MAGNETIC TAPE RECORDER

The Ampex Model 350-2 is a dual track audio tape recorder for recording and playing back stereophonic signals in which the crosstalk between channels is not critical. The overall performance and operation are similar to a Model 350.

The Model 350-2 differs from a Model 350 in the following manner:

- 1. The Model 350-2 is available as a three case portable or for rack mounting. When rack mounted, it occupies 36 3/4 inches of rack space.
- 2. A special head assembly has been incorporated. In place of the record head, an assembly consisting of two heads of multichannel design has been made in which one head is stacked above the other, with the two gaps in line. One of these heads covers the upper portion of the tape, the other head covers the lower portion. A similar assembly has been incorporated in place of the standard playback head. Thus it is possible to record, playback, and monitor two channels simultaneously. The standard erase head is provided.
- 3. A catalog number 5701 or 5701-1 Electronic Chassis (Figure 1 or 2) is supplied for Track #1 (upper track). This assembly incorporates the standard erase and bias oscillator. A catalog number 5701-2 or 5701-3 Electronic Chassis (Figure 1A or 2A) is supplied for Track #2 (lower track). This assembly is identical to the Track #1 Electronic Chassis, except the erase and bias oscillator has been replaced with a bias buffer amplifier. The input of the buffer amplifier (the connector labelled Bias J412P) receives the bias signal through a Bias Interconnecting Cable connected to the Erase Head Connector on the Track #1 Electronic Chassis. The buffer amplifier amplifies the bias signal to provide the bias current for the Track #2 record head. The Erase head is connected to the Erase Head Connector on the Track #2 Electronic Chassis.
- 4. The Installation and Operation Procedures for each track of the Model 350-2 are identical to that of the Model 350. Rack mount installation should be made in the following order, from top to bottom: Power Supply No. 1, Power Supply No. 2, Mechanical Assembly, Track #1 Electronic Assembly, Track #2 Electronic Assembly. The head cables for Track #1 are color-coded red. The fuse, F402 in the Track #1 Electronic Assembly has been increased to 5 amperes to accommodate the additional load of the Track #2 Electronic Assembly.

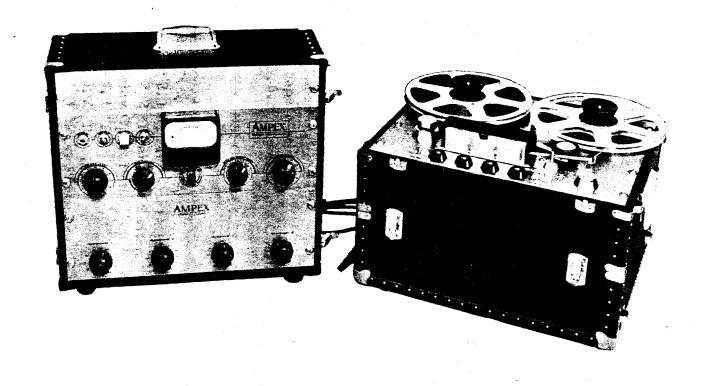
SPECIAL INSTRUCTIONS FOR MODEL 350-2

When adjusting the erase and bias on the Model 350-2, interaction between the units makes necessary a series of adjustments and readjustments until a state of balance has been attained.

- a. Turn R460, BIAS control, on the Slave Electronic Assembly full counterclockwise.
- b. Adjust the Master Erase (C438) to approximately zero on the VU meter, as described in steps 1 and 2 which follow.
- c. Adjust the Master Bias (R460) as described in steps 3, 4, 5, and 6 which follow.
- d. Adjust the Slave Bias (R460) as described in steps 3, 4, 5, and 6 which follow.
- e. Recheck the Master erase and Master bias. If necessary, repeat the entire procedure until the proper operating levels for the erase and bias are attained.

