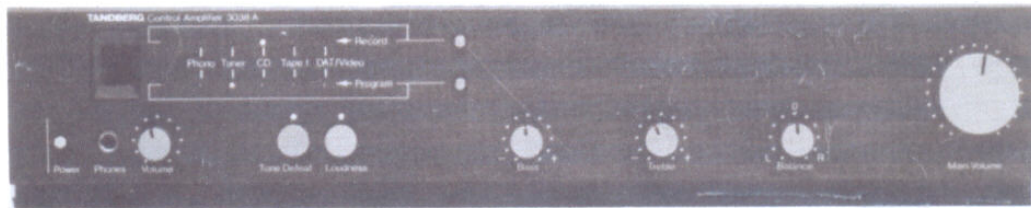


TANDBERG® TCA 3038A

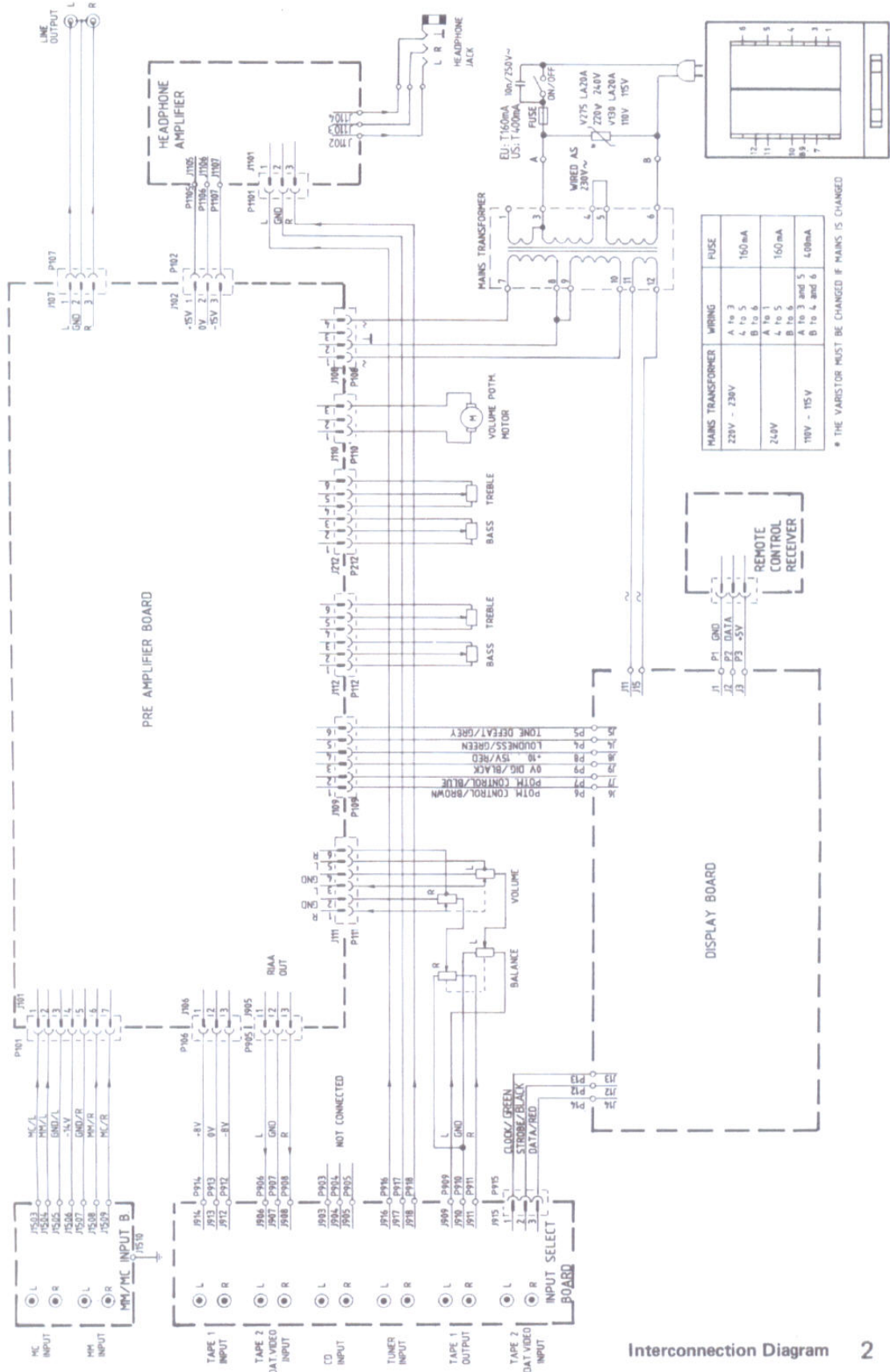
2004
2006

Circuit Diagrams and Alignment Instructions

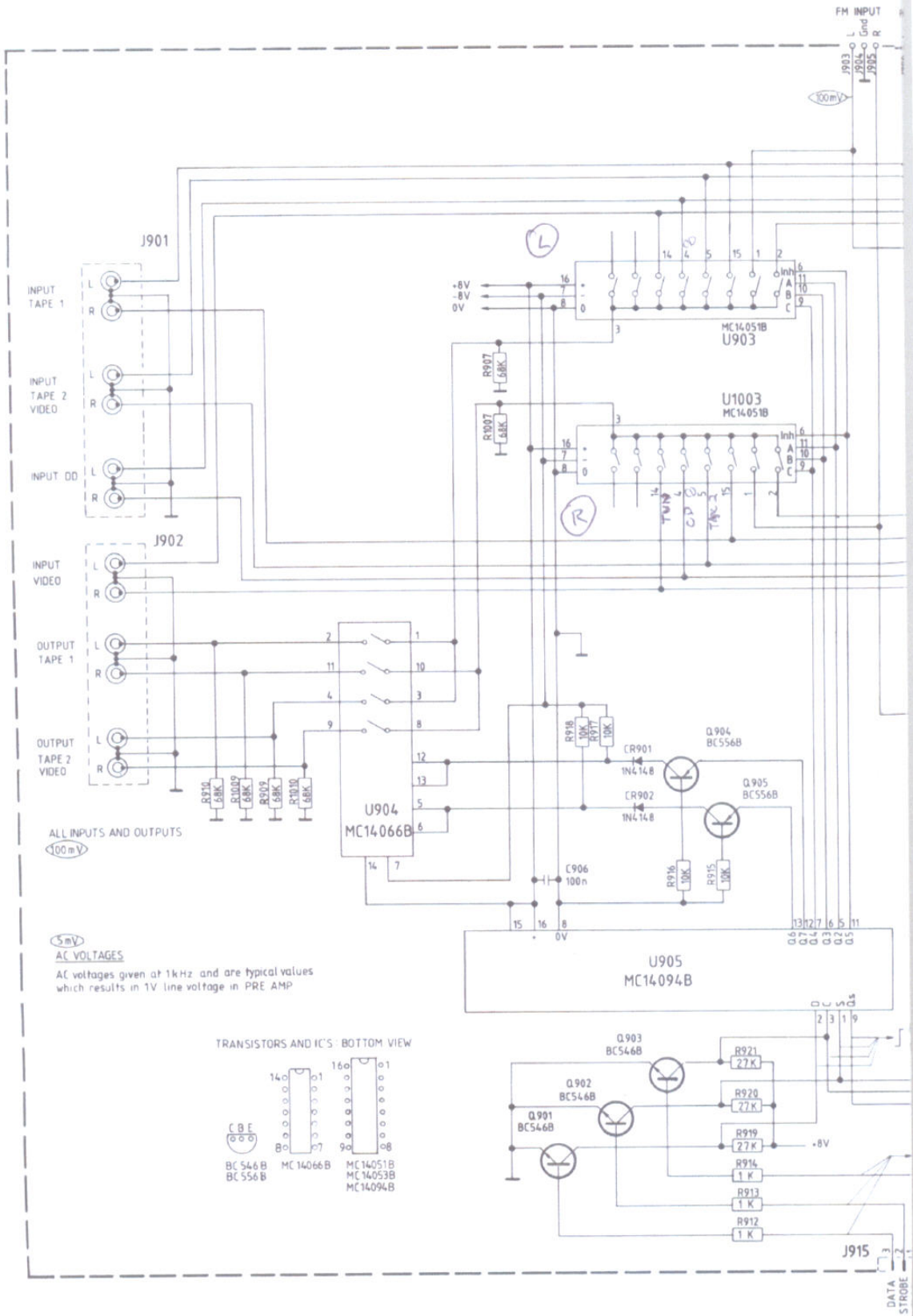
SCHEMATICS
w/notes



January 1989



