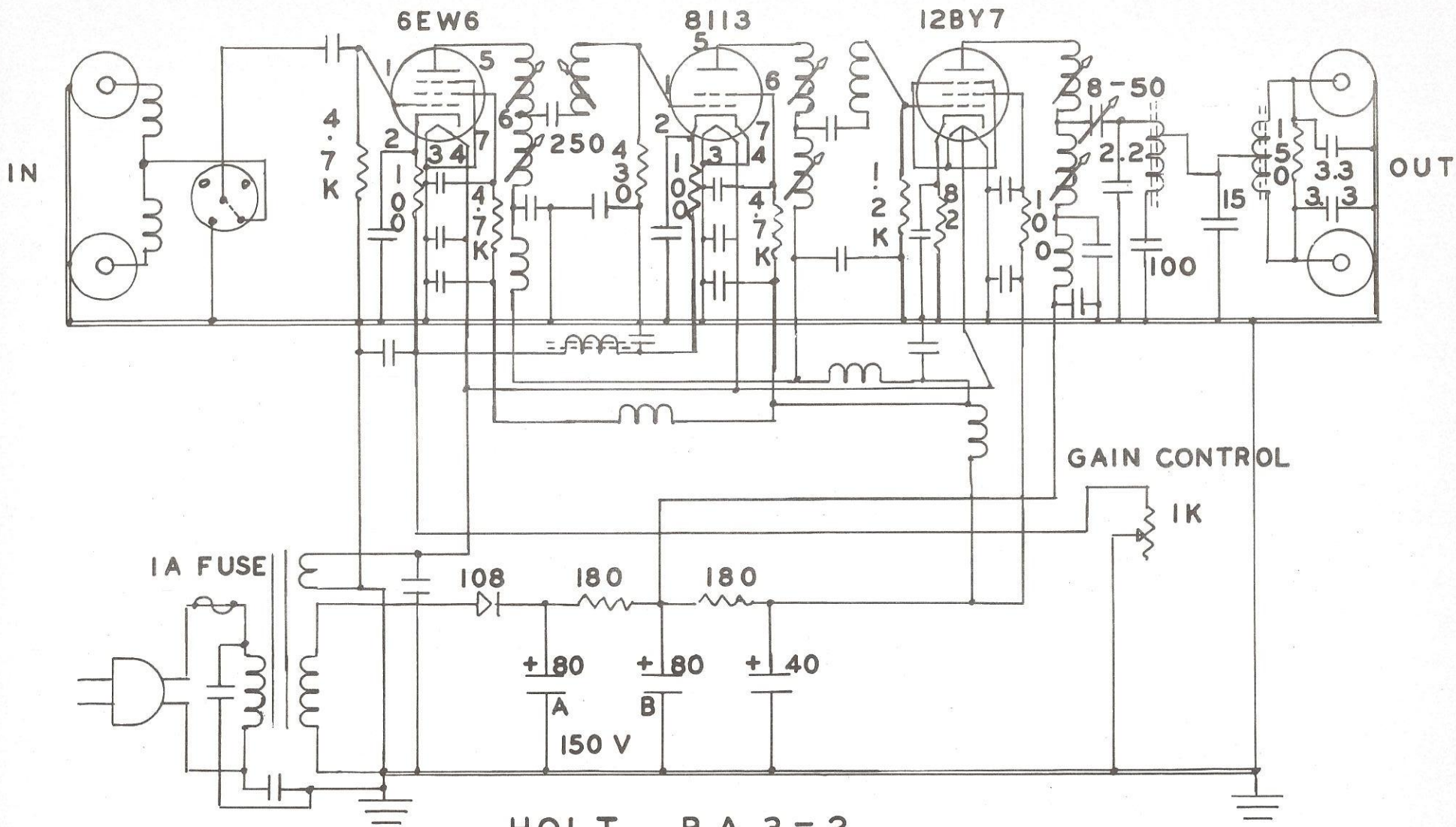
SELENIUM RECTIFIERS ARE SARKES TARZIAN MODEL 108 OR EQUIVALENT





HOLT MODEL BA 1-4 BRIDGING AMPLIFIER





HOLT B.A 3-2

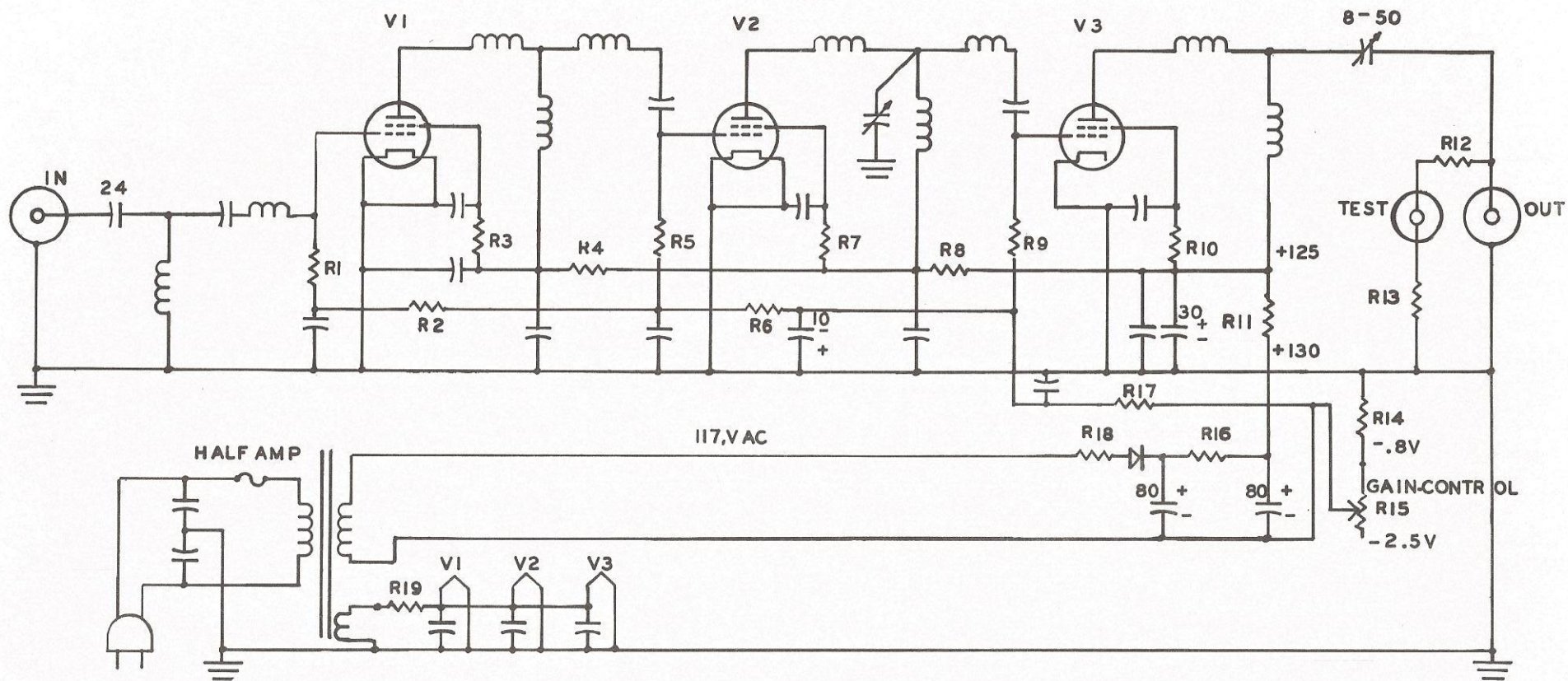
LOW BAND BRIDGING AMPLIFIER

ALL CAPACITORS NOT MARKED ARE 1000 MMFD  $\pm$  10% 600 V

ALL RESISTORS NOT MARKED ARE ONE HALF WATT

POWER TRANSFORMER HOLT 27-K-2





R1 - 330  
 R2 - 2200  
 R3 - 4700  
 R4 - 56  
 R5 - 470  
 R6 - 2200  
 R7 - 4700

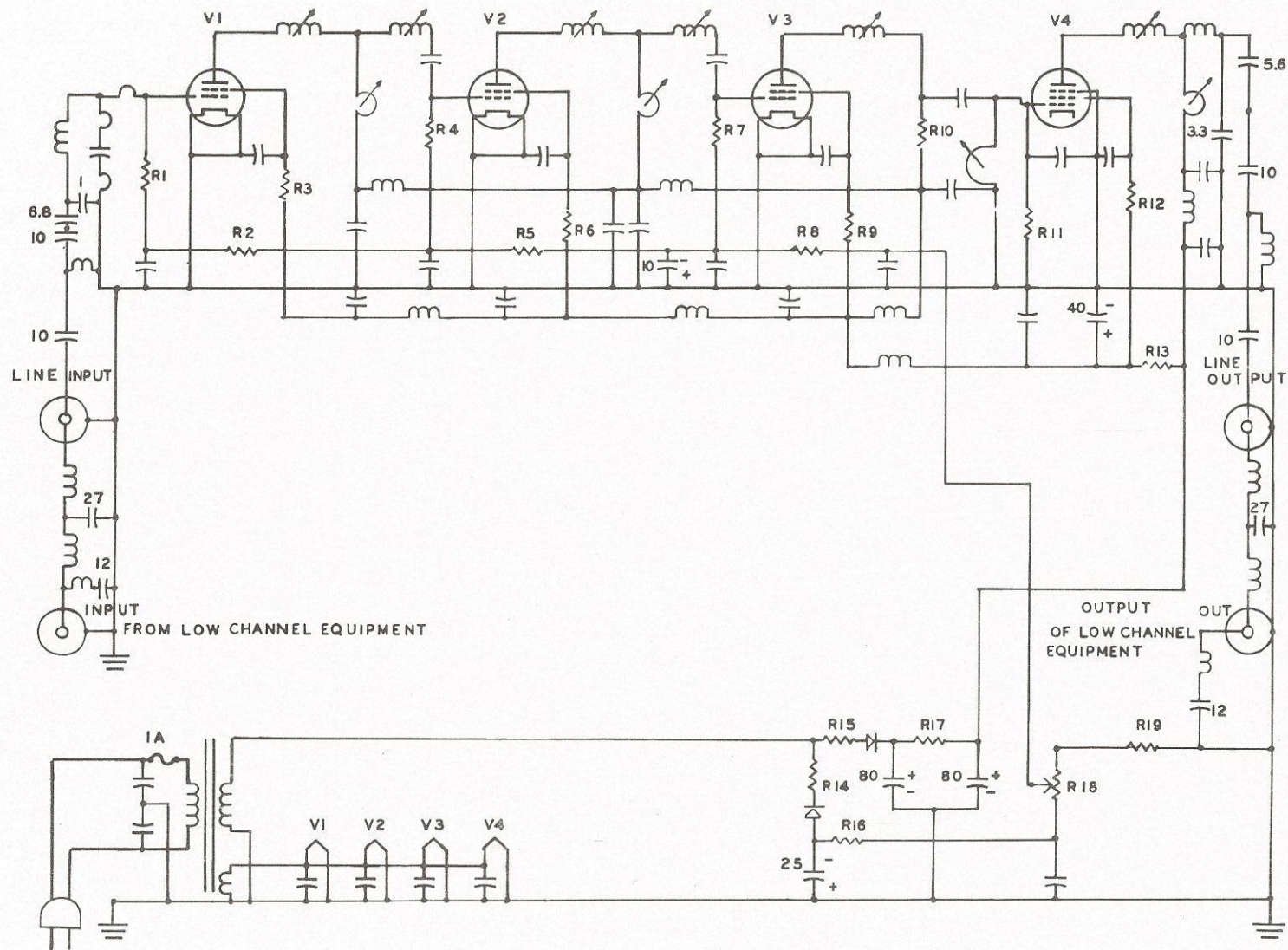
R8 - 56  
 R9 - 1000  
 R10 - 4700  
