

# SONY

## hi-fi Service Bulletin No. 62

SONY CORPORATION OF AMERICA

Technical Publications Department

47-47 Van Dam Street, Long Island City, New York 11101

Model: TA-4650, -5650, -8650  
TAN-5550, -8550

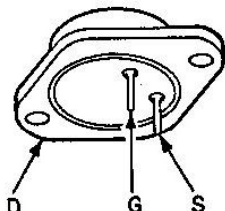
Subject: V-FET Replacement

Date: August 15, 1977

Refer also to Hi-Fi Service Bulletins No. 41, 49, and 51.

Perform the following procedure if V-FET failure is suspected. To avoid damage to a replacement V-FET, do not replace without first making this check.

1. Turn off the power and remove the suspect V-FET.
2. Check resistance readings of this V-FET using a VOM set to the  $X1\Omega$  range. See illustration below.



**2SJ18, 2SK60**

VOM set to  $X1\Omega$  range.

S to D ----- Approx.  $1\sim 2\Omega$

S to G ----- Same as a diode

D to G ----- Same as a diode

If readings appear normal, the V-FET is probably okay, and other circuit components should be checked.

3. If readings are not normal, turn on the power with the V-FET still out of the circuit. Set the VOM to the 50 VDC range (or as close as possible) and connect the leads to the V-FET conductor patterns on the board as follows:

V-FET	source	gate
<b>2SJ18</b>	VOM (+)	VOM (-)
<b>2SK60</b>	VOM (-)	VOM (+)

4. Set the dc bias adjust resistor (see below) on the Power Amp Board for maximum reading.

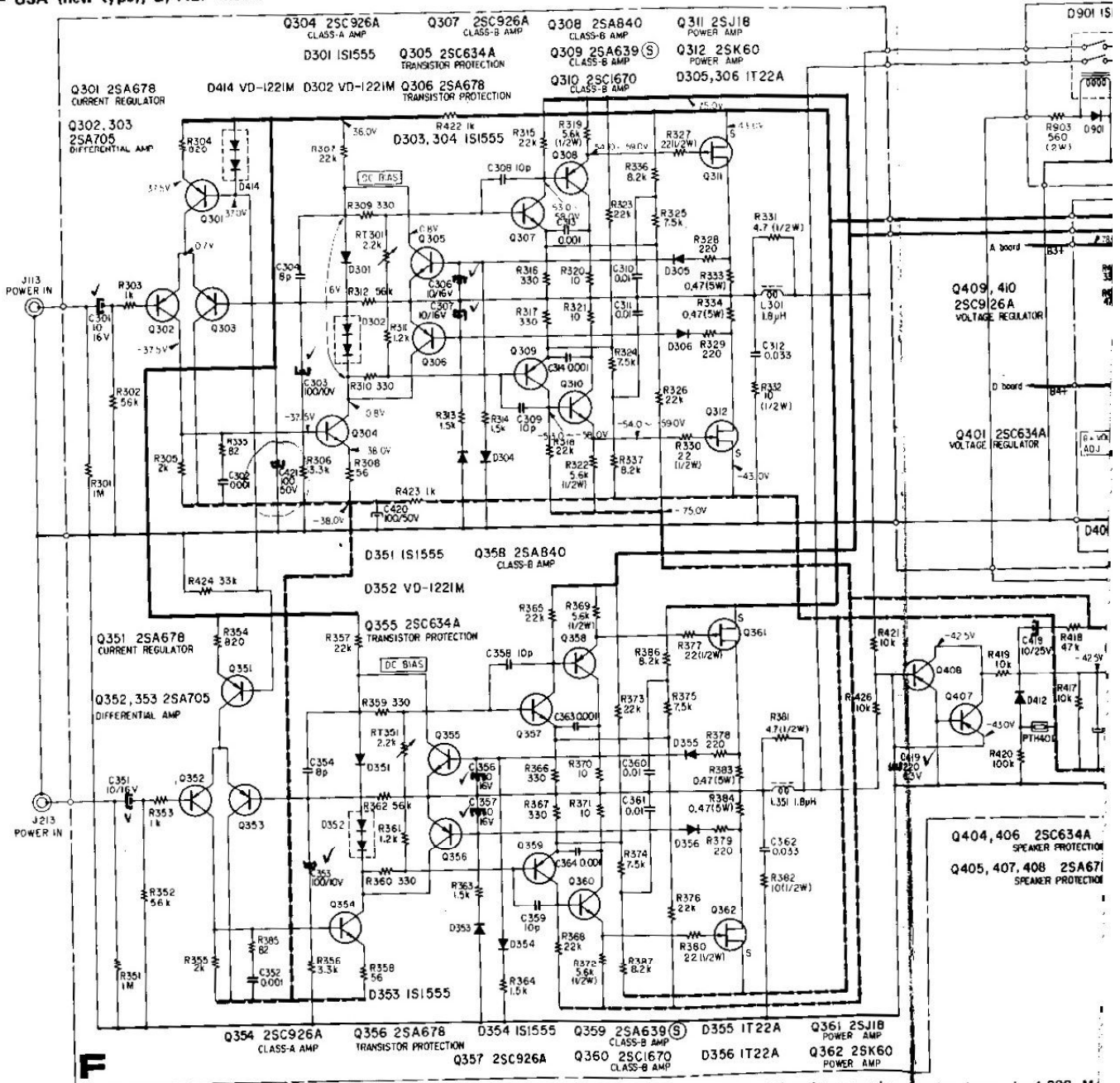
TA-4650, -5650	-	RT-301 (RT-351)
TA-8650, TAN-8550	-	RT-701 (RT-751)
TAN-5550	-	RT-501 (RT-601)