Interconnection Diagram 2

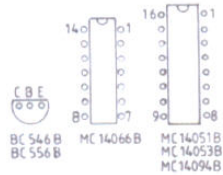


ALL INPUTS AND OUTPUTS
100mV

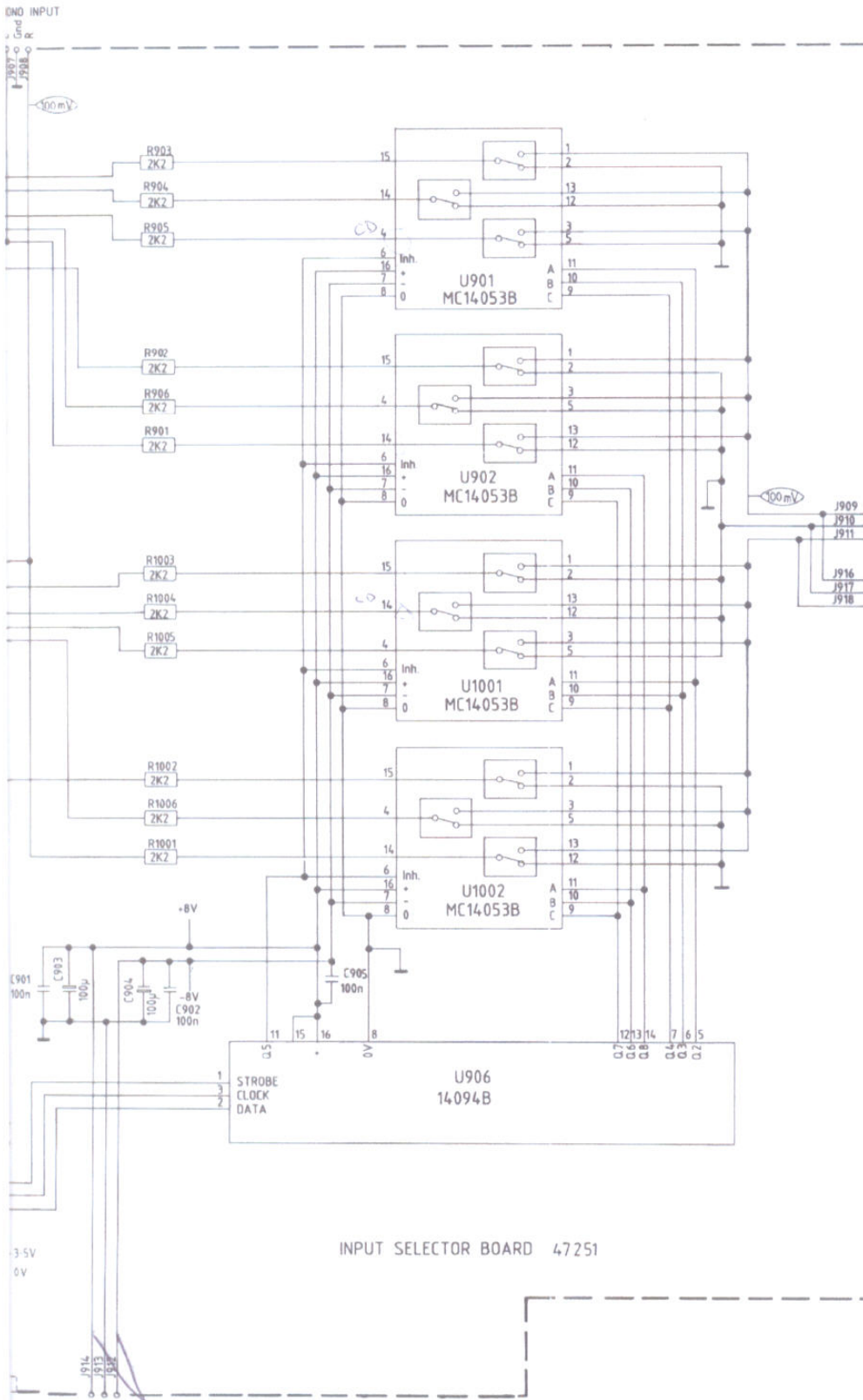
5mV
AC VOLTAGES

AC voltages given at 1kHz and are typical values which results in 1V line voltage in PRE AMP

TRANSISTORS AND IC'S - BOTTOM VIEW



DATA STROBE



DC on one channel only (possibly on only one input) may indicate BAD wire chip IC 903/1003 (L+R respectively). Verify by opening appropriate pin for corresponding input.

