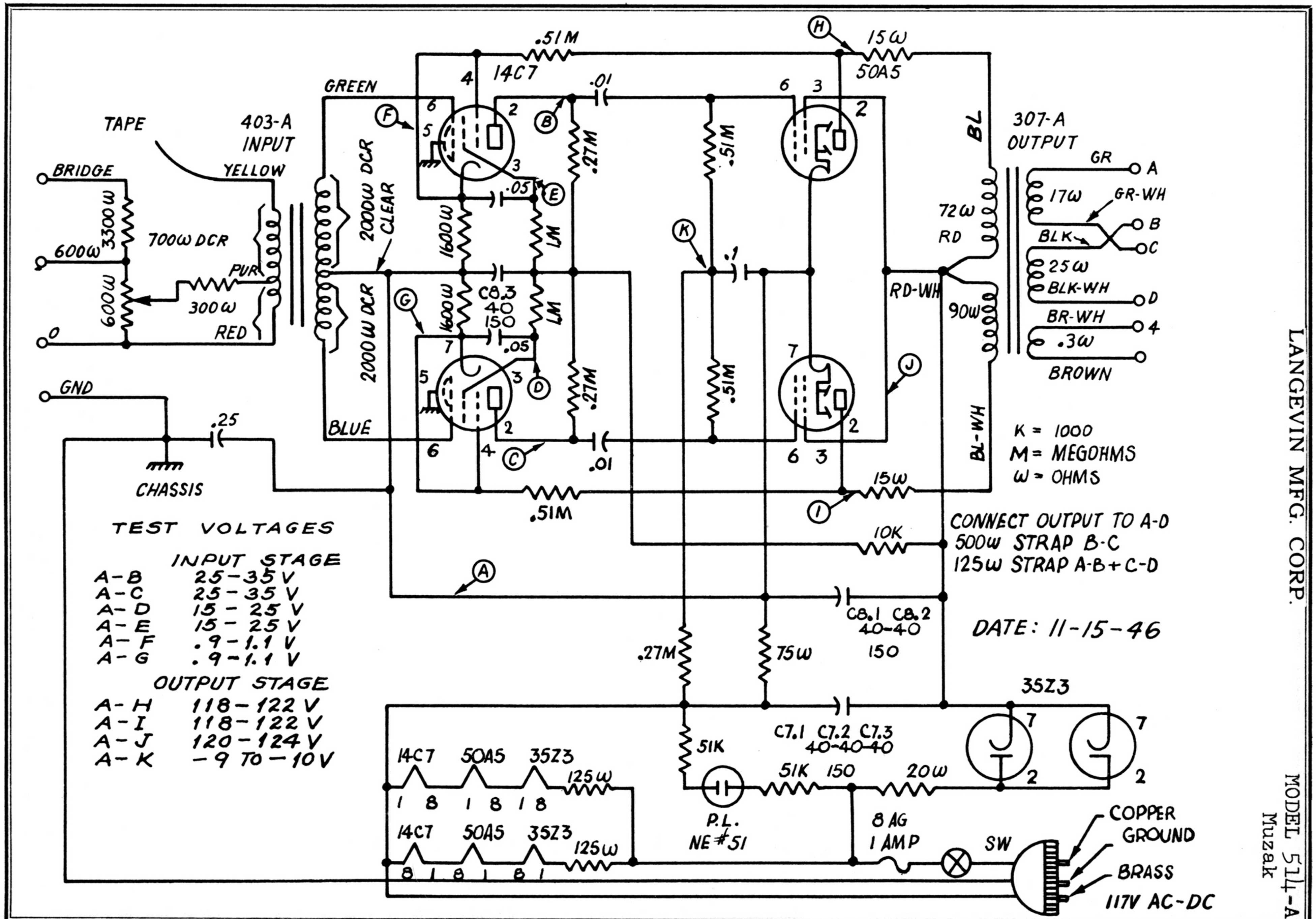
TAPE
403-A
INPUT
YELLOW
BRIDGE
3300ω
700ω DCR
600ω
PUR
600ω
300ω
RED
0
2000ω DCR
CLEAR
2000ω DCR
GREEN
BLUE
14C7
.51M
.01
15ω
50A5
.27M
.51M
1600ω
LM
C8.3
40
150
.05
.1
GND
.25
CHASSIS
307-A
OUTPUT
BL
GR
17ω
GR-WH
BLK
72ω
RD
RD-WH
25ω
BLK-WH
90ω
BR-WH
.3ω
BROWN
BL-WH
A
B
C
D
4
K = 1000
M = MEGOHMS
ω = OHMS
CONNECT OUTPUT TO A-D
500ω STRAP B-C
125ω STRAP A-B + C-D
10K
C8.1 C8.2
40-40
150
DATE: 11-15-46
TEST VOLTAGES
INPUT STAGE
A-B 25-35 V
A-C 25-35 V
A-D 15-25 V
A-E 15-25 V
A-F .9-1.1 V
A-G .9-1.1 V
OUTPUT STAGE
A-H 118-122 V
A-I 118-122 V
A-J 120-124 V
A-K -9 TO -10 V
.27M
75ω
35Z3
C7.1 C7.2 C7.3
40-40-40
51K
14C7 50A5 35Z3
125ω
P.L.
NE #51
51K 150
20ω
8 AG
1 AMP
SW
COPPER
GROUND
BRASS
117V AC-DC
LANGEVIN MFG. CORP.
MODEL 514-A
Muzak