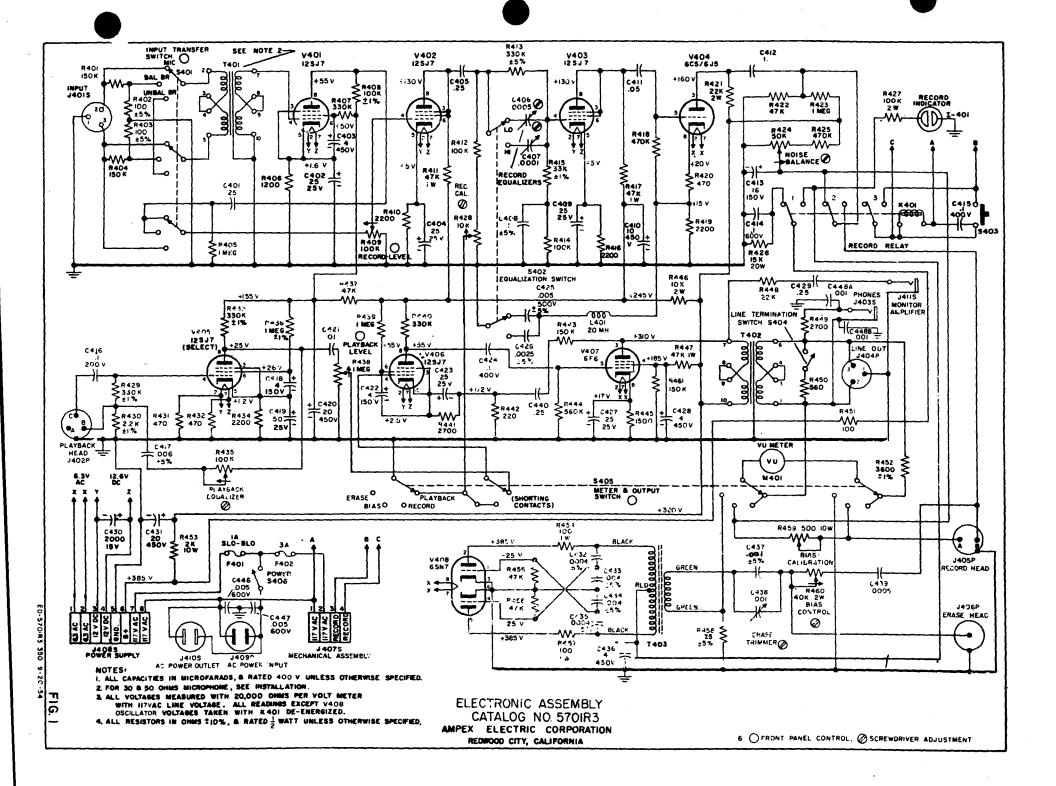
CAUTION

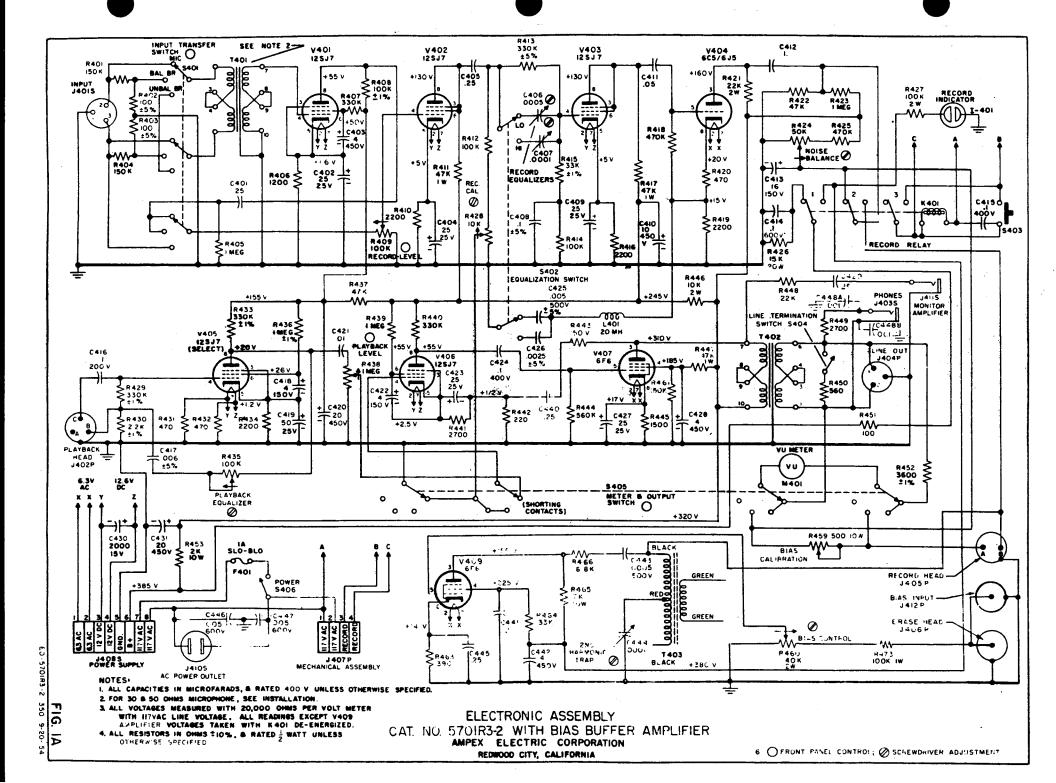
C444 in the Slave Electronic Assembly, in conjunction with one winding of T403, provides a second harmonic trap. The adjustment of this circuit has been made at the factory, and the setting of C444 should not be changed. If any change were made, it is possible that the circuit would resonate at the fundamental frequency (90 KC). This would result in insufficient voltage to properly bias the record head.




