

Channel amplifier type 1058 is designed to accept signals from microphone and line sources and raise them to 0 dBm for feeding a 600 ohm load. Low noise and distortion and generous overload performance are important features of this amplifier.

High, mid (presence) and low frequency controls are included. A ten position input sensitivity switch covers the range 0 to -80 dBm.

Two inputs are provided for line and microphone use. The line input is selected on the first three positions of the sensitivity switch (0 to -20 dBm). The microphone input is selected on the remaining 7 positions (-20 to -80 dBm).

The amplifier is housed in a completely screened case with removable side panels and is fitted with runners to slide between the rails of the I.S.E.P. (International Standard Equipment Practice) modular system. All connections are made on a multi-way in-line connector socket at the rear which engages with a mating plug when the amplifier is pushed home into the console desk or frame.

Individual plug-in printed circuit amplifiers are used for each stage. The sensitivity switch operates by varying both feedback and attenuation to maintain wide dynamic range at all settings. Frequency correction and filter characteristics are obtained by the use of selective feedback. Generous use of D.C. feedback results in extremely stable operation over the range 0 to +55°C.

**FRONT PANEL
CONTROLS**

1. Sensitivity. Rotary switch giving 10 positions from 0 to -80 dBm (ref. 600 ohms) with microphone/line changeover at -20 dBm.
2. H.F. continuously variable boost and cut.
3. Presence frequency selection.
4. Presence amplitude control.
5. L.F. continuously variable boost and cut.

BACK PANEL

Amphenol 15-way connector.

CHANNEL AMPLIFIER TYPE 1058

PERFORMANCE

FREQUENCY RESPONSE

With all controls flat: 20Hz – 20,000 Hz ± 0.5 dB with reference to 1,000 Hz.

L.F. CONTROL

Continuously variable to maximum of ± 16 dB at 40 Hz.

H.F. CONTROL

Continuously variable to maximum of ± 16 dB at 10 KHz.

PRESENCE CONTROLS

Continuously variable 0 to ± 16 dB.
Switched presence frequencies peaking at 7.0, 5.0, 3.5, 2.5, and 1.7 KHz.

MICROPHONE INPUT

A range of externally mounted plug-in transformers is available giving input impedances of:

7.5/30 ohms	150/600 ohms
50/200 ohms	300/1200 ohms
75/300 ohms	2500/10,000 ohms

Balanced and floating. Reactive component less than 20% between 50 and 10,000 Hz.

LINE INPUT

600 ohms unbalanced selected at -20 dBm point on sensitivity switch. For use with external 10K ohms line input transformer.

OUTPUT IMPEDANCE

1. Source impedance 35 ohms to feed 600 ohm load. Balanced and floating, reactive component less than 20% between 50 and 10,000 Hz.
2. Source impedance 0.25 ohms to feed 250 ohms load or higher.

GAIN

+80 dB ref. 600 ohms at maximum sensitivity.
Variable by switching in 10 dB steps to 0 dBm.

NOISE

Better than -125 dBm equivalent input signal referred to 600 ohms (Equivalent to -128 dBm ref. 300 ohms or -138 dBm ref. 30 ohms).

DISTORTION

Less than 0.01% at 0 dBm into 600 ohms
0.03% at +10 dBm into 600 ohms
0.1% at +20 dBm into 600 ohms

POWER REQUIREMENTS CONNECTIONS

24 volts D.C. $\pm 5\%$ at approximately 100 mA.

A Input 0°
B Input 180° Mic.
C 24 volts +
D 24 volts +
E —
F —
H —
J —

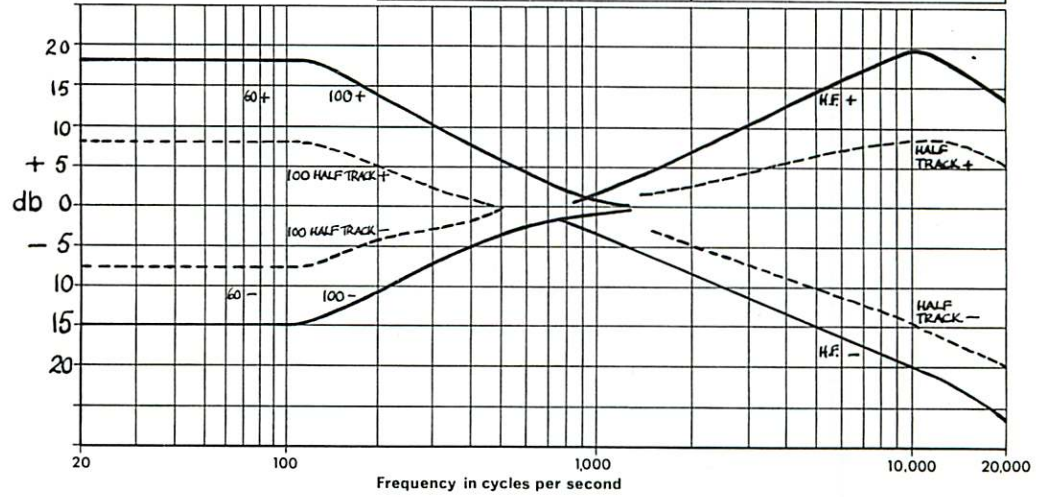
K Line input
L Unbalanced output
M Output 0°
N Output 180°
P 24 volts —
R 24 volts +
S Chassis

Either +Ve or -Ve H.T. supply should be connected to point L (Module case) *at one point only* in the system. When a number of modules are used together, 'L' should be connected to the frame or desk in which they are mounted and the frame itself connected to one side of the supply at one point only.