J909
J910
J911
L Gnd R Audio out
J916
J917
J918
L Gnd R To headphone amplifier

4053 - Source Switch

4051 - Input notes

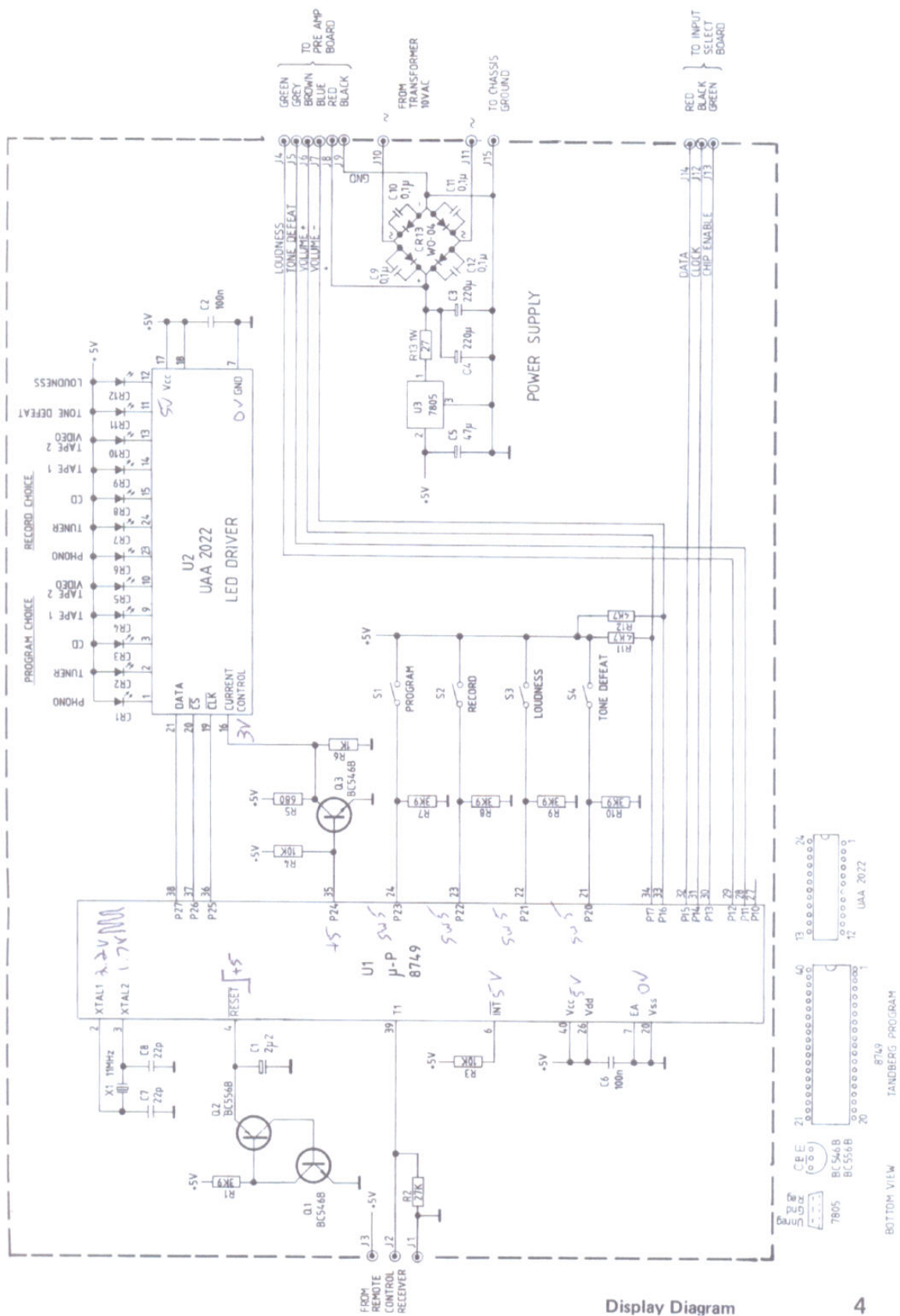
4094 - DATA SHIFT REGISTER FOR 4051/4053.

