

ZODIAC

Microphone Amplifier-unit MA-7238

The microphone amplifier consists of amplifier stages and active lowpass filters. The signal from the microphone is amplified by a lownoise transistor Q1 (BC 109B) where the amplification is adjusted at the collector.

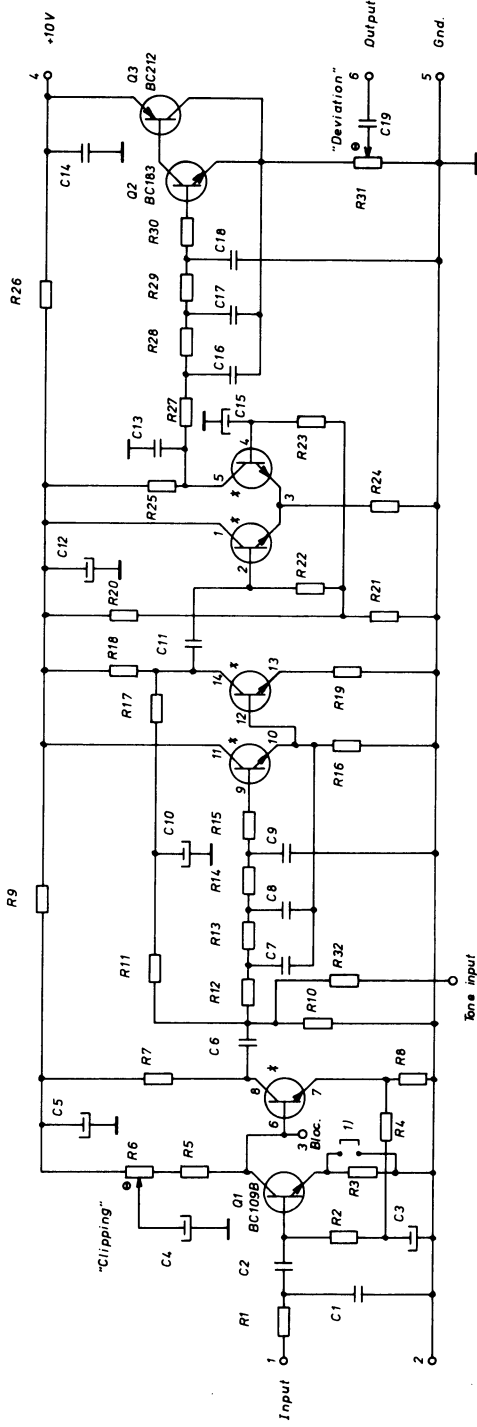
Pre-emphasis is done through C6, R10, and R11. After this the signal is led to an active low-pass filter which consists of a RC-combination and a transistor which as the transistor in the following amplifier stage belongs to the transistorarray CA 3046. The following pair of transistors which also belongs to the array, are limiting the signal so that the modulator stage is not overdriven.

C13 gives de-emphasis so that the frequency characteristic is straight when limiting does not occur. The following RC-combination and the transistors Q2 and Q3 work as an active low-pass filter.

The output level from the microphone amplifier is adjusted with R31, and is led to the modulation stage in the transmitter-multiplier-unit.

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1) Shorting strap for gain set.