DIMENSIONS

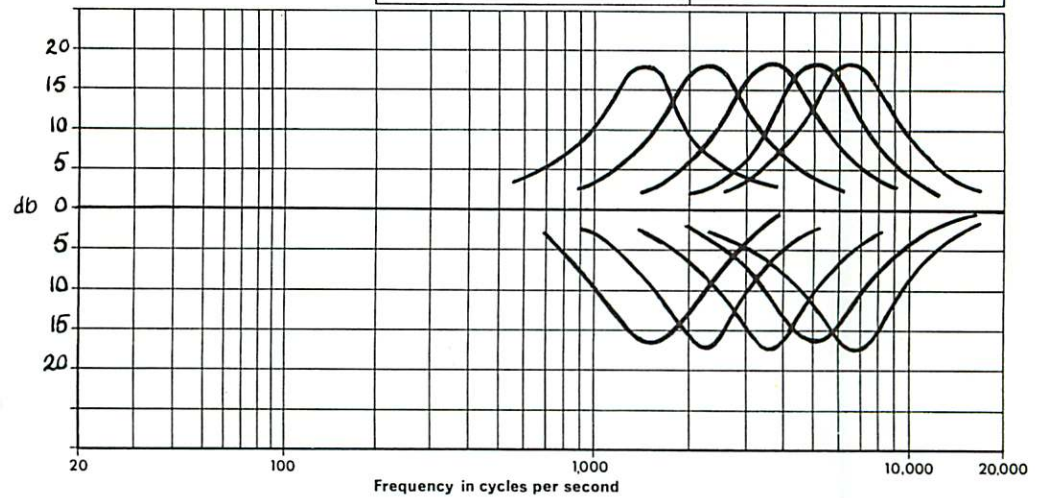
The front panel measures 45 mm. x 220 mm. (1.75" x 8.70"). Amplifiers should be spaced on 46 mm. centres horizontally and 222 mm. centres vertically to allow for clearance between units.