4066 Tape Switch

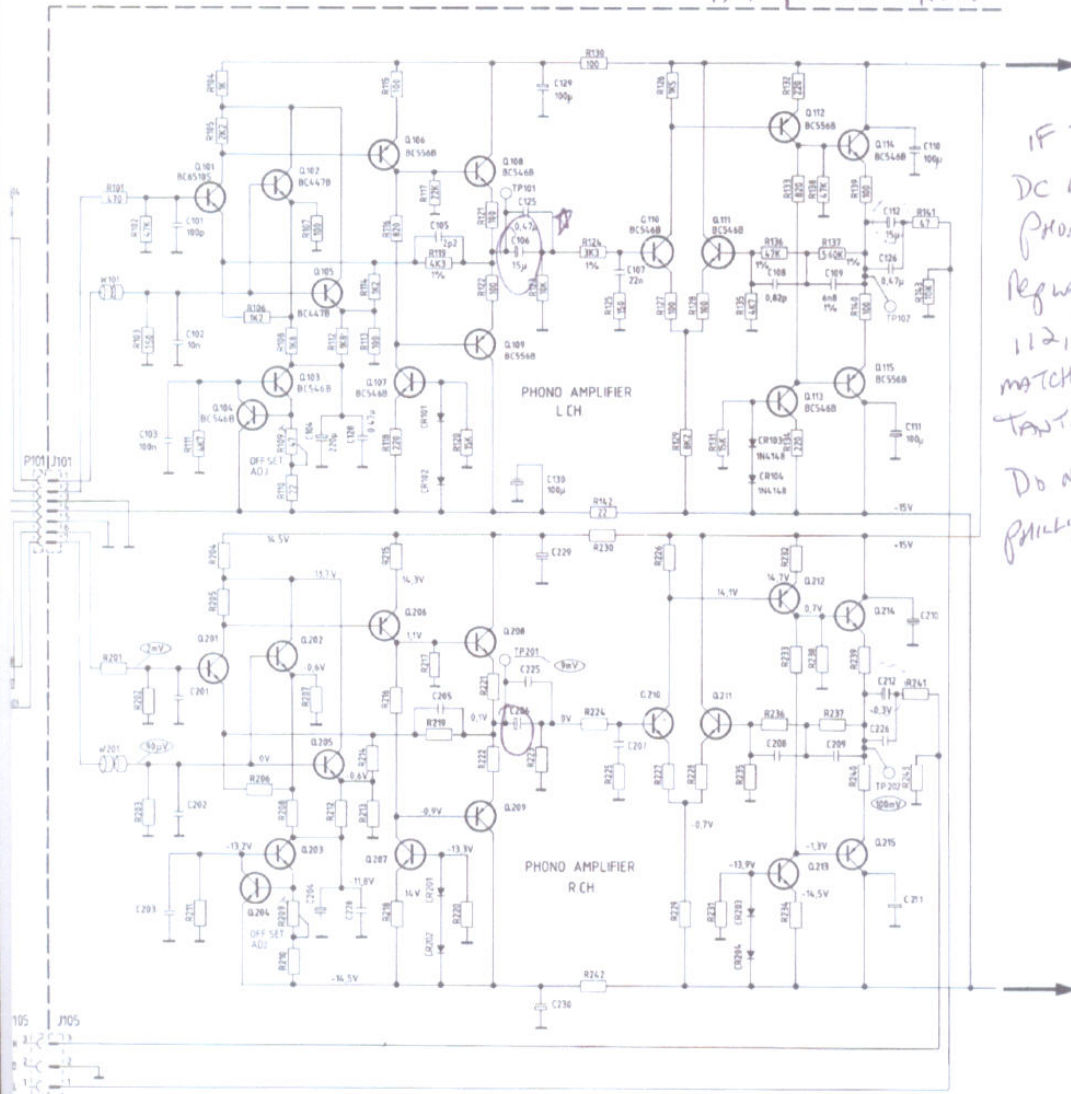
Should read (w/power OFF!) 2 meg resistance to ground. If not, one or more chips are defective.

Also ±8 supplies unbalanced are indicative of bad chips.

Input Selector Diagram



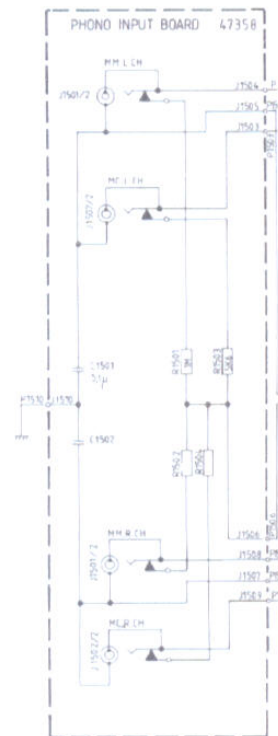
* - C106/206 may leak, CAUSING BASE OF Q110 TO BE DRIVEN INTO CUTOFF. LIFT C106/206 TO CHECK (DRIVE SIGNAL WILL PASS THROUGH C125 WHICH IS IN PARALLEL W/106).



IF THERE IS DC LEAKAGE IN PHONO SECTION REMOVE C106,206 112,212 WITH NEW MATCHED SET OF TANTALUMS 22/16V. DO NOT USE ORIGINAL PHILLIPS ORAVIA CAPS!