 R11 - 100  
 R12 - 560  
 R13 - 390  
 R14 - 22  
 R15 - 500 POT.

R16 - 180  
 R17 - 2200  
 R18 - 10  
 R19 - 1 OHM 1W  
 TRANSFORMER HOLT 3045

UNMARKED CAPACITORS ARE 1000MMFD  
 PLUS OR MINUS 10 PERCENT

## HOLT LEA LINE EXTENDER AMPLIFIER



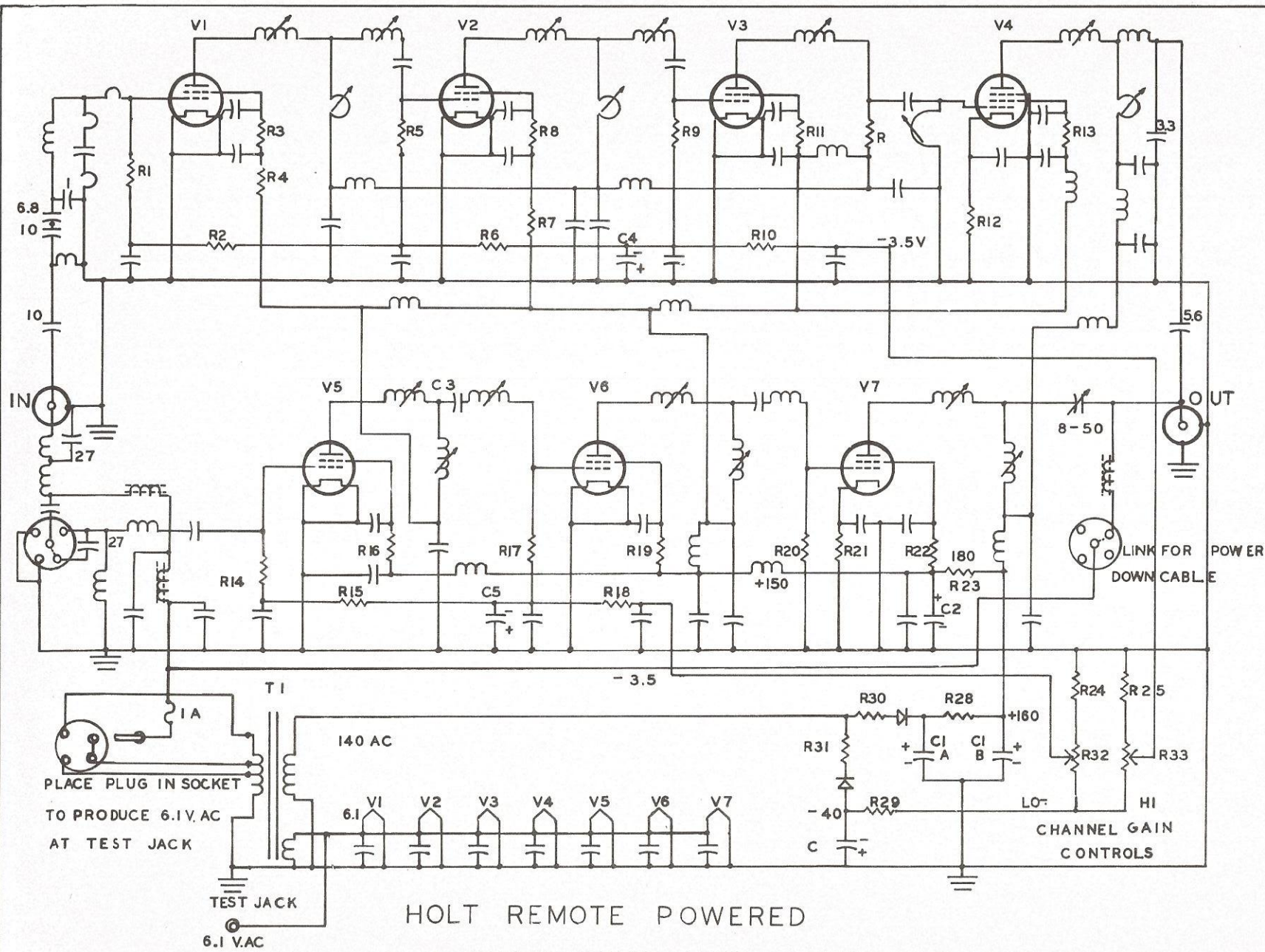


- R1 - 330
- R2 - 5600
- R3 - 4700
- R4 - 560
- R5 - 5600
- R6 - 4700
- R7 - 680
- R8 - 5600
- R9 - 4700
- R10 - 560
- R11 - 82
- R12 - 100
- R13 - 180 - 2W
- R14 - 47000
- R15 - 10
- R16 - 33000
- R17 - 100 - 10W
- R18 - 10K POT. CONTROL
- R19 - 2200