1058 CHANNEL AMPLIFIER
HIGH & LOW FREQUENCY
CORRECTION



1058 CHANNEL AMPLIFIER
PRESENCE FILTER

1.7, 2.5, 3.5, 5.0 and 7.0 KHz



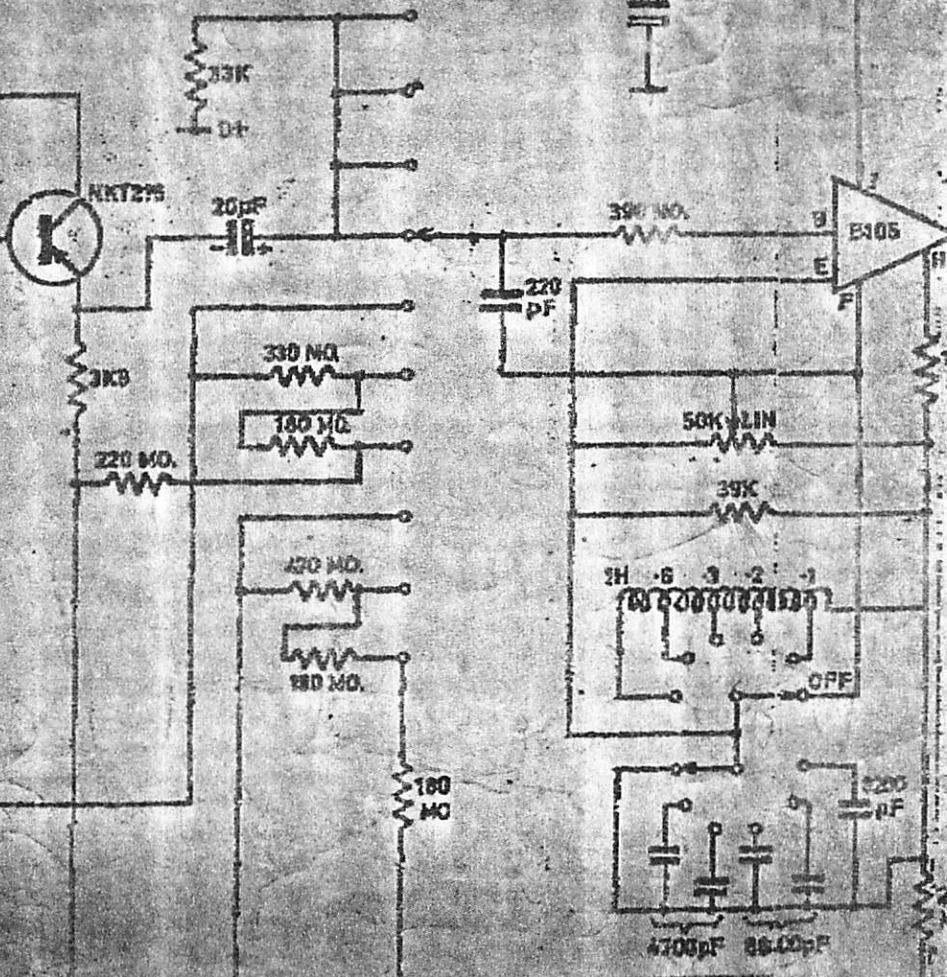