MODEL 350 TWO CASE PORTABLE
(WITH FOUR CHANNEL MIXER)

AMPEX ELECTRIC CORPORATION
REDWOOD CITY, CALIFORNIA







(Applies to Model 350 -2, 7-1/2 - 15 ips)

Ampex Corporation Redwood City, California

Fig. 1. Master Electronic Assembly - Catalog No. 5701R4

R413

330 K

12SJ7

C405

V403

+130 V

C412

R424 50K R423 I MEG

6 OFRONT PANEL CONTROL Ø SCREWDRIVER ADJUSTMENT

RECORD

V404 6C5/6J5

+160 V

.C411

INPUT TRANSFER

R401

150 K

INPUT

SEE NOTE 2

T401 -

4. ALL RESISTORS IN OHMS TIQ%. & RATED - WATT UNLESS

OTHERWISE SPECIFIED

12SJ7


+'85 V

Fig. 1-A. Slave Electronic Assembly - Catalog No. 5701R4-2

(Applies to Model 350B-2, 7-1/2 - 15 ips)

Ampex Corporation

Redwood City, California



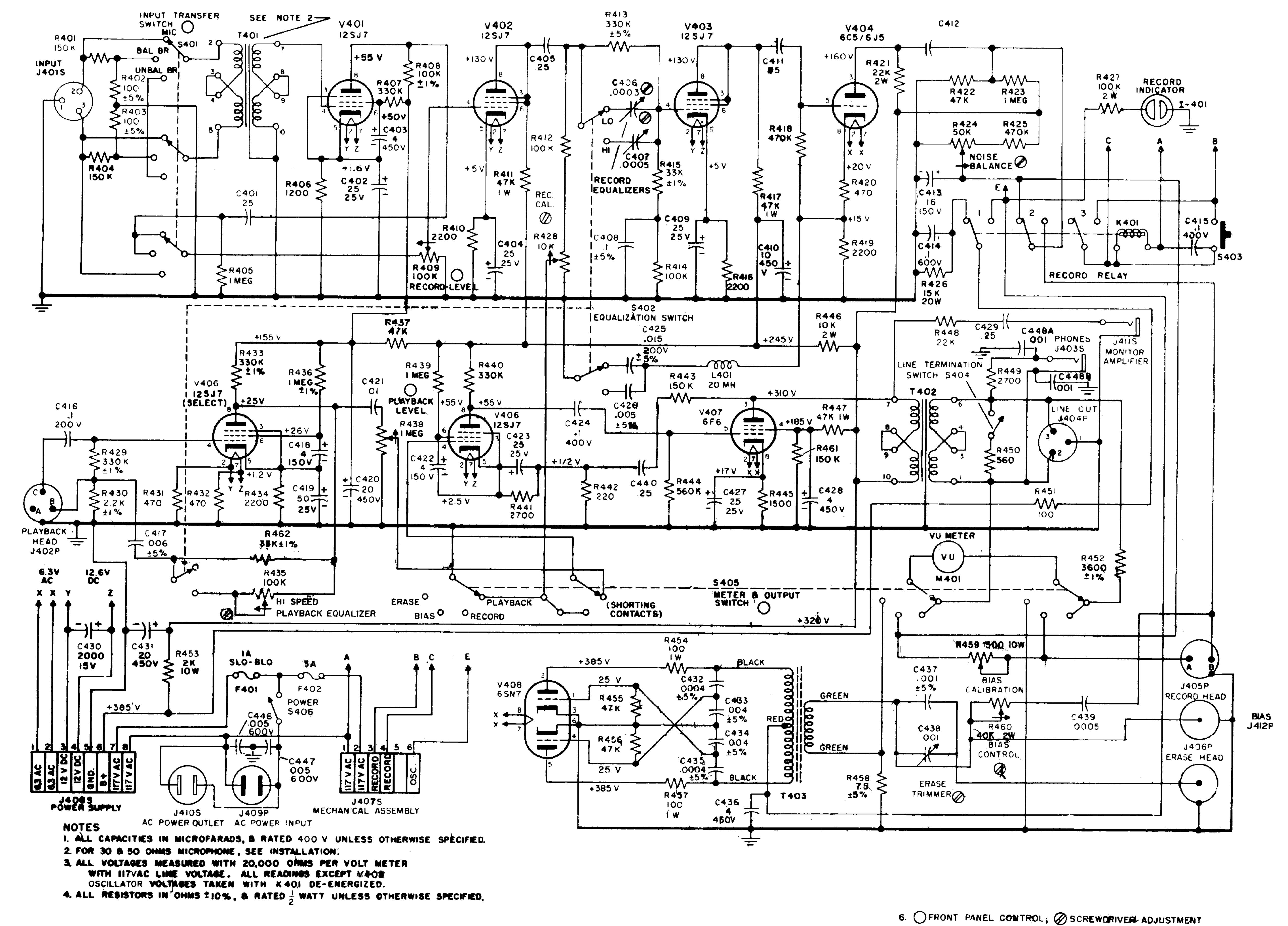


Fig. 2. Master Electronic Assembly - Catalog No. 5701R4-1
(Applies to Model 350 -2, 3-3/4 - 7-1/2 ips)

Ampex Corporation
Redwood City, California

Fig. 1-A. Slave Electronic Assembly - Catalog No. 6157-1 (S3221)

(Applies to Model 350B-2, 3-3/4 - 7-1/2 ips)

Ampex Corporation

Redwood City, California

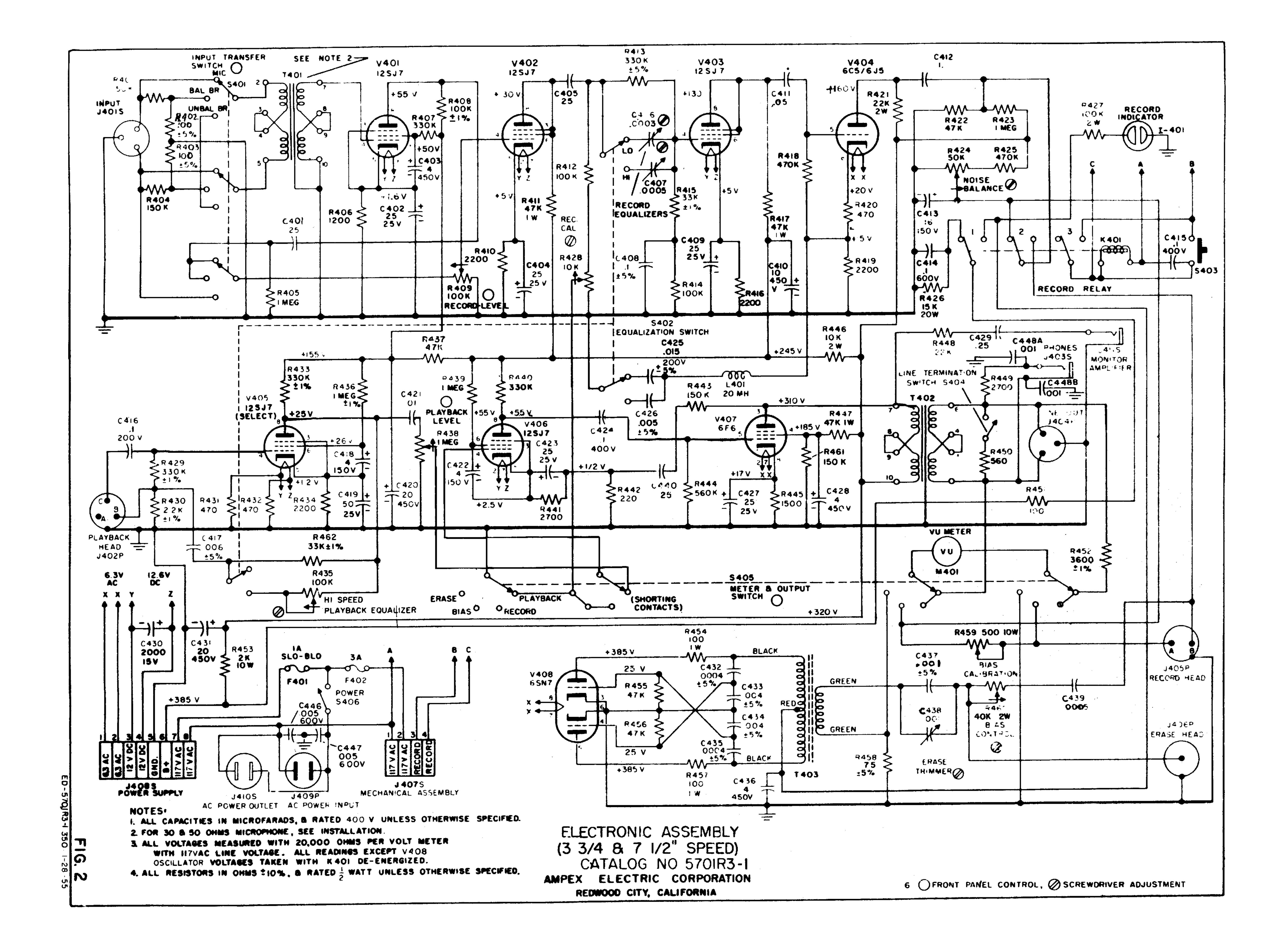
Fig. 2-A. Slave Electronic Assembly - Catalog No. 5710R4-3
(Applies to Model 350B-2, 3-3/4 - 7-1/2 ips)