PREAMPLIFIER BOARD
47256-2

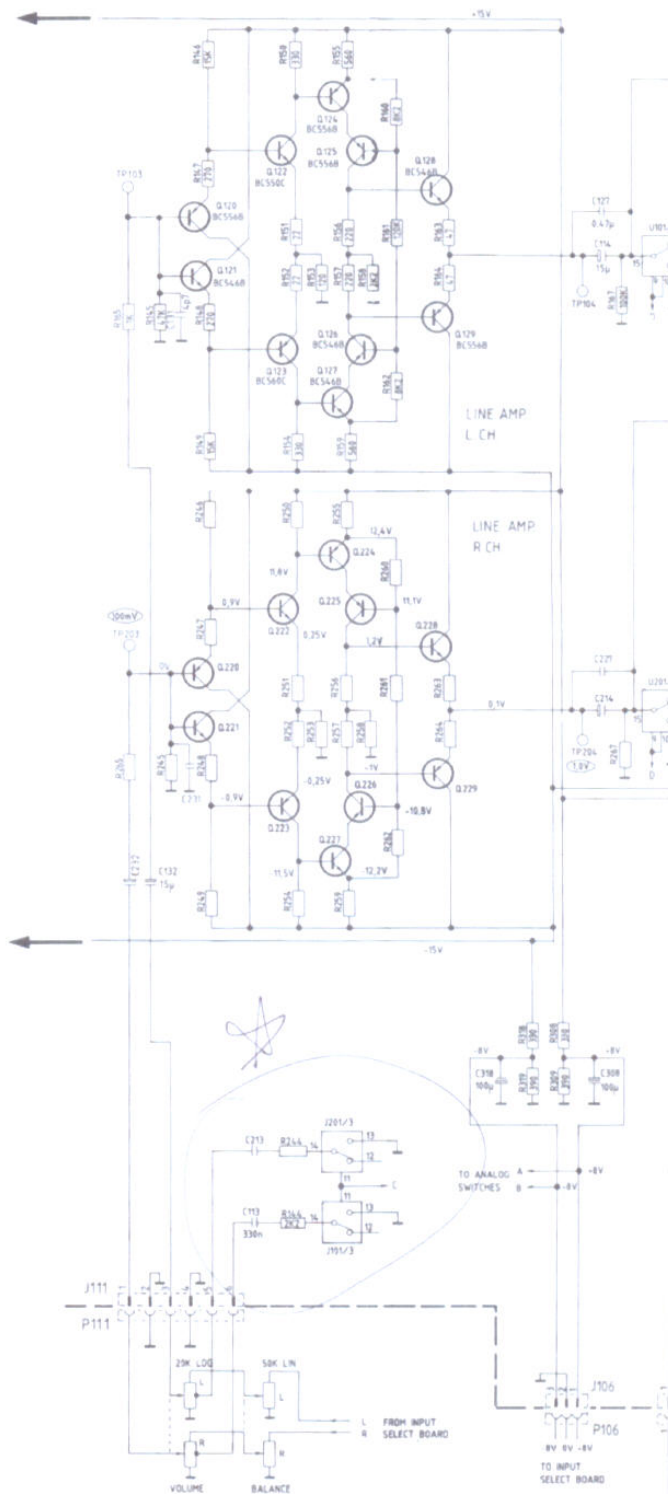
- TRANSISTORS AND ICs BOTTOM VIEW
- | | | | |
|--|---------|--------------------|--------------------------|
| | | | |
| BC548B
BC558B
BC560C
BC560C
BC447B
BC458B | BC 4515 | BD 239B
NO 240B | MC 14057 B
U101, U201 |
- 5V DC-LEVELS AT 1kHz ARE APPROXIMATE VALUES. VOLUME POTENTIOMETER IN MAX POSITION. BALANCE IN MIDDLE POSITION. ALL DC LEVELS ARE TYPICAL VALUES.
- ADJUSTMENTS:
Adjustments can first be performed after 30 minutes warm-up.
Adjust R198/R204 until the DC voltage at TP101/TP201 is 0V ± 100 mV.
Short-circuit connectors shall be used at the MC - outputs.