TRANSFORMER HOLT 27-K2  
 CAPACITORS UNMARKED ARE  
 1000MMFD  $\pm$  10%

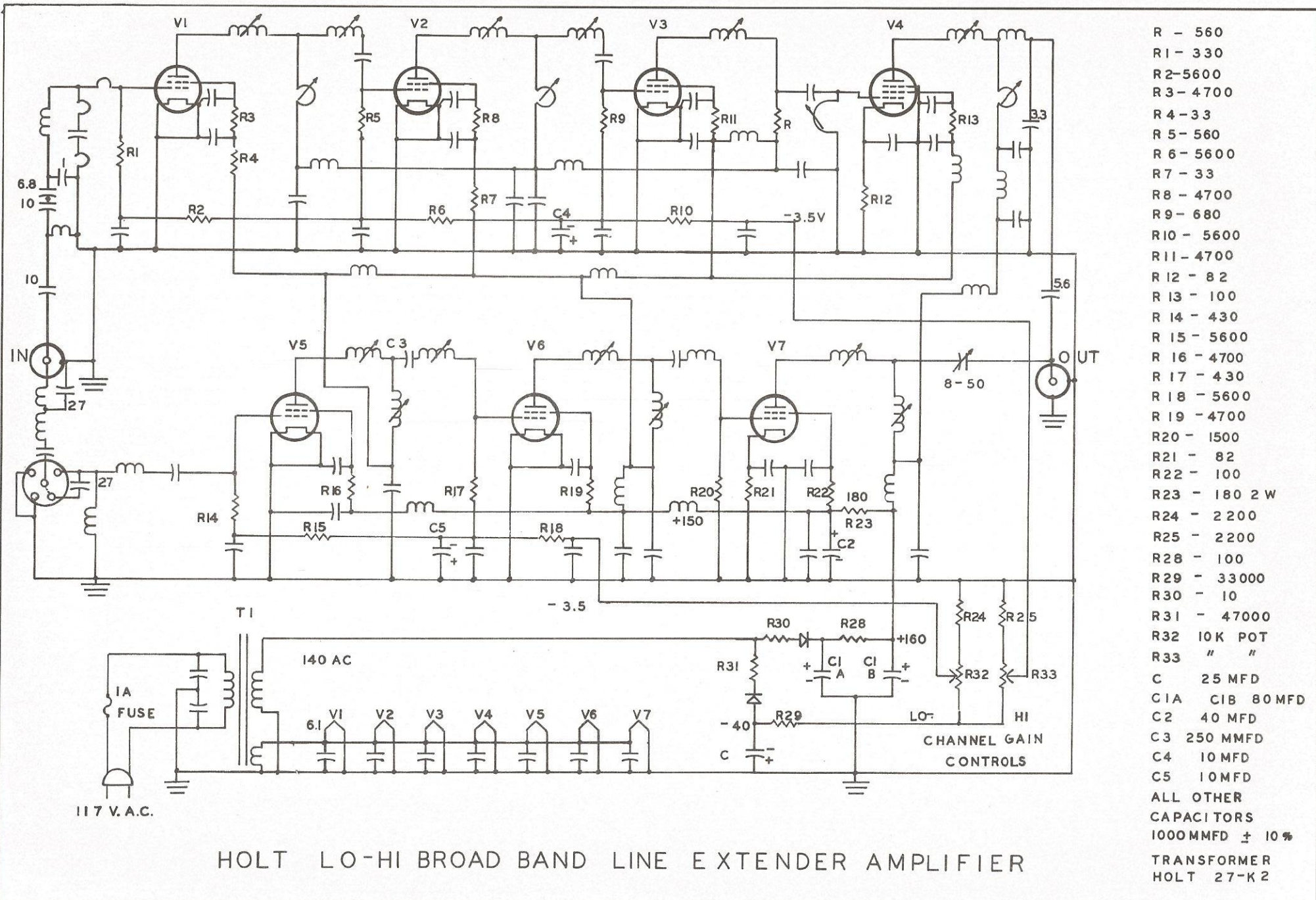
HOLT HIGH LEA DROP-IN LINE EXTENDER AMPLIFIER





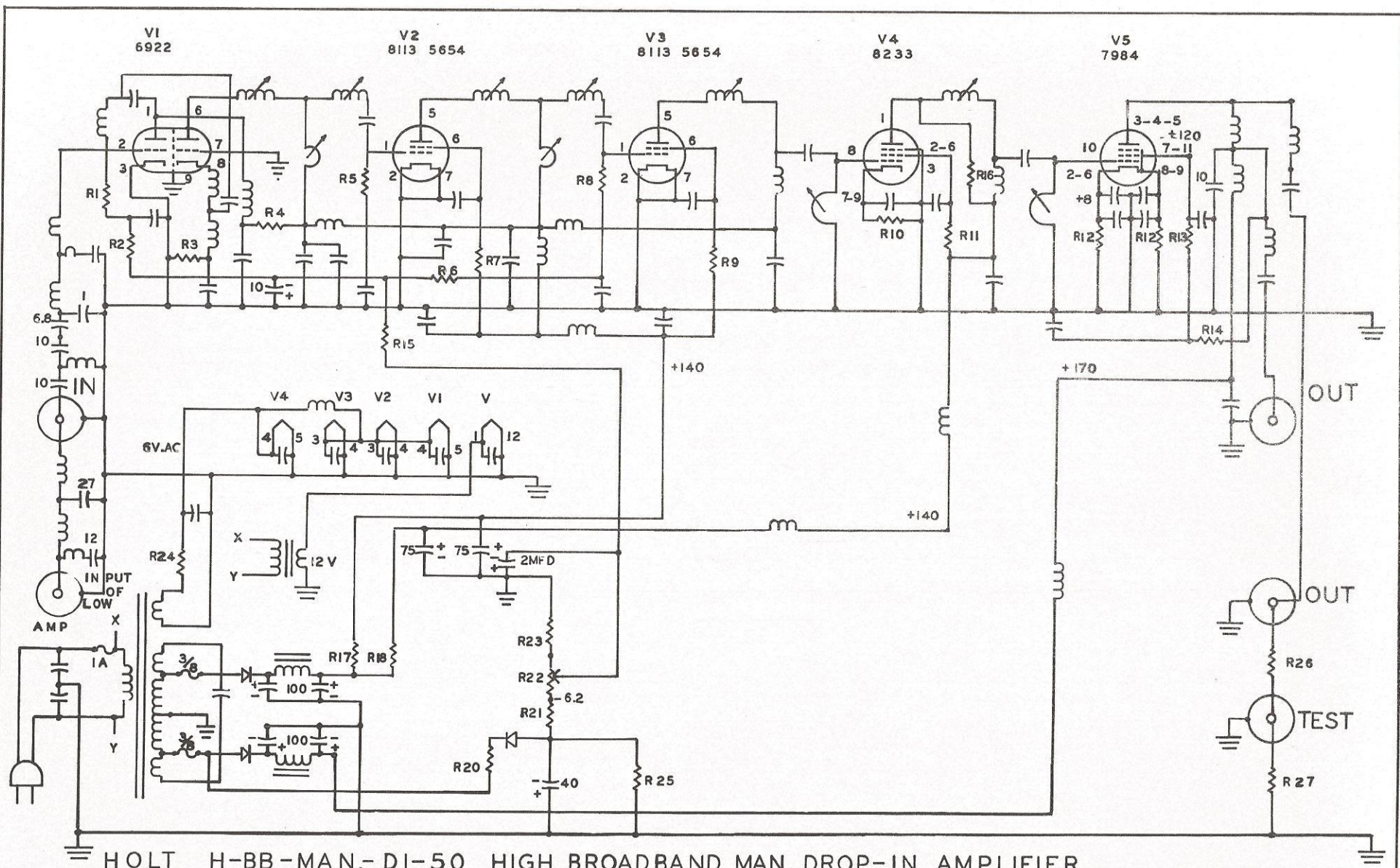
- R - 560
- R1 - 330
- R2 - 5600
- R3 - 4700
- R4 - 33
- R5 - 560
- R6 - 5600
- R7 - 33
- R8 - 4700
- R9 - 680
- R10 - 5600
- R11 - 4700
- R12 - 82
- R13 - 100
- R14 - 430
- R15 - 5600
- R16 - 4700
- R17 - 430
- R18 - 5600
- R19 - 4700
- R20 - 1500
- R21 - 82
- R22 - 100
- R23 - 180 2 W
- R24 - 2200
- R25 - 2200
- R28 - 100
- R29 - 33000
- R30 - 10
- R31 - 47000
- R32 10K POT
- R33 " "
- C 25 MFD
- C1A C1B 80 MFD
- C2 40 MFD
- C3 250 MMFD
- C4 10MFD
- C5 10MFD
- ALL OTHER CAPACITORS 1000MMFD ± 10%
- TRANSFORMER HOLT 27-K3