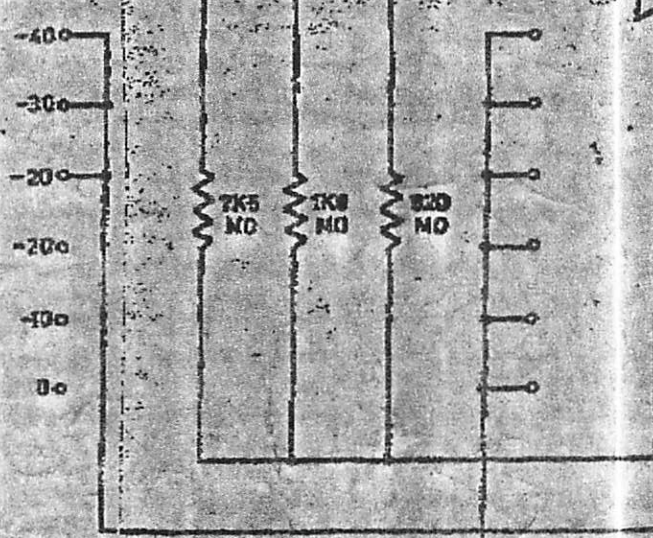
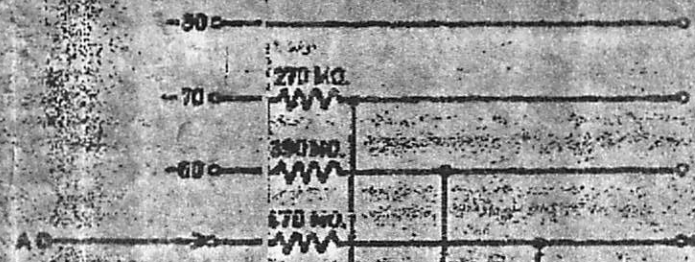
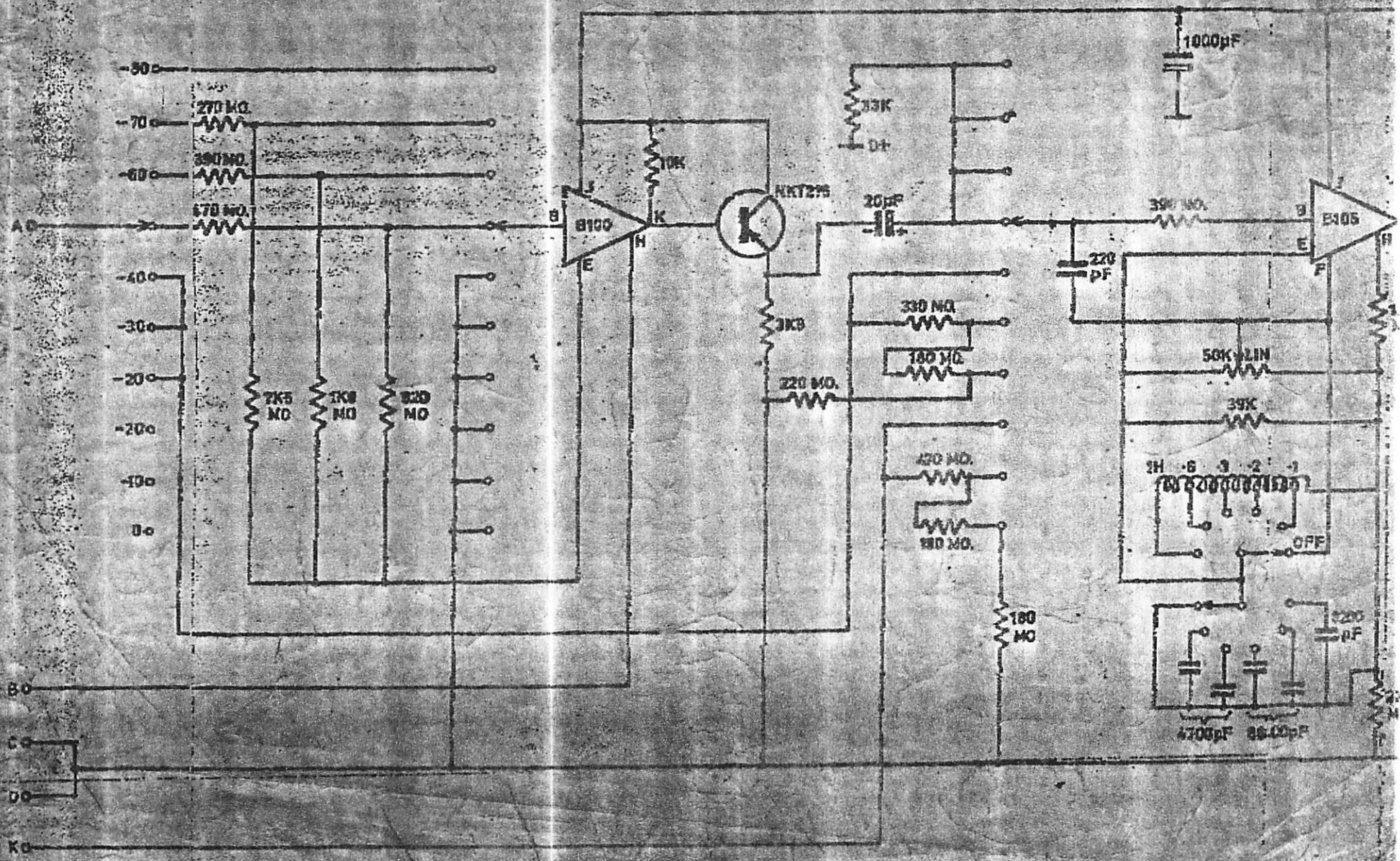
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