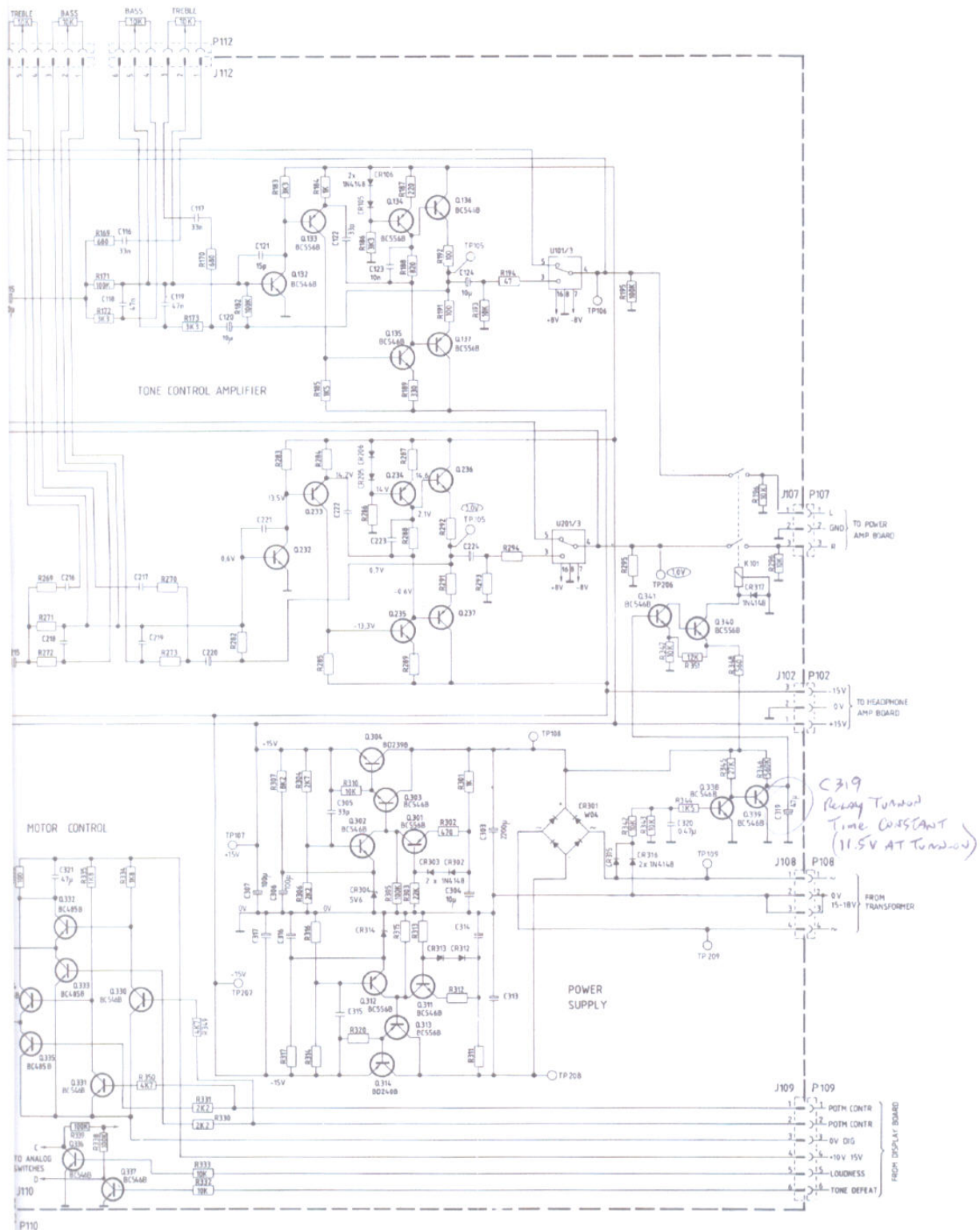


F
TO INPUT
SELECT BOARD D

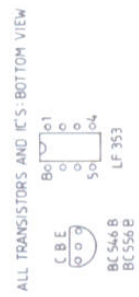
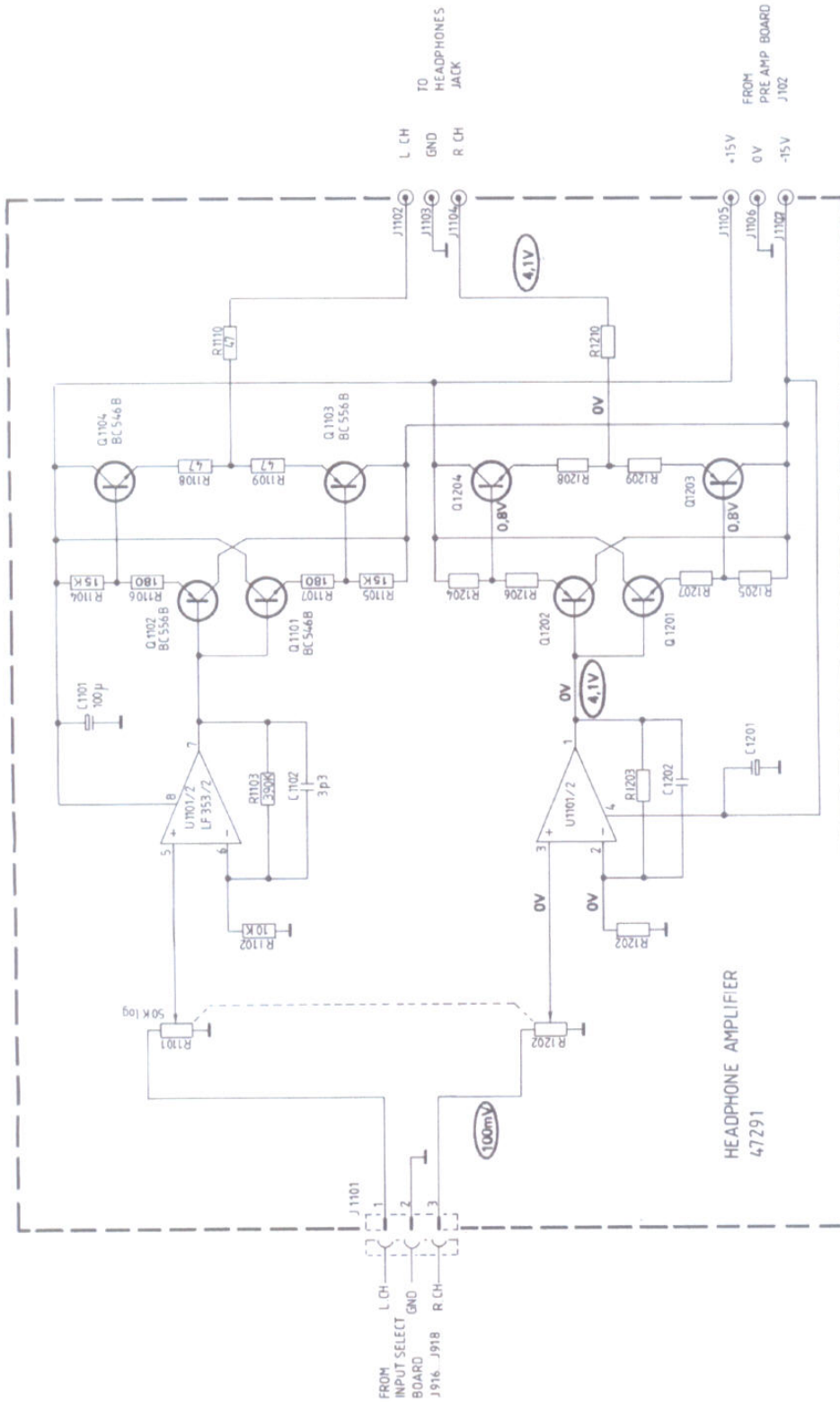
* Loudness Lowpass Filter.
 NOT AN ACTIVE CIRCUIT.
 Loudness is Accomplished By
 Dropping Highs + Raising Volume,
 Thereby INCREASING RELATIVE BASS
 RESPONSE.