- R - 560
- R1 - 330
- R2 - 5600
- R3 - 4700
- R4 - 33
- R5 - 560
- R6 - 5600
- R7 - 33
- R8 - 4700
- R9 - 680
- R10 - 5600
- R11 - 4700
- R12 - 82
- R13 - 100
- R14 - 430
- R15 - 5600
- R16 - 4700
- R17 - 430
- R18 - 5600
- R19 - 4700
- R20 - 1500
- R21 - 82
- R22 - 100
- R23 - 180 2 W
- R24 - 2200
- R25 - 2200
- R28 - 100
- R29 - 33000
- R30 - 10
- R31 - 47000
- R32 10K POT
- R33 " "
- C 25 MFD
- C1A C1B 80 MFD
- C2 40 MFD
- C3 250 MMFD
- C4 10 MFD
- C5 10 MFD
- ALL OTHER CAPACITORS 1000MMFD ± 10%
- TRANSFORMER HOLT 27-K 2



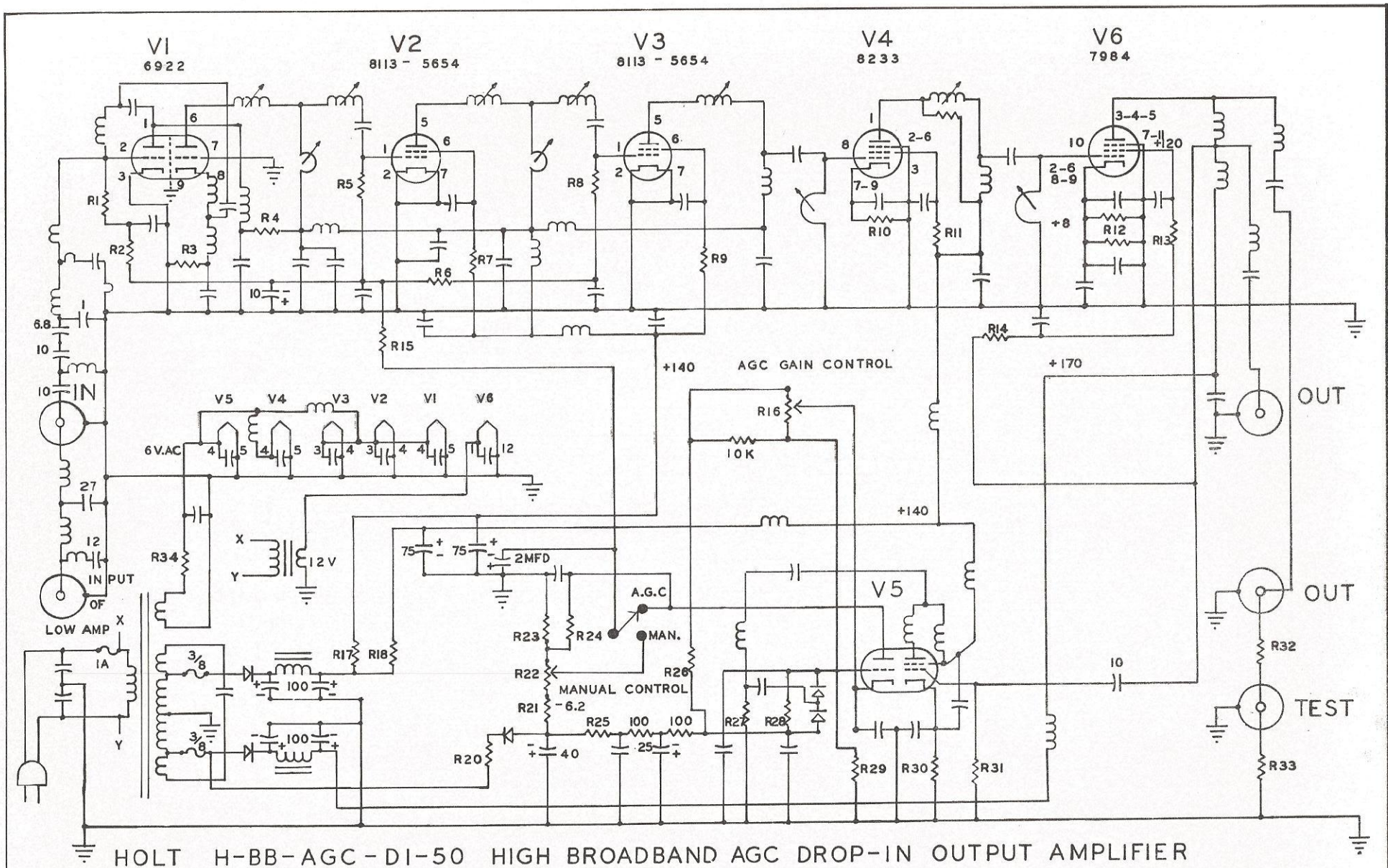


HOLT H-BB-MAN.-DI-50 HIGH BROADBAND MAN. DROP-IN AMPLIFIER

- |         |                   |             |                 |
|---------|-------------------|-------------|-----------------|
| R1-330  | R8-560            | R14-6.8     | R21-56K         |
| R2-5.6K | R9-4.7K           | R15-2.2K    | R22-10K-CONTROL |
| R3-270  | R10-56            | R16-2.7K    | R23-1.5K        |
| R4-100  | R11-100           | R17-400-10W | R24-.25-3W      |
| R5-680  | R12-150 OFF PIN 2 | R18-300-10W | R25-47K         |
| R6-5.6K | 150 OFF 8,9       | R20-4.7K    | R26-560         |
| R7-4.7K | R13-4.7K          |             | R27-390         |

CAPACITORS ARE 1000 MMFD EXCEPT WHERE MARKED  
 RESISTORS ARE HALF WATT " " "  
 TRANSFORMER IS HOLT CV 162A-1 REGULATING  
 RECTIFIERS - 2 - 1F8 SILICONS