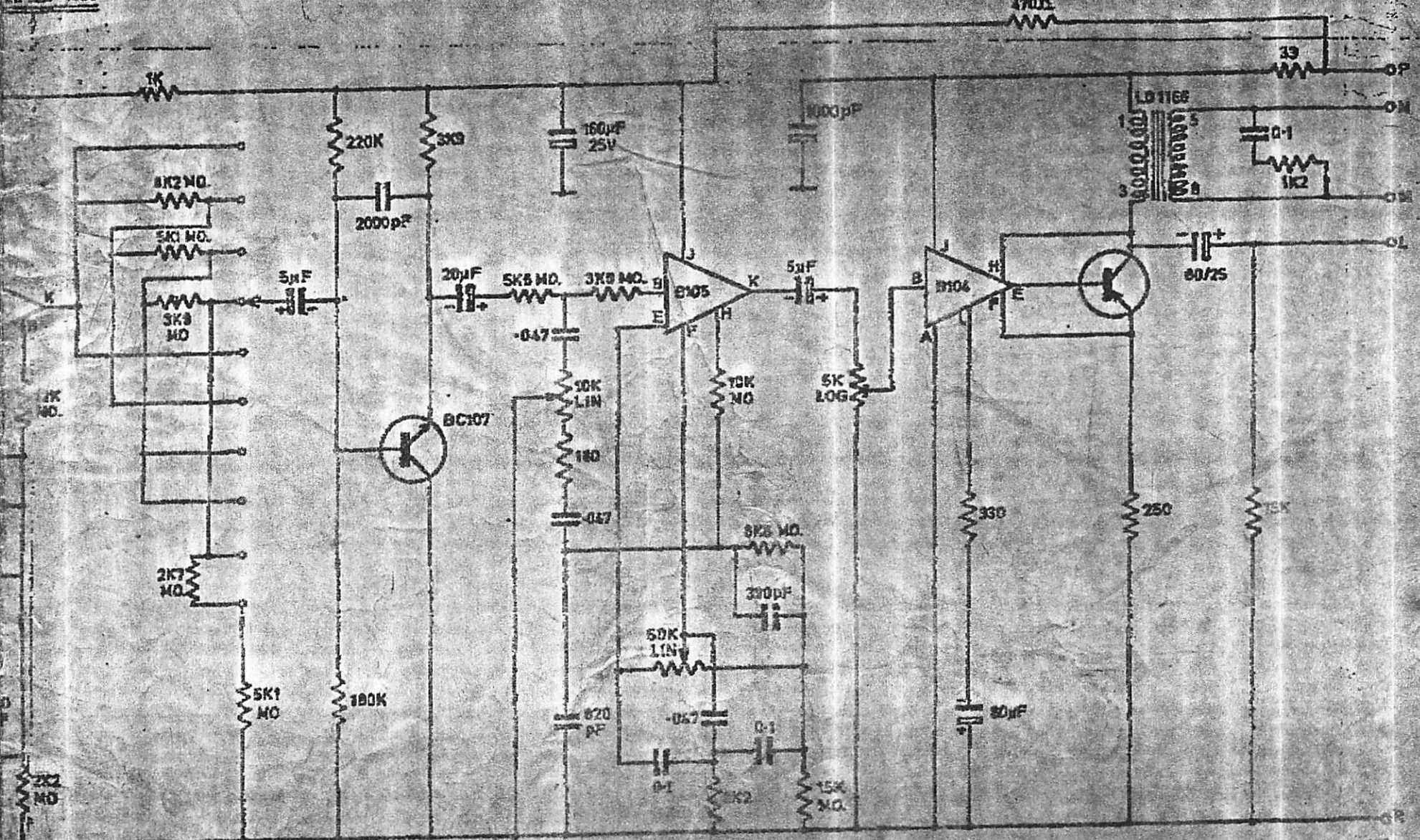
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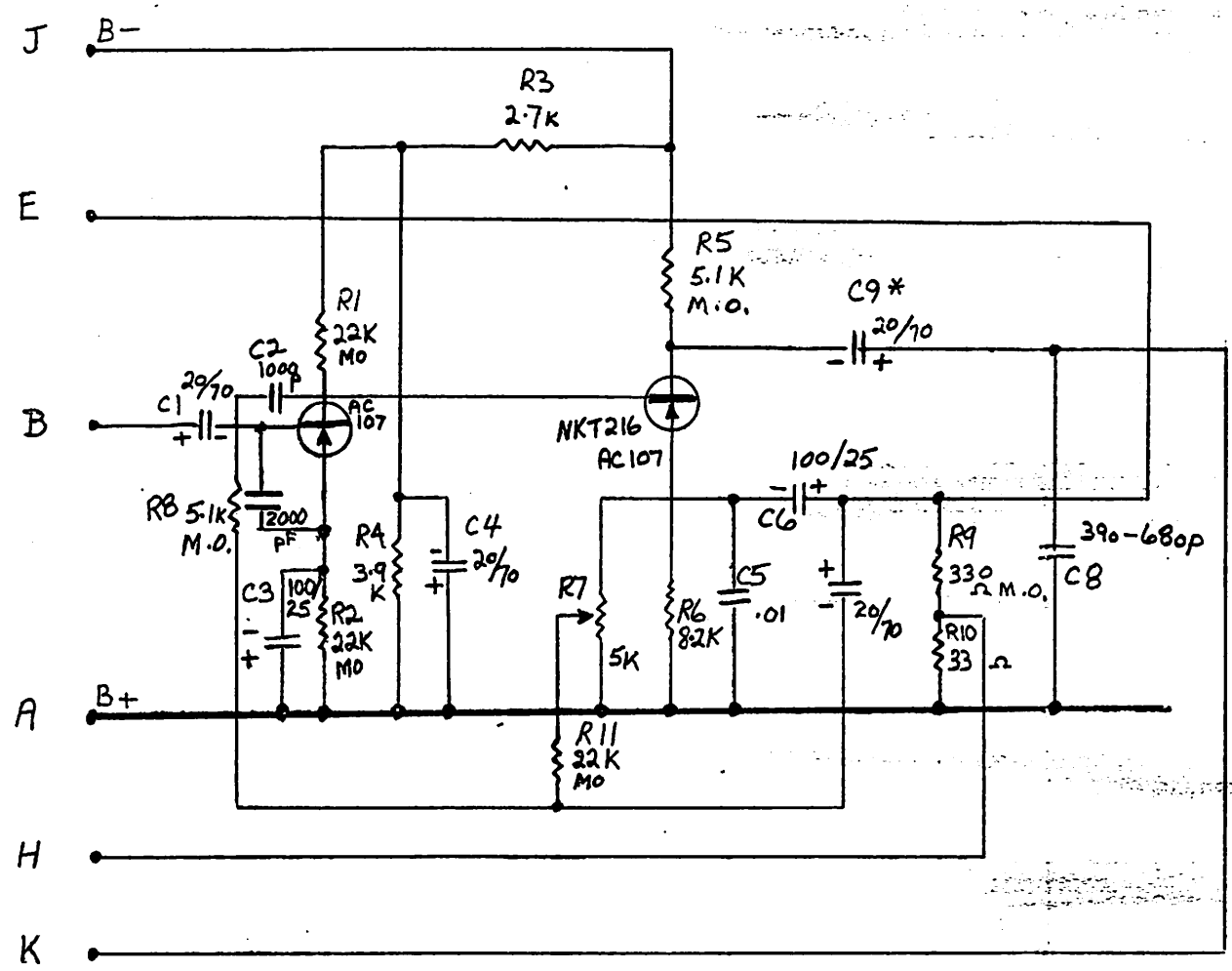
MERCURY RUDY