5. Turn off the power and install the replacement V-FET. Reapply power and reset the dc bias according to the service manual for the respective model.

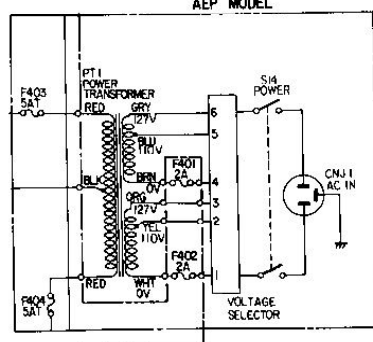
TA-4650

TA-4650

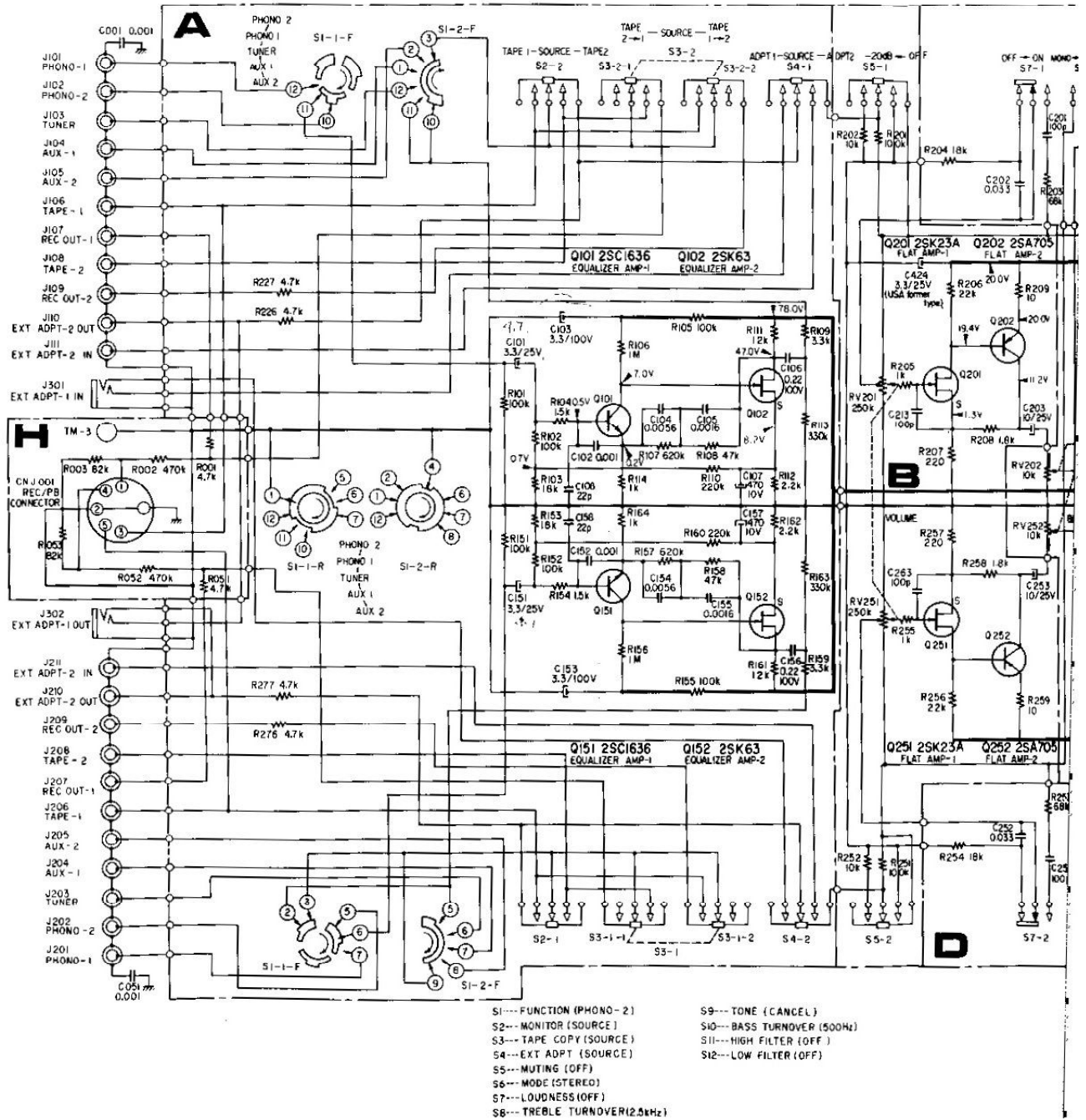
SCHEMATIC DIAGRAM - Power Amplifier Section -  
- USA (new type), E, AEP model -