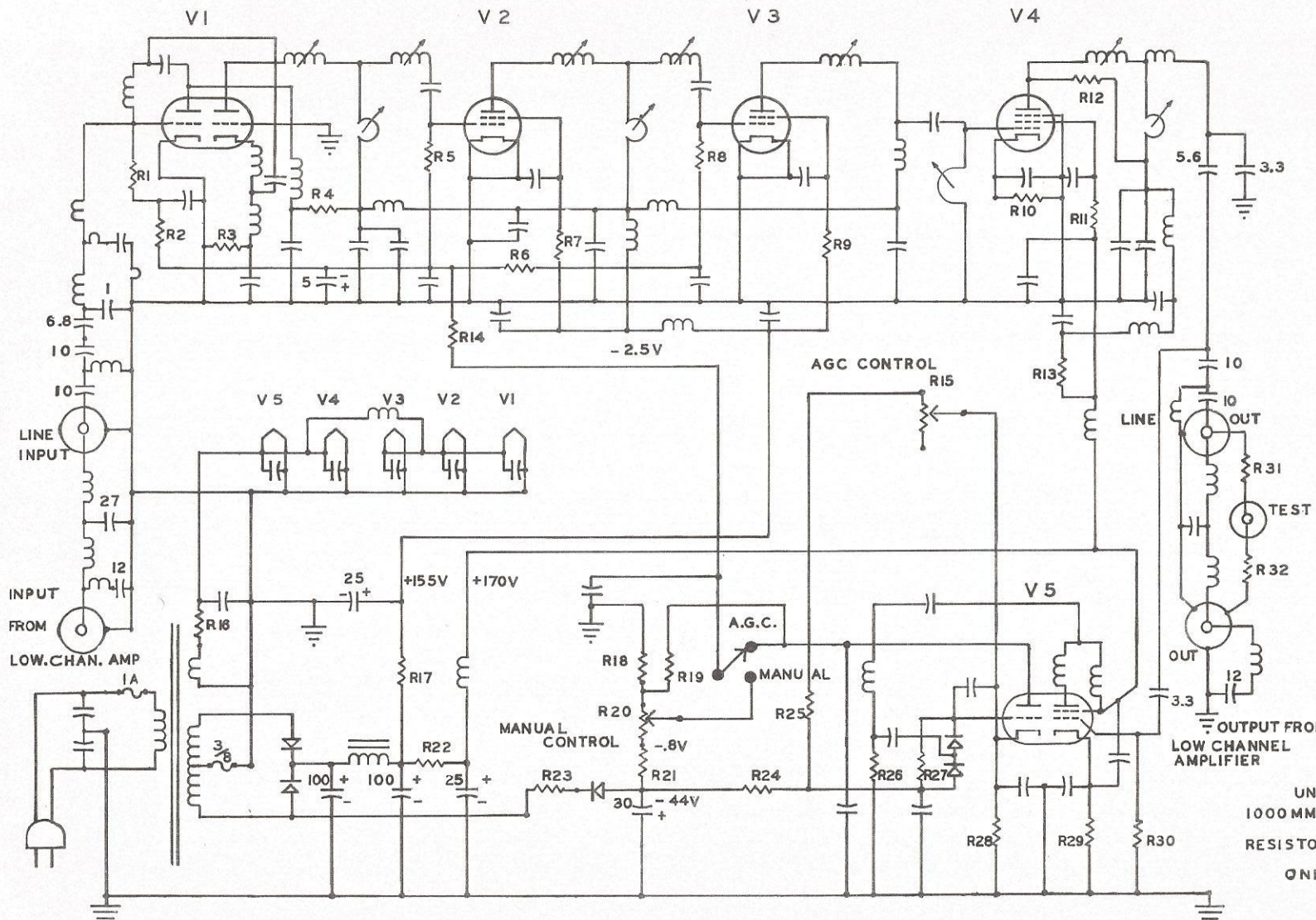




HOLT H-BB-AGC-DI-50 HIGH BROADBAND AGC DROP-IN OUTPUT AMPLIFIER

- |            |                     |                   |                   |              |  |
|------------|---------------------|-------------------|-------------------|--------------|--|
| R1 - 330   | R8 - 560            | R14 - 6.8 K       | R21 - 5.6 K       | R28 - 470 K  | ALL CAPACITORS UNMARKED ARE 1000MMFD PLUS OR MINUS TEN PERCENT |
| R2 - 5.6 K | R9 - 4.7 K          | R15 - 2.2 K       | R22 - 10K-CONTROL | R29 - 68 K   |  |
| R3 - 270   | R10 - 56            | R16 - 10K CONTROL | R23 - 1.5 K       | R30 - 68 K   | ALL RESISTORS UNMARKED ARE ONE HALF WATT                       |
| R4 - 100   | R11 - 100           | R17 - 400-10 W    | R24 - 220 K       | R31 - 47 K   |  |
| R5 - 680   | R12 - 150 OFF PIN 2 | R18 - 200-10 W    | R25 - 2.2 K       | R32 - 560    | POWER TRANSFORMER HOLT CV162A - I REGULATING TRANSFORMER       |
| R6 - 5.6 K | 150 OFF 8,9         | R20 - 4.7 K       | R26 - 820         | R33 - 390    |  |
| R7 - 4.7 K | R13 - 4.7 K         |                   | R27 - 820         | R34 - .25-3W | RECTIFIERS IN POWER SUPPLY 2 - 1F8 SILICONS                    |





- R1 - 330
- R2 - 5600
- R3 - 270
- R4 - 100
- R5 - 680
- R6 - 5600
- R7 - 4700
- R8 - 680
- R9 - 4700
- R10 - 82
- R11 - 100
- R12 - 680
- R13 - 10K 5 W
- R14 - 2200
- R15 - 10K CONTROL
- R16 - .36 3 W
- R17 - 400 10 W
- R18 - 1500
- R19 - 220K
- R20 - 10K CONTROL
- R21 - 68K
- R22 - 200 10 W
- R23 - 39 K
- R24 - 2200
- R25 - 820
- R26 - 820
- R27 - 470K
- R28 - 68K
- R29 - 220
- R30 - 47K
- R31 - 560
- R32 - 390