Ampex Corporation
Redwood City, California

6. OFRONT PANEL CONTROL. SCREWDRIVER ADJUSTMENT

4. ALL RESISTORS IN OHMS 210%. & RATED - WATT UNLESS

OTHERWISE SPECIFIED





FREQUENCY IN CYCLES PER SECOND

FIG. 5A
INPUT FOR HIGH IMPEDANCE MICROPHONE
(SEE INSTALLATION)

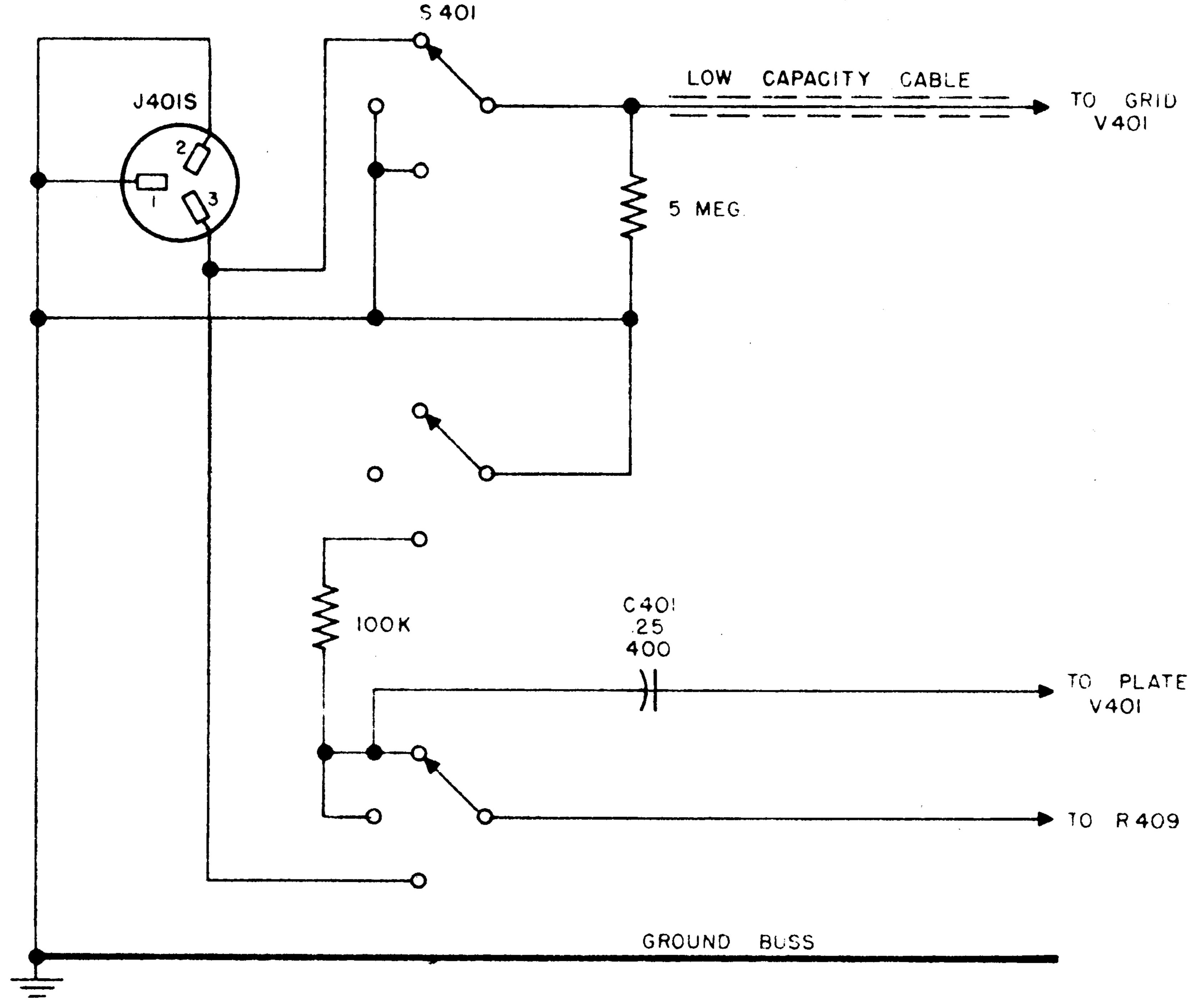
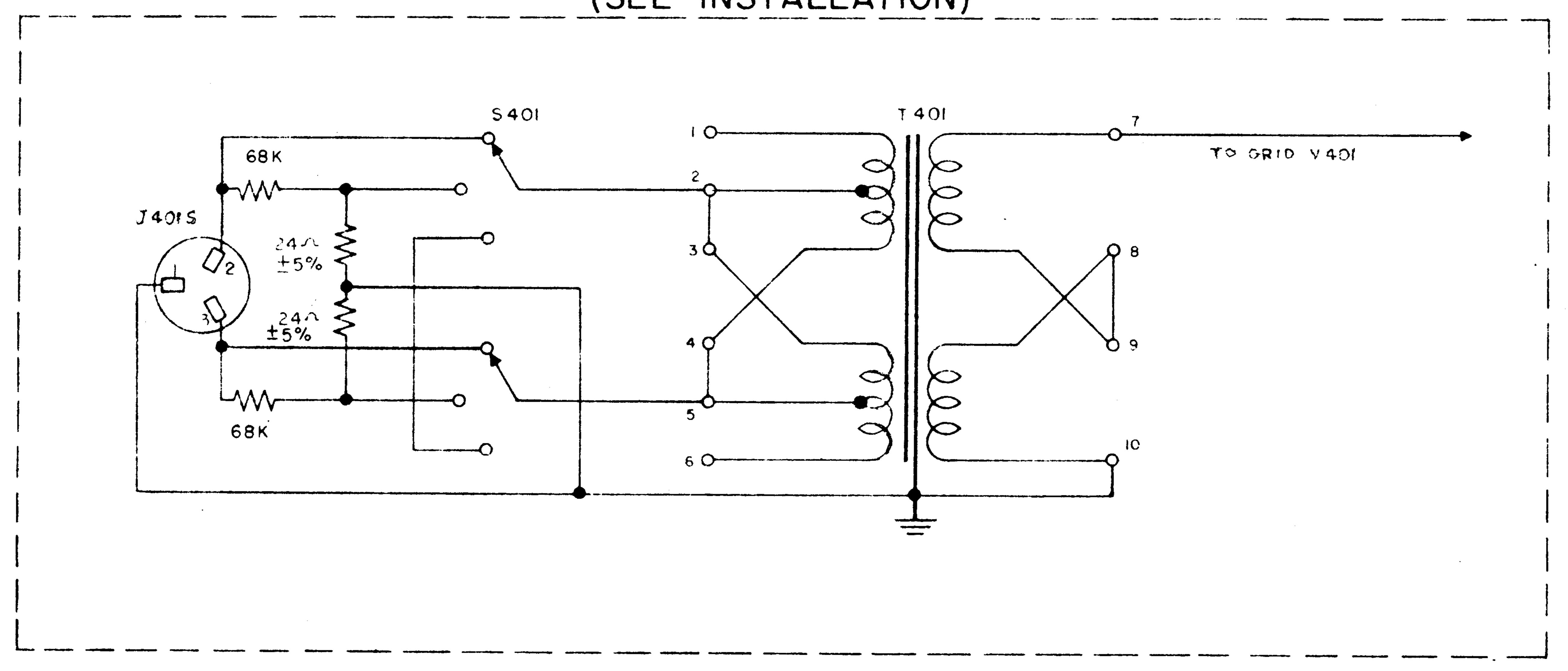
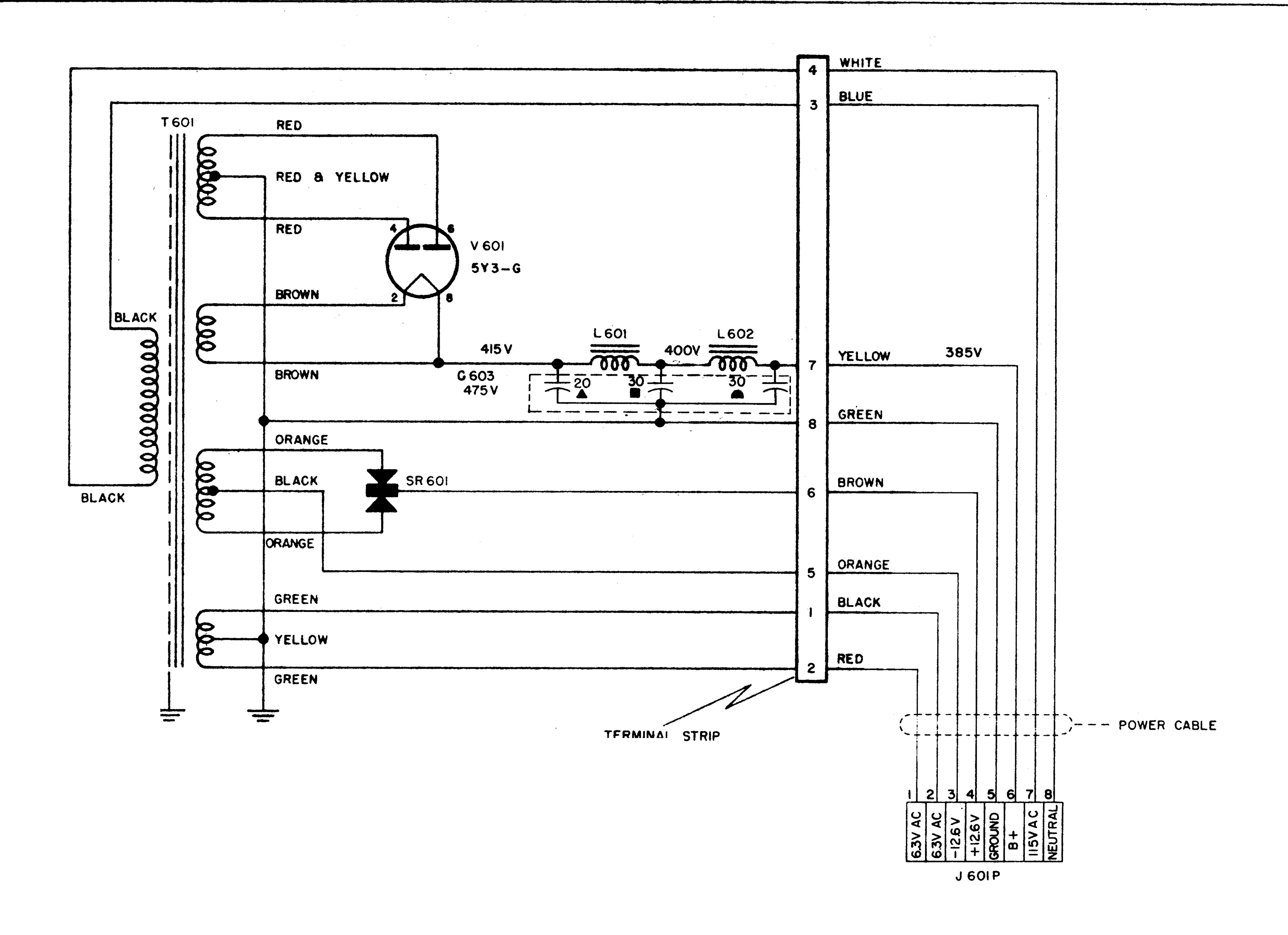