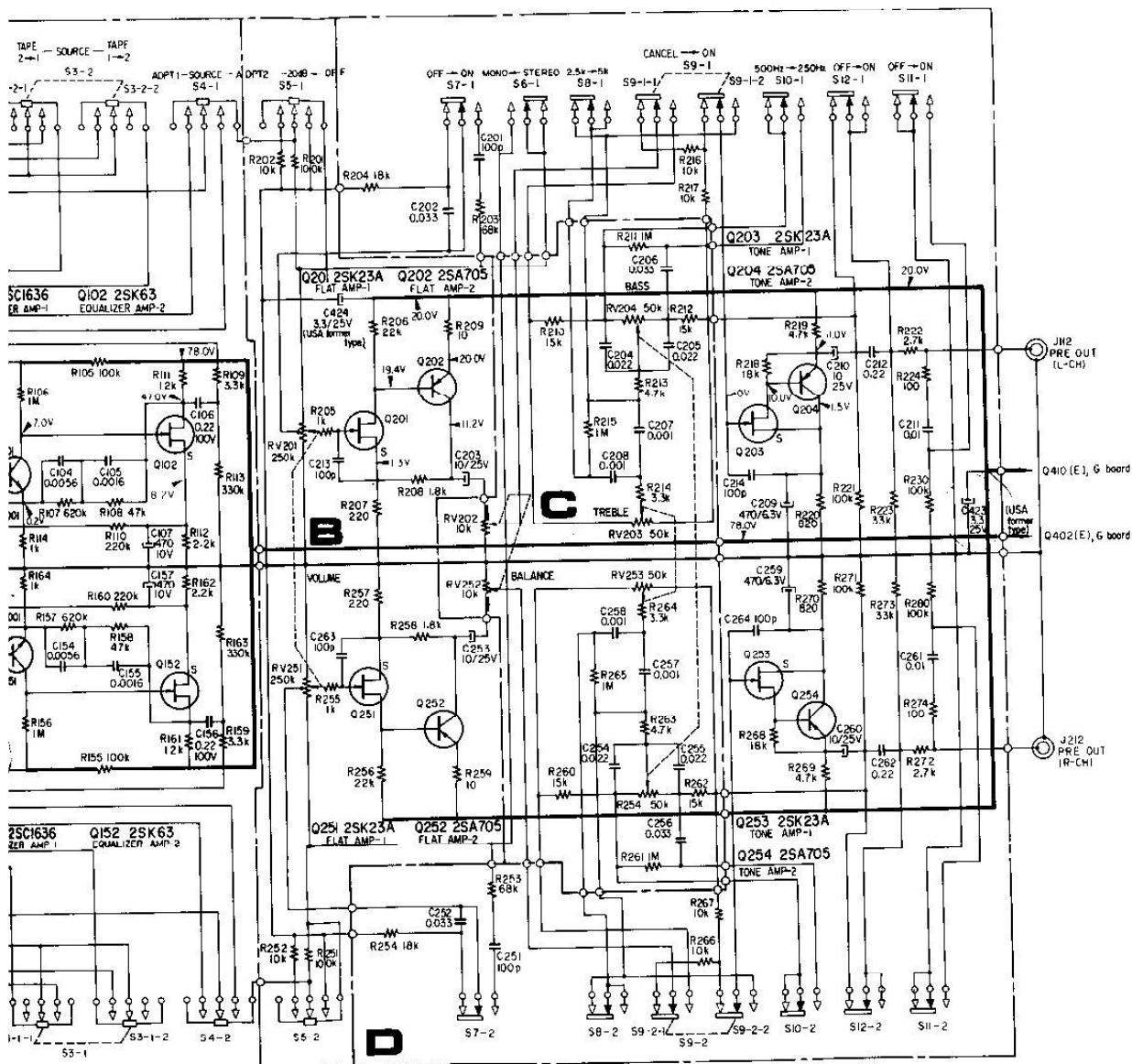


Note: All resistance values are in ohms. k = 1,000, M = 1,000,000.  
All capacitance values are in  $\mu\text{F}$  except as indicated which means  $\text{pF}$ .