OUTPUT FROM  
LOW CHANNEL  
AMPLIFIER

TRANSFORMER 7079

UNMARKED CAPACITORS ARE  
1000MMFD ± 10 PERCENT

RESISTORS NOT MARKED ARE  
ONE HALF WATT

HOLT MODEL HBB-AGC DROP-IN BROAD BAND LINE AMPLIFIER

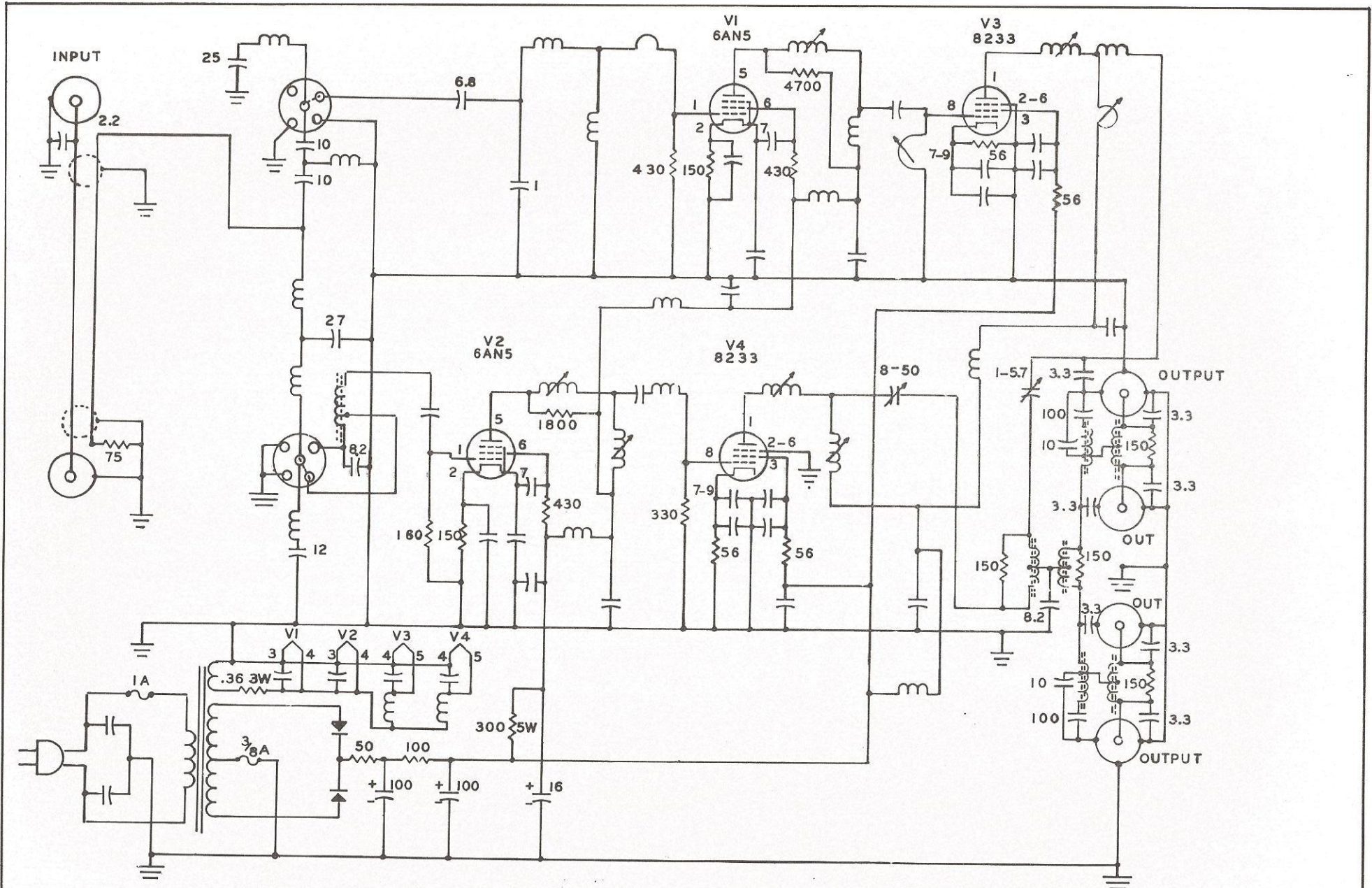








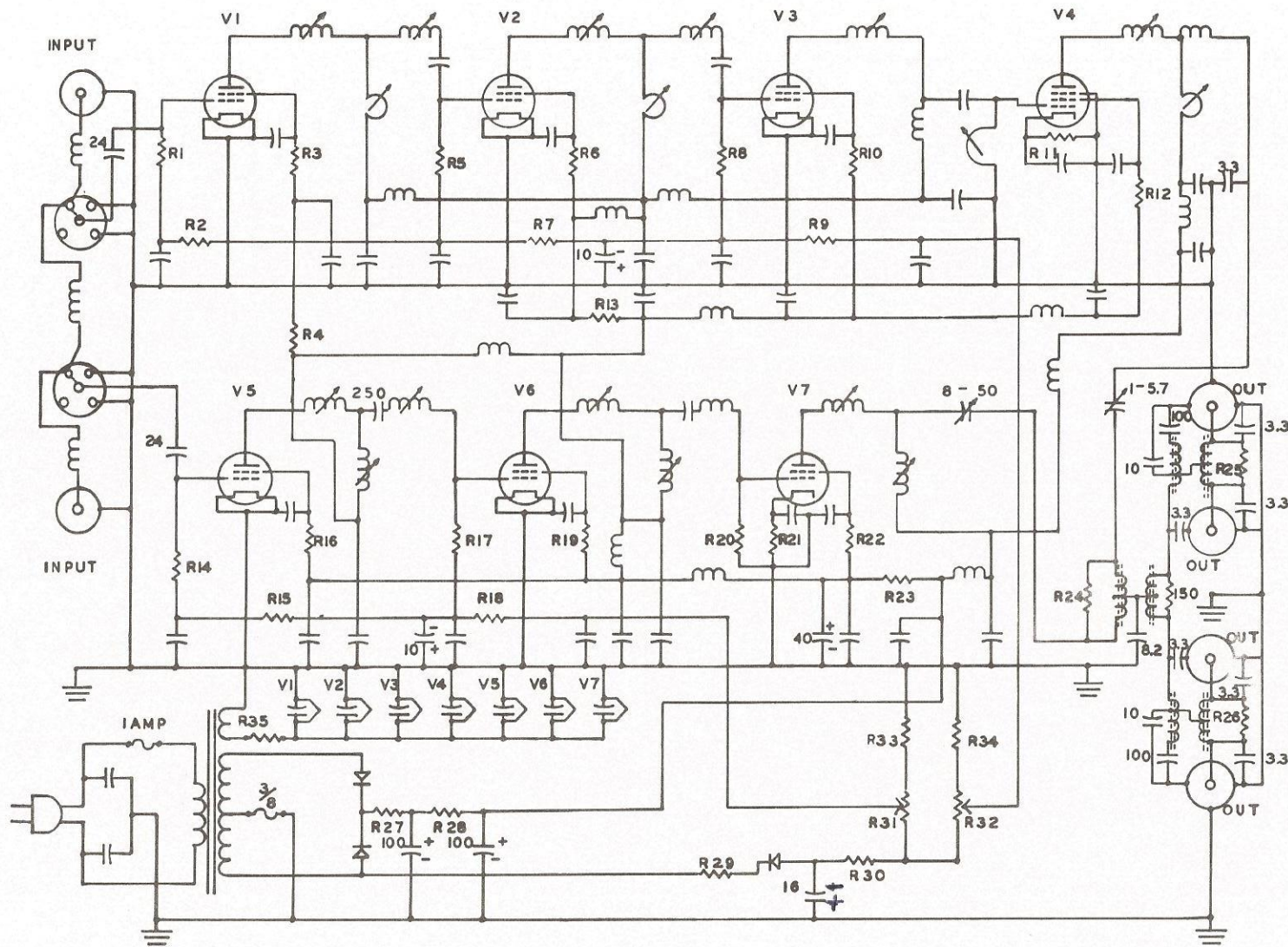




HOLT BA 4-4-50 DCI BRIDGING AMPLIFIER

CAPACITORS UNMARKED ARE 1000MMFD  
 RESISTORS " " HALF WATT  
 TRANSFORMER IS HOLT 7079



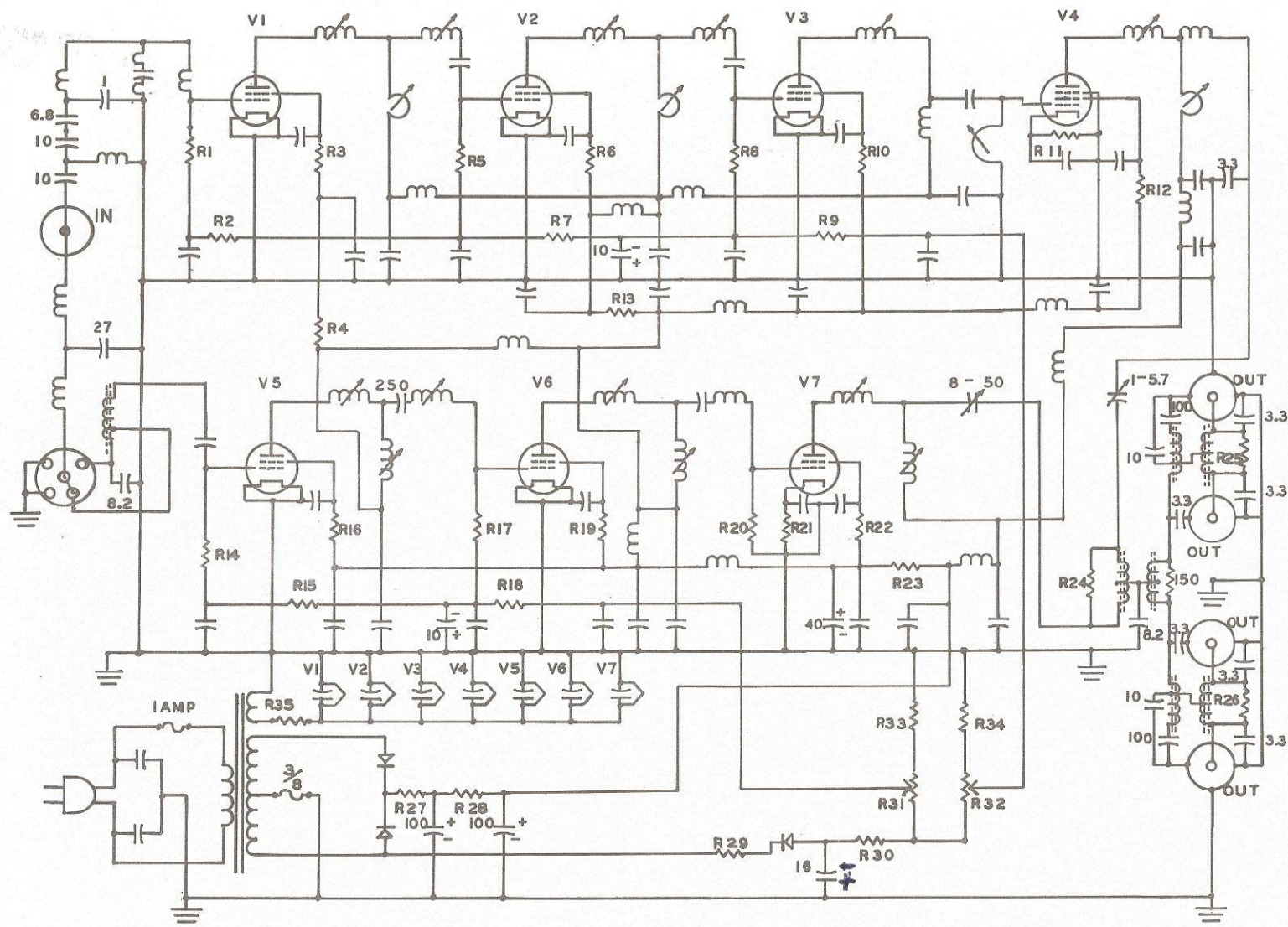


- R1 - 4700
- R2 - 5600
- R3 - 4700
- R4 - 33
- R5 - 560
- R6 - 4700
- R7 - 5600
- R8 - 680
- R9 - 5600
- R10 - 4700
- R11 - 82
- R12 - 100
- R13 - 33
- R14 - 4700
- R15 - 5600
- R16 - 4700
- R17 - 430
- R18 - 5600
- R19 - 4700
- R20 - 820
- R21 - 82
- R22 - 100
- R23 - 400 10W
- R24 - 150
- R25 - 150
- R26 - 150
- R27 - 50 10W
- R28 - 100 10W
- R29 - 47000
- R30 - 33000
- R31 - 10000 POT.
- R32 - " "
- R33 - 2200
- R34 - 2200
- R35 - .25 3W

TRANSFORMER 7079  
 UNMARKED CAPACITORS  
 1000MFD ± 10%

HOLT BA-7-4 LOW - HIGH BROAD BAND BRIDGING AMPLIFIER