5-85 70W 15:14

CHANNEL AMPLIFIER

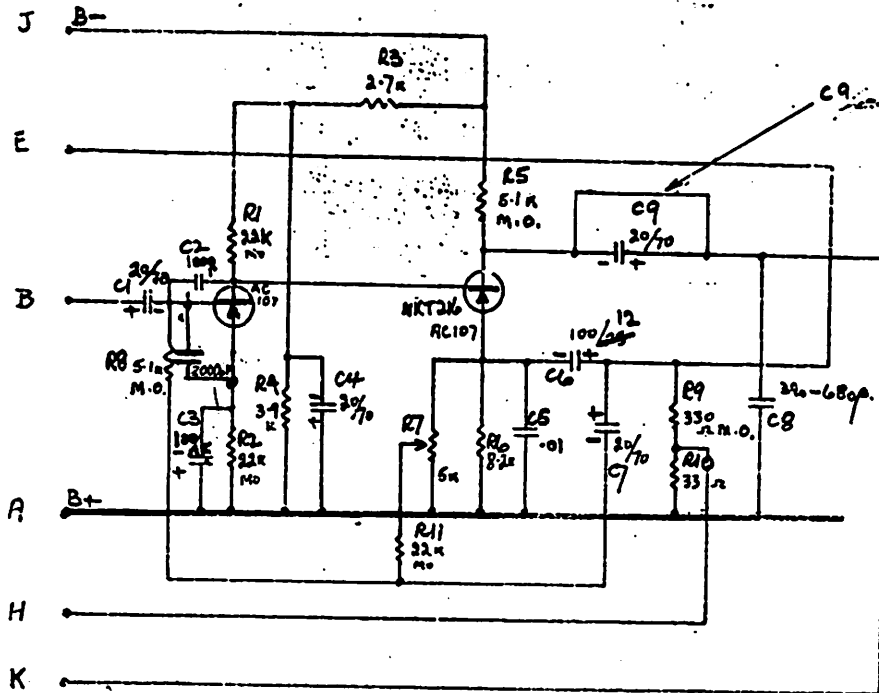






* C9 REPLACED BY SHORT CIRCUIT WHEN FOLLOWED BY EMITTER FOLLOWER.

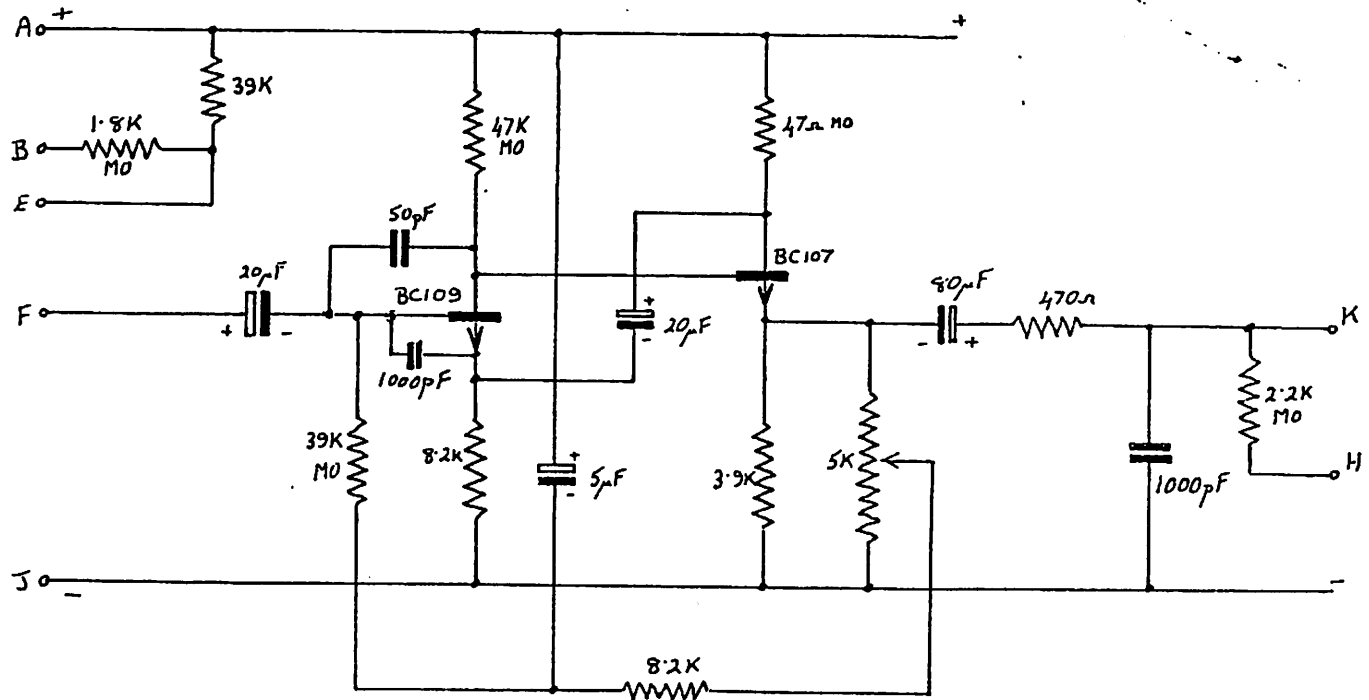
MICROPHONE AMPLIFIER B100



C9 S/C on Philips or when followed by an emitter follower.