FIG. 5B
INPUT TRANSFORMER CONNECTION FOR
30 & 50 OHMS MICROPHONES
(SEE INSTALLATION)





NOTE: ALL VOLTAGES MEASURED WITH 20,000 OHMS PER VOLT METER WITH 117V AC POWER INPUT. J601P IS CONNECTED, TO THE ELECTRONICS WITH THE RECORD RELAY DE-ENERGIZED

TIG.

4

POWER SUPPLY
CAT. NO. 3741
AMPEX ELECTRIC CORPORATION
REDWOOD CITY, CALIFORNIA

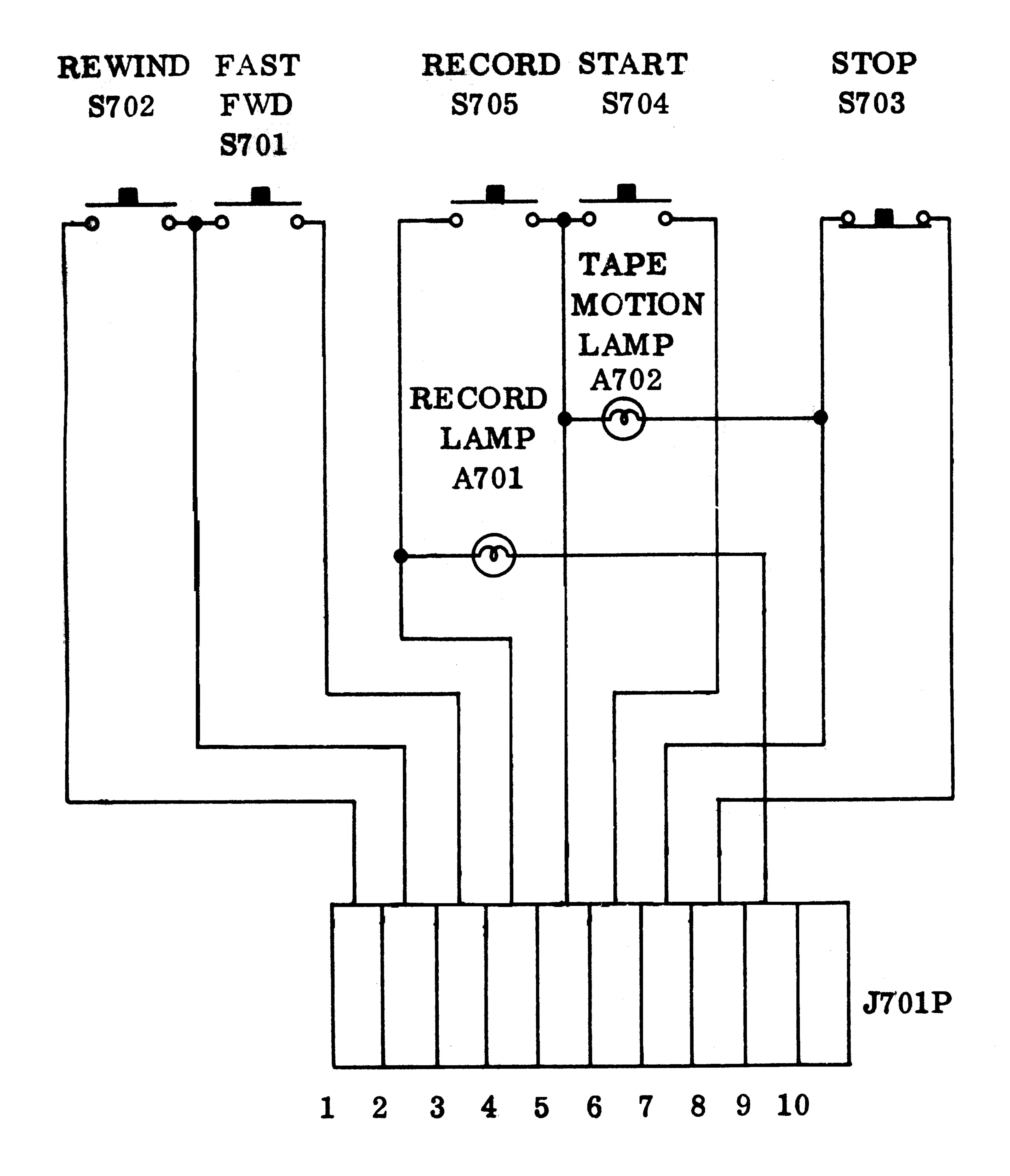


FIG. 15. SCHEMATIC DIAGRAM, REMOTE CONTROL UNIT