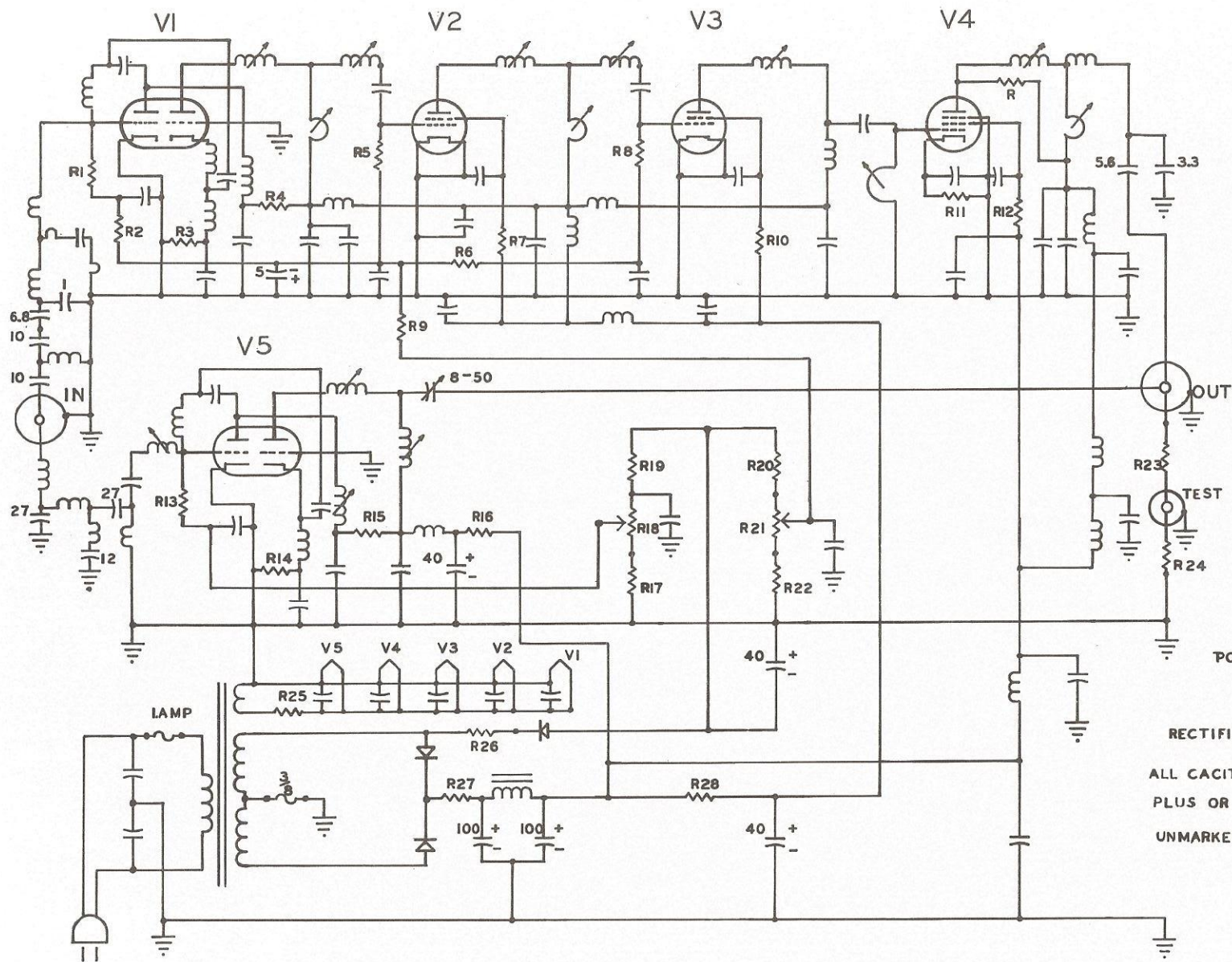
- R1 - 4700
- R2 - 5600
- R3 - 4700
- R4 - 33
- R5 - 560
- R6 - 4700
- R7 - 5600
- R8 - 680
- R9 - 5600
- R10 - 4700
- R11 - 82
- R12 - 100
- R13 - 33
- R14 - 4700
- R15 - 5600
- R16 - 4700
- R17 - 430
- R18 - 5600
- R19 - 4700
- R20 - 820
- R21 - 82
- R22 - 100
- R23 - 400 10W
- R24 - 150
- R25 - 150
- R26 - 150
- R27 - 50 10W
- R28 - 100 10W
- R29 - 47000
- R30 - 33000
- R31 - 10000 POT.
- R32 - "
- R33 - 2200
- R34 - 2200
- R35 - .25 3W

TRANSFORMER 7079

UNMARKED CAPACITORS  
1000 MMFD ± 10%

HOLT TA-7-4 LOW - HIGH BROAD BAND BRIDGING AMPLIFIER





- R - 1000
- R1 - 330
- R2 - 5600
- R3 - 270
- R4 - 100
- R5 - 560
- R6 - 5600
- R7 - 4700
- R8 - 680
- R9 - 5600
- R10 - 4700
- R11 - 82
- R12 - 100
- R13 - 160
- R14 - 470
- R15 - 100
- R16 - 500 - 10W
- R17 - 1500
- R18 - 10,000 CONTROL
- R19 - 6800
- R20 - 6800
- R21 - 10,000 CONTROL
- R22 - 1500
- R23 - 560
- R24 - 390
- R25 - .36 - 3W
- R26 - 33000
- R27 - 75
- R28 - 400 - 10W