SCHEMATIC DIAGRAM - Preamplifier Section -





NO-2) S9---TONE (CANCEL)  
 CE1 S10---BASS TURNOVER (500Hz)  
 SURCE1 S11---HIGH FILTER (OFF)  
 URCE1 S12---LOW FILTER (OFF)

1  
 2)  
 OVER(25kHz)

Note: All resistance values are in ohms. k =  
 All capacitance values are in  $\mu\text{F}$  except  
 which means  $\mu\text{F}$ .  
 All voltages are dc measured with a VOI  
 impedance of 20k ohms/volt. No signa  
 Voltage variations may be noted bec  
 duction tolerances.

■ : B +



## SECTION 2 ADJUSTMENTS

**Note:** Turn POWER on and allow about three minutes for warm-up:

### 2-1. POWER SUPPLY VOLTAGE ADJUSTMENT

See Fig. 2-1 and 2-2.

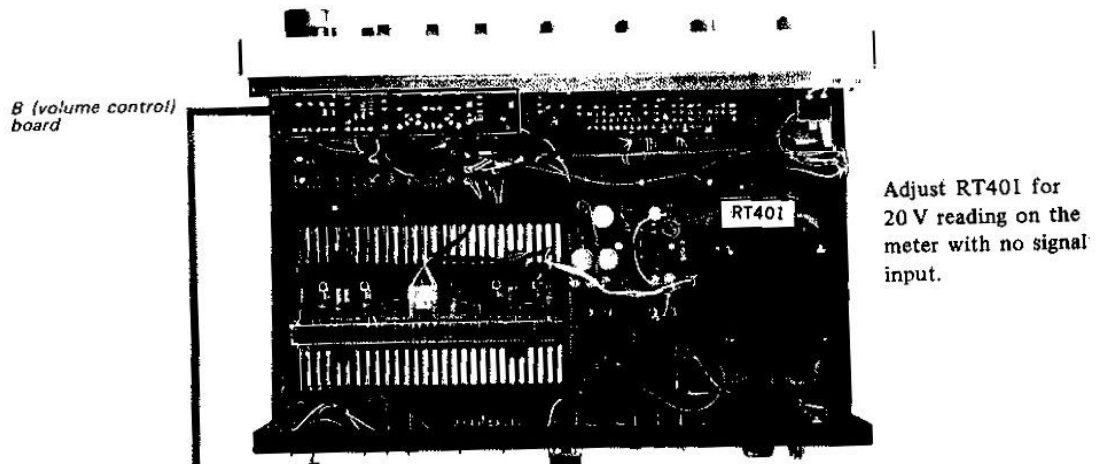


Fig. 2-1.

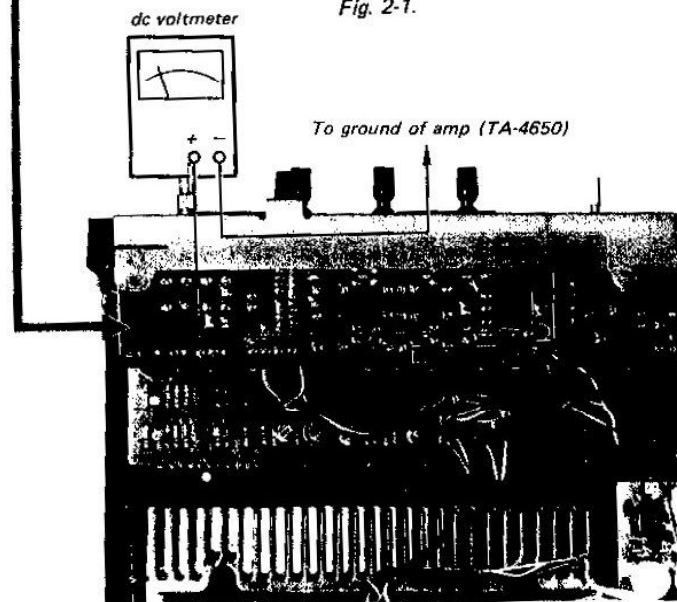


Fig. 2-2.