MICROPHONE AMPLIFIER B 100

B105

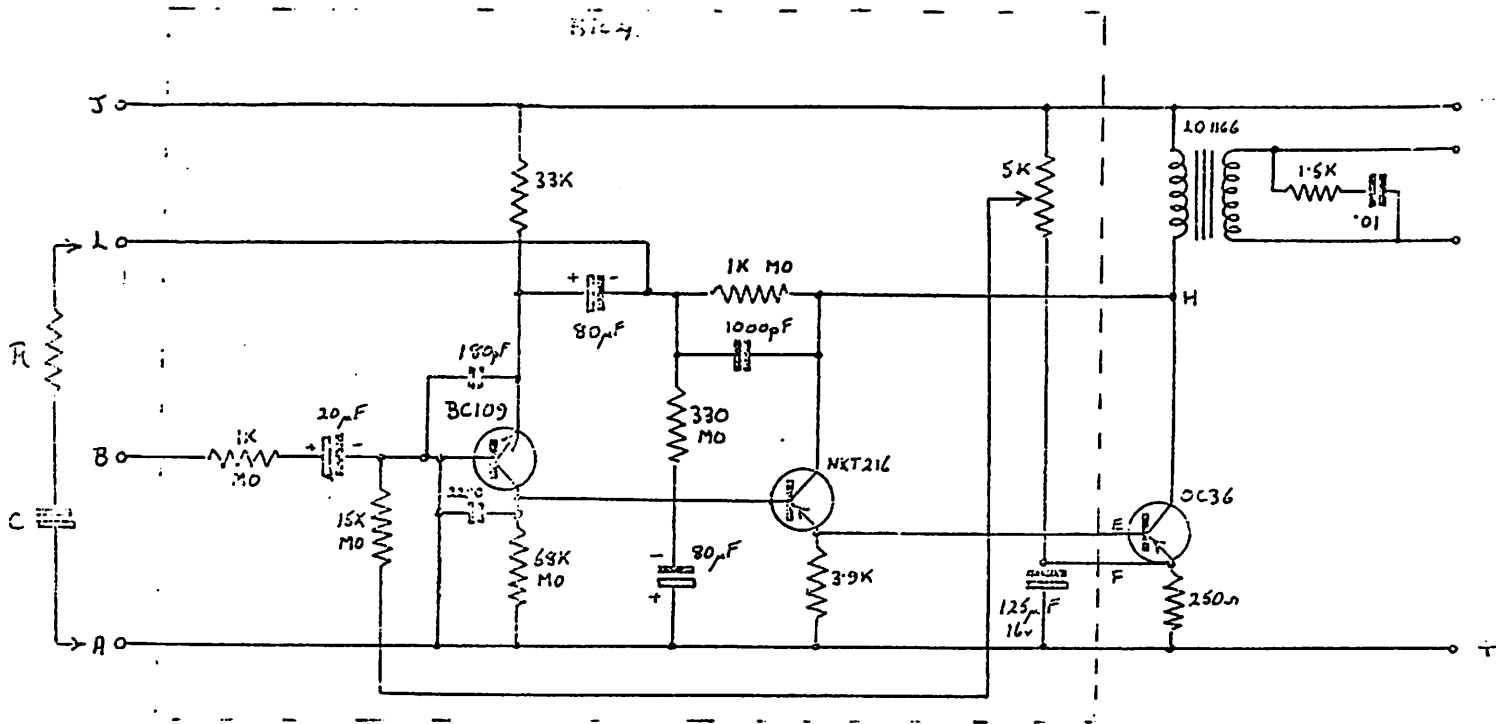


15K Ω combining resistors.

R_{FB} (between H & F) = 4.7K (-10dB)



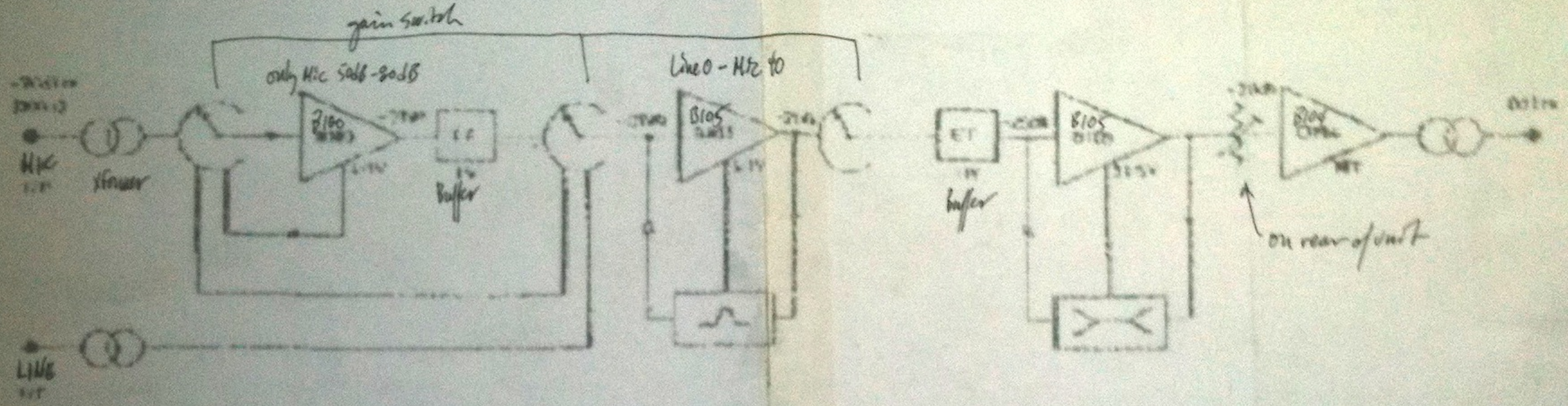
LINE AMPLIFIER B104.