POWER TRANSFORMER HOLT 7079

FILTER CHOKE 1.5 HENRY

RECTIFIERS 1F8

ALL CAPACITORS UNMARKED ARE 1000MMFD  
PLUS OR MINUS 10 PERCENT

UNMARKED RESISTORS ARE ONE HALF WATT

HOLT LH-BB-MANUAL MIDWAY BROADBAND LINE AMPLIFIER



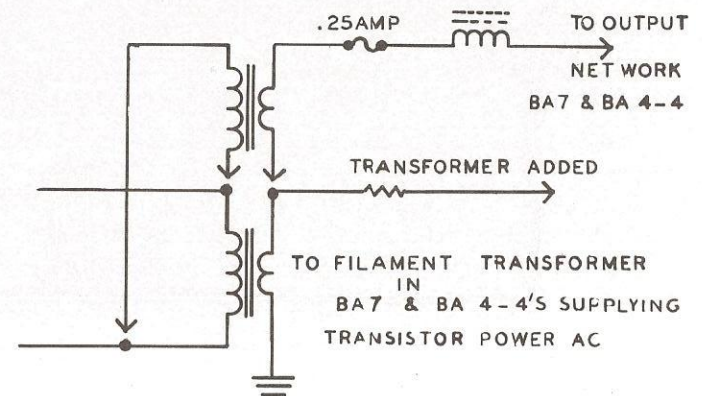
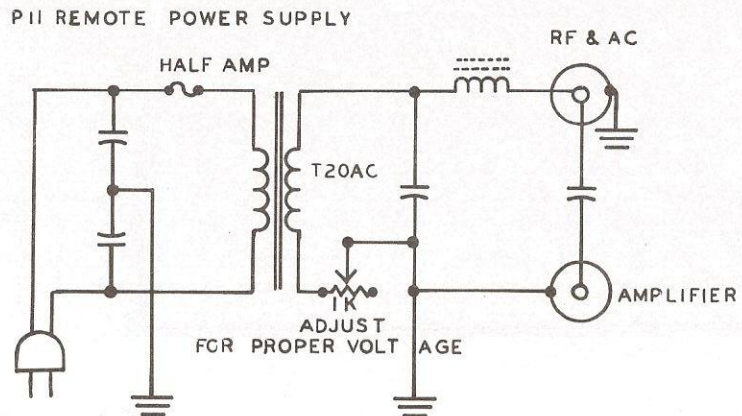
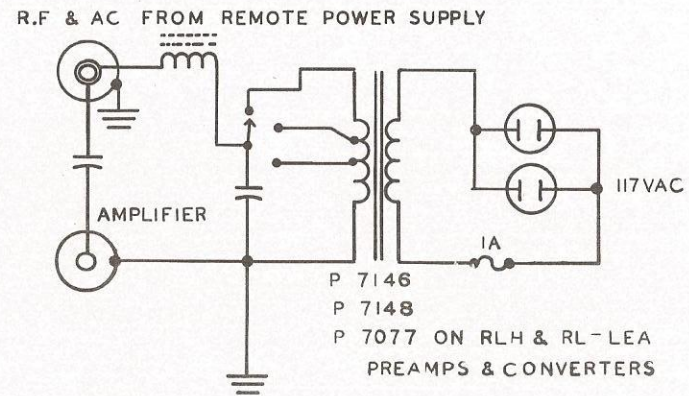
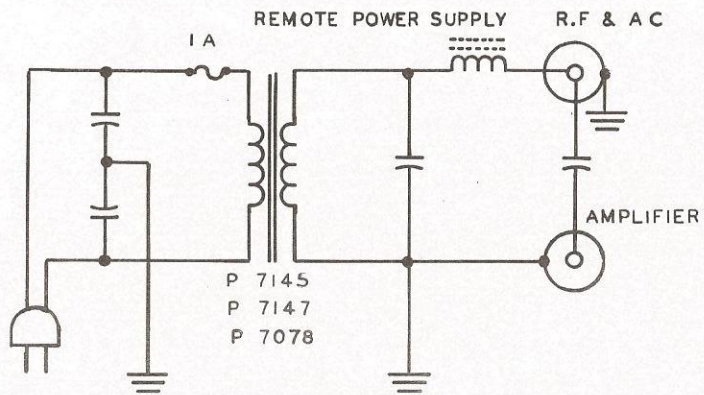




# AC POWER SUPPLIES FOR HOLT REMOTELY POWERED EQUIPMENT

MODELS P3  
 P3A SENDS RF & AC DOWN LINE  
 P5  
 P7  
 P12 15 VAC

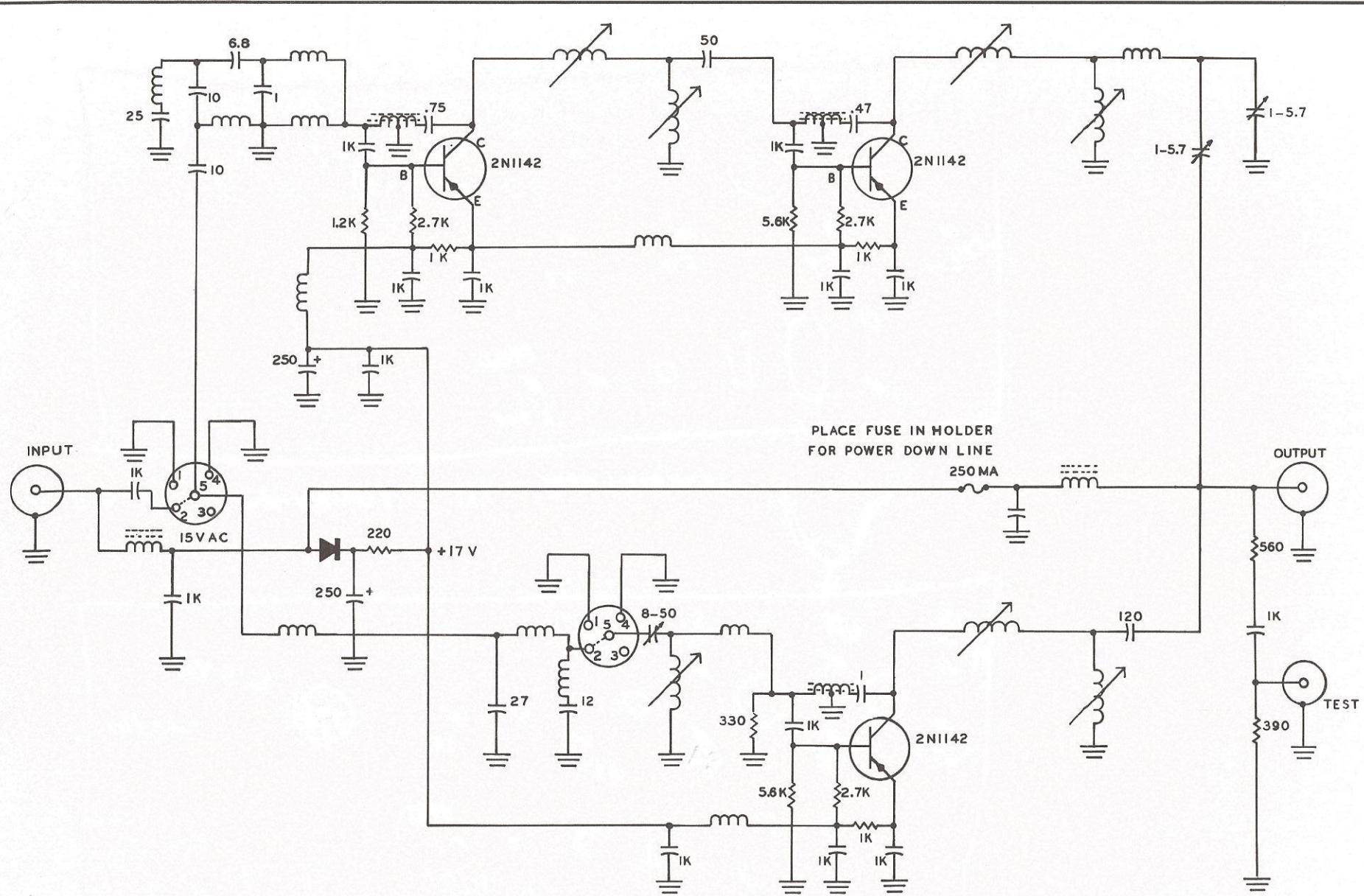
MODELS P4  
 P6 FEEDS RF & AC TO EQUIPMENT











PLACE FUSE IN HOLDER  
FOR POWER DOWN LINE

HOLT RLH LEA-T REMOTELY POWERED LINE EXTENDER AMPLIFIER