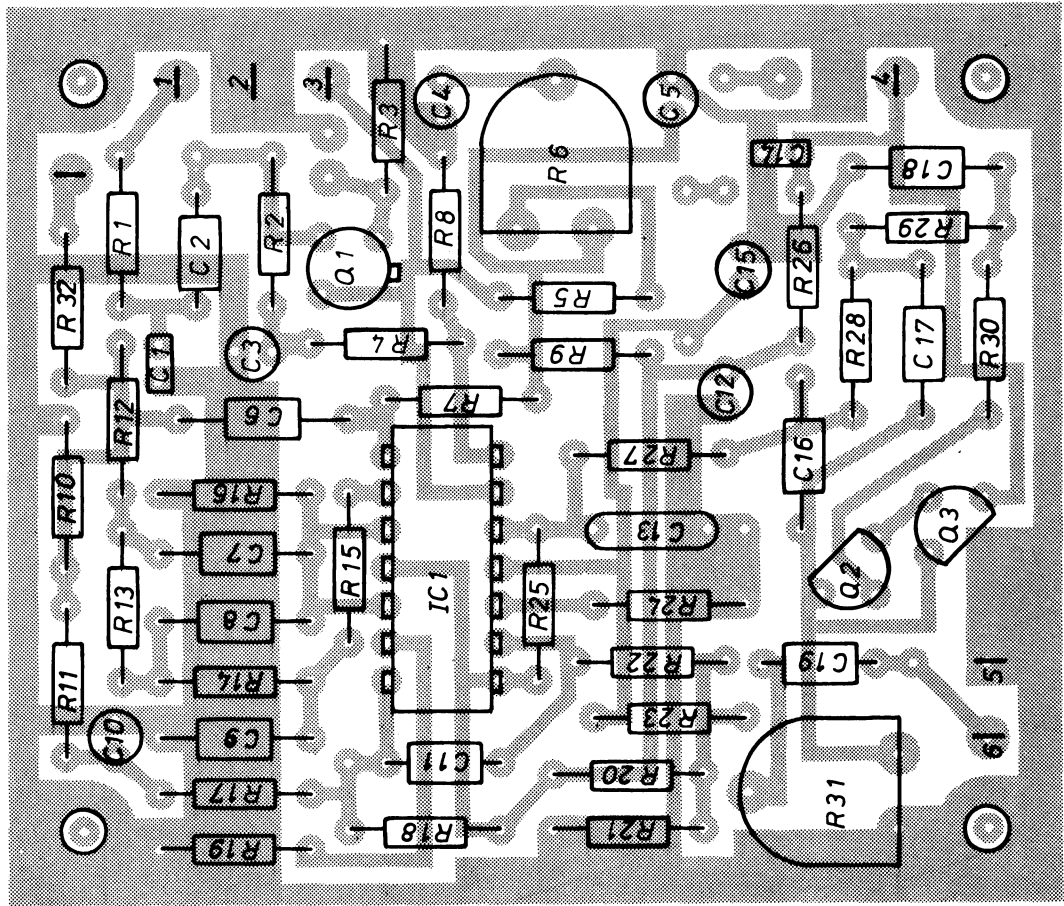
* Transistor array CA 3046

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Microphone Amplifier
 MA-7238
 Dwg. no. 7238-2

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Microphone Amplifier
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Component List

Microphone Amplifier - MA-7238

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
IC1	IC	CA3046-RCA
Q1	Transistor	BC 109
Q2	-	BC 183 (BC 237)
Q3	-	BC 213 (BC 307)
R1	Resistor	1K/1/8 W
R2	-	15K
R3	-	1K
R4	-	15K
R5	-	1K
R6	Trimmerpotm.	22K
R7	Resistor	4,7K
R8	-	1K
R9	-	330 ohm
R10	-	22K
R11	-	4,7K
R12	-	39K
R13	-	39K
R14	-	39K
R15	-	1K
R16	-	39K
R17	-	33K
R18	-	10K
R19	-	330 ohm
R20	-	47K
R21	-	15K
R22	-	15K
R23	-	15K
R24	-	3,9K
R25	-	15K
R26	-	330 ohm
R27	-	33K
R28	-	33K
R29	-	33K
R30	-	1K
R31	Trimmerpotm.	4,7K
R32	Resistor	330K

Component List

Microphone Amplifier - MA-7238

<u>Ckt. Symbol</u>	<u>Description</u>	<u>Value or type</u>
C1	Capacitor	2,2 nf-ceramic
C2	-	330 nf-polyester
C3	-	22 uf/16V-tantal
C4	-	4,7 uf/16V-tantal
C5	-	22 uf/16V-tantal
C6	-	4,7 nf-styroflex
C7	-	1 nf-styroflex
C8	-	1 nf-styroflex
C9	-	220 pf-styroflex
C10	-	1 uf/16V-tantal
C11	-	330 nf-polyester
C12	-	22 uf/16V-tantal
C13	-	47 nf-polyester
C14	-	4,7 nf-ceramic
C15	-	1 uf/16V-tantal
C16	-	1 nf-styroflex
C17	-	1 nf-styroflex
C18	-	680 pf-styroflex
C19	-	100 nf-polyester