R - C	GAIN	% DIST. 0 + 20 dB	Noise AT O/P.
—	15 dB	0.026	-99 dB _m
330 Ω - 100 μF	20 dB	0.026	-96 dB _m
120 Ω - 200 μF	25 dB	0.037	-90 dB _m
50 Ω - 400 μF	30 dB	0.055	-85 dB _m

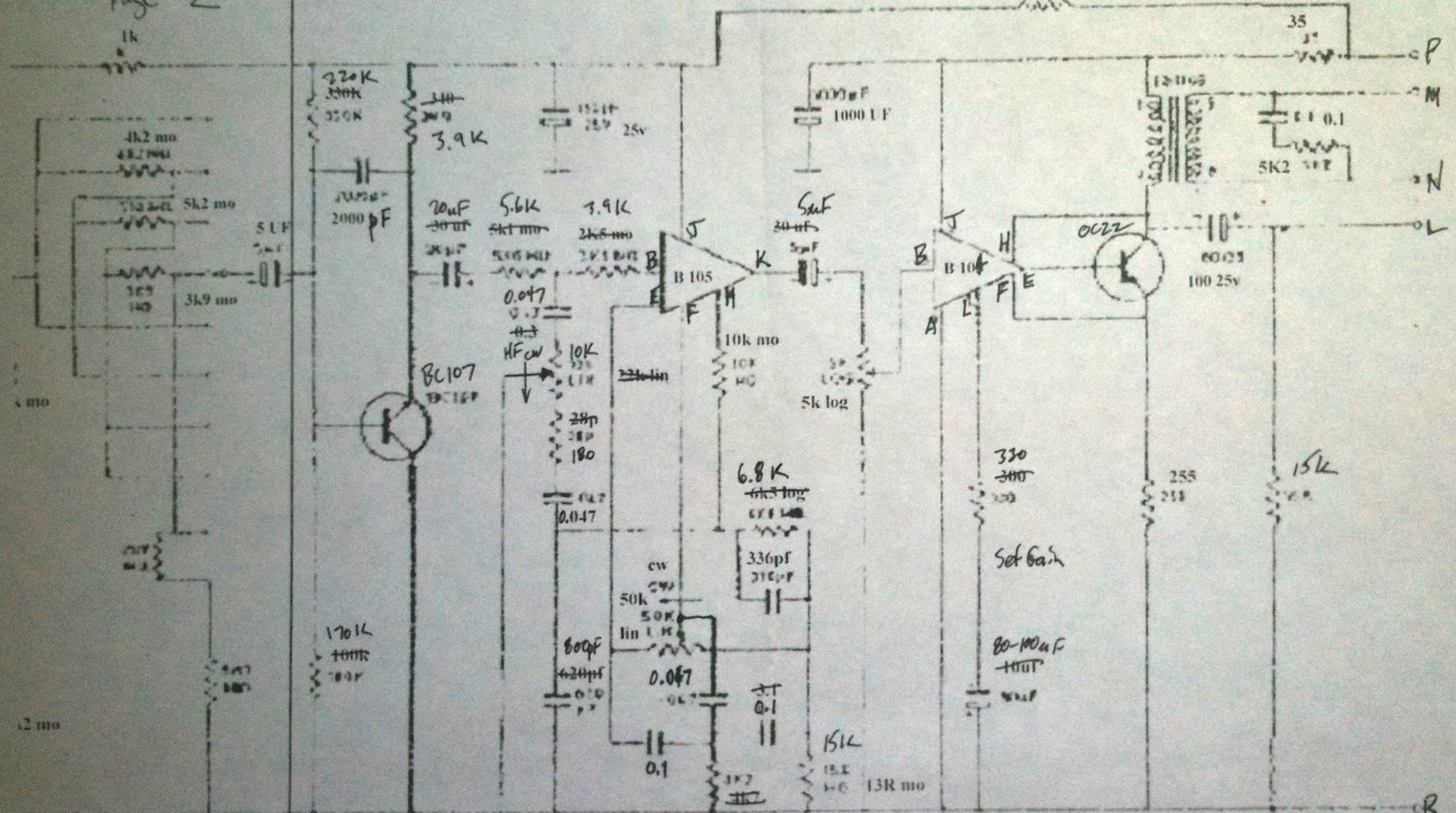
E.M.N.

BLOCK SCHEMATIC FOR 1058 CHANNEL AMPLIFIER



ALL VOLTAGES AFTER THE VOLTAGE ACROSS THE 1.1K RESISTOR
ON THE LAST TRANSDUCER
SENSITIVITY SWITCH IN THE -10dB POSITION

Previous Page ←



Previous Page ←