IF ONE CHANNEL OUT:
 Check For
 Cold Solder on
 Volume Pot.





Part of Preamplifier Diagram



100 mV - AC levels are approx. values
 Volume potentiometer in max. position
 and unloaded output.

0V - DC levels are approx. values.

Headphone Amplifier Diagram 7

Technical Data

Tandberg Control Amplifier TCA 3038A

Power Requirements:	110 – 115 V/220 – 230 V/240 V ± 10 %, 50/60 Hz
Power consumption:	35 W max.
Dimensions:	Width: 17 1/8" (43.5 cm) Depth: 13 3/4" (35.2 cm) Height: 3 1/4" (8.7 cm) Weight: 10.7 lbs (4.85 kg)

Technical Data according to IHF-A-202, 1978

Frequency range:	20 – 20.000 Hz	± 0.5 dB
Phono MM, Phono MC:	20 – 20.000 Hz	+ 0/- 0.5 dB
Tape 1, Tape 2, Tuner, CD:		
Maximum Voltage Output:	5 V at THD = 0.05%	
Preamp output:	5.5 V at clipping level	
Tape 1, Tape 2:	5.5 V	
Headphone output:	10 V unloaded	
Total Harmonic Distortion (20 Hz – 20.000 Hz):		
Phono MM, Phono MC:	< 0.08 %	
Tape 1, Tape 2, DAT, Video, Tuner, CD:	< 0.04 %	
Input Sensitivity – Ref. 0.5 V output voltage:		
Phono MM:	0.9 mV	
Phono MC:	120 µV	
Tape 1, Tape 2, DAT, Video, Tuner, CD:	70 mV	
A-weighted Signal-to-Noise ratio:		
Phono MM:	75 dB	
Phono MC:	70 dB	
Tape 1, Tape 2, DAT, Video, Tuner, CD:	85 dB	
Maximum Input Voltage (1 kHz):		
Phono MM:	70 mV	
Phono MC:	5 mV	
Tape 1, Tape 2, DAT, Video, Tuner, CD:	5.5 V	
Input impedance:		
Phono MM:	47 kohm	
Phono MC:	150 ohm	
Tape 1, Tape 2, DAT, Video, Tuner, CD:	min. 10 kohm	

Secondary Disclosures

Output impedance:	
Preamp:	200 ohm + 15 µF in series
Headphones:	150 ohm
Headphones (min. load):	150 ohm
Tone-control response:	
Bass:	± 9 dB at 100 Hz
Treble:	± 9 dB at 10.000 Hz
Loudness:	Max. 7 dB at 60 Hz
Crosstalk (100 Hz – 10 kHz):	
Phono MM, Phono MC:	To any of the other sources > 75 dB
Tape 1, Tape 2, DAT, Video, Tuner, CD:	To any of the other sources > 75 dB
Separation (100 Hz – 10 kHz):	
Phono MM, Phono MC:	> 50 dB
Tape 1, Tape 2, DAT, Video, Tuner, CD:	> 50 dB
Transient intermodulation:	
All inputs:	Immeasurable

Other Technical Data

Frequency range:	1.6 – 250.000 Hz + 0/- 3 dB
Tape 1, Tape 2, Tuner, CD:	
Phase shift (20 Hz – 20.000 Hz):	+ 5°/- 5°
Tape 1, Tape 2, DAT, Video, Tuner, CD:	

– Specifications are subject to change without notice.

Dismantling/Mounting the Display board

Dismantling/mounting the Display board is in principle shown in the figure. (The dimensions are not the same).

IMPORTANT! PUT THE WIRING IN THIS SPACING, INSIDE OF THE LEAF SPRING.
KEEP THE WIRING FROM THE PCB SURFACES – IF NOT THE WIRING CAN SHORT-CIRCUIT TO THE COMPONENTS-LEGS!