MODEL 514-A
Muzak

LANGEVIN MFG. CORP.

TYPE: Two stage, medium gain, 4 watt power amplifier for AC or DC operation.

TYPICAL ELECTRICAL CHARACTERISTICS

Gain: From 600 Ohm source, approximately 43 db on bridging input. Approximately 61 db on 600 Ohm input connection.

Operates From:- Nominal source impedance at 600 Ohms

Operates Into:- Load impedance of 4, 125, or 500 Ohms

Output Power: Approximately 3 watts with less than 2% or, 4 watts with less than 5% total harmonic distortion at 400 Cycles single frequency.

Output Noise: 42 db below ∠35 VU (7 db below .001 watt) or better, depending upon tube balance and power line conditions.

FREQUENCY CHARACTERISTICS: ∠1.0 db over the range 50-15,000 Cycles

Volume Control: Operates on either input impedance

Power Consumption: 117 Volts AC or DC 72 VA at 120 Volts

Fuse: Type 3AG 1 Ampere

TUBES: 2 - 35Z3 2 - 5JA5 2 - 14C7

NOTES:

1. Almost all AC-DC operated amplifier units are subject to a wide variation of operating conditions due to the many different types of power lines on which they operate. By this is meant that the grounding of the power lines, grounding of neutral leg, and the bonding to ground of the conduit or BX used in the installation have a definite effect on the noise level and stability of AC-DC amplifier equipment.

   The 514-A Amplifier is normally supplied with the "0" input, chassis ground, and "0" output terminals strapped together (externally) on the terminal board. In this condition, the amplifier requires no other grounding. However, if installation requirements demand a variation of the standard ground strapping, it may be necessary to experiment with other grounding conditions for lowest noise levels and good stability.

2. When operating from DC, OBSERVE POLARITY, BLACK wire in the power cord is connected to copper lug which in turn should plug to positive of DC line or, ungrounded side of AC line.

   WHITE wire is connected to brass lug which is negative on DC lines or, grounded side of AC lines.

   RED wire, which is connected to the amplifier chassis, may or may not be connected to ground depending upon local noise conditions.

3. Tube filaments are so wired that one 35Z3, 50A5, 14C7 are in series and in case of failure in one series filament circuits, the amplifier will operate on the other half of the tube line-up.

4. On AC operation, some type of interference, due to electrical appliances, may be greatly reduced by the use of a 117 volt AC line isolation transformer having an electro-static shield.