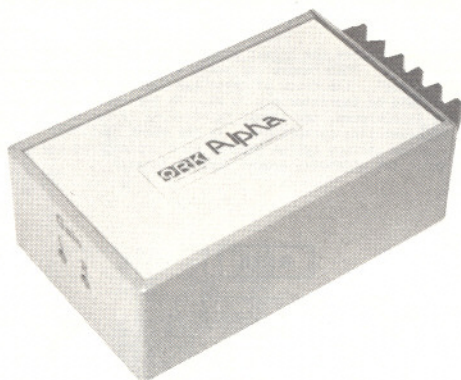


ALPHA I & II

Equalized Preamplifier



Preamplifier Models

MODEL	PART NO.	DESCRIPTION
Alpha I	933-0001	Alpha I Mono, Turntable, Equalized Preamplifier
Alpha II	933-0002	Alpha II Stereo, Turntable, Equalized Preamplifier

SECTION I GENERAL INFORMATION

1-1. INSTALLATION INSTRUCTIONS

1-2. Remove the amplifier from packing and carefully examine it for any apparent damage. If any exists, please contact the carrier that delivered the equipment and Broadcast Electronics.

1-3. The module of the Alpha preamplifier is a high gain device which, although "shielded", can amplify an electrical disturbance that may be in the immediate vicinity. It is imperative that the amplifier be installed at a reasonable distance (12 inches from the turntable motor, a power transformer, or any other device that may generate a magnetic hum field. The amplifier should be installed in close proximity to the output of the tone arm. Position the module such that the front terminals are accessible to the operator.

1-4. Connect a short length of shielded audio cable between the right channel input of the preamplifier and the tone arm. Connect a ground wire between the turntable frame and the ground terminal of the preamplifier.

1-5. Connect the right channel output of the preamplifier to its load. Each output connection is balanced as supplied. For unbalanced operation, connect one side of the load to ground. Balanced connections are preferred even if the turntable preamplifier ultimately runs into an unbalanced mixing buss. For stereophonic operation connect the left channel in a like manner.

CAUTION

THE CASE OF THE PREAMPLIFIER SHOULD BE
SECURELY CONNECTED TO EARTH GROUND.

1-6. Plug the power cord of the power module into a 115 volt ac power source.

1-7. Install a monaural disc on the turntable and adjust the output level(s) to achieve equal desired output(s). (The output is continuously variable from approximately +10 dBm to less than -50 dBm to facilitate matching levels on any audio input console). It is not recommended that the amplifier be used to drive a microphone channel. This could adversely affect the signal-to-noise ratio and dynamic range of the preamplifier.

1-8. Measure and record the output level of the preamplifier with a normal cartridge input. Then remove the audio source and measure and record the output level. The ratio of these two levels as compared to a +10 dBm output should be approximately 75 dB. In the event that high noise levels are encountered, the signal to noise ratio may be improved by reversing the power line connections. In the event that this fails, carefully isolate the various system grounds by disconnecting one ground end at a time until the offending ground loop is located.

NOTE

IN AREAS OF HIGH INTENSITY ELECTRO-MAGNETIC RADIATION (STRONG RF FIELDS ASSOCIATED WITH BROADCAST TRANSMITTERS, FLOURESCENT OR MERCURY ARC LAMP UNITS) IT MAY BE NECESSARY TO CONNECT BY-PASS CAPACITORS ACROSS THE SIGNAL INPUT(S) TO THE PREAMPLIFIER. A 1000 PF CAPACITOR WITH SHORT LEADS AS SUPPLIED WITH THE ACCESSORY KIT SHOULD BE QUITE ADEQUATE.

1-9.

TABLE 1

FREQUENCY VS.
NAB MONOPHONIC AND STEREOPHONIC REPRODUCING CHARACTERISTIC

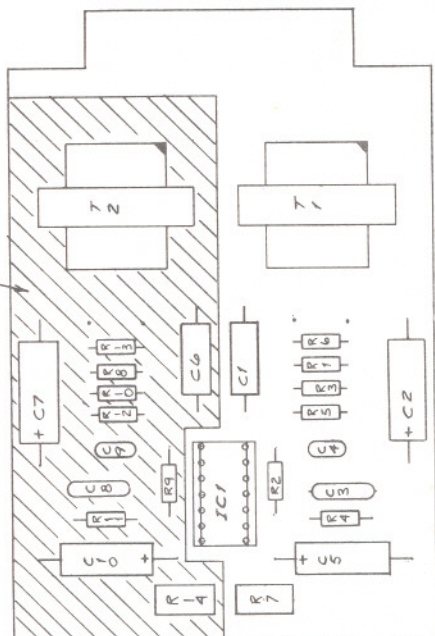
FREQUENCY	REPRODUCING CHARACTERISTIC	FREQUENCY	REPRODUCING CHARACTERISTIC
15,000 cps	-17.17 dB	3,000 cps	-4.76 dB
14,000 cps	-16.64 dB	2,000 cps	-2.61 dB
13,000 cps	-15.95 dB	1,000 cps	-0 dB
12,000 cps	-15.28 dB	700 cps	+1.23 dB
11,000 cps	-14.55 dB	400 cps	+3.81 dB
10,000 cps	-13.75 dB	300 cps	+5.53 dB
9,000 cps	-12.88 dB	200 cps	+8.22 dB
8,000 cps	-11.91 dB	100 cps	+13.11 dB
7,000 cps	-10.85 dB	70 cps	+15.31 dB
6,000 cps	-9.62 dB	50 cps	+16.96 dB
5,000 cps	-8.23 dB	30 cps	+18.61 dB
4,000 cps	-6.64 dB		

Final Assembly, Alpha I and Alpha II - 933-0001,-0002

REF. DES.	DESCRIPTION	PART NO.	QTY.
C11	Capacitor, Electrolytic, 1000 uF @ 25V	013-1051	1
J1	Connector, 10 Pin	411-0867	1
L1	Ferrite Bead	360-0007	1
TB1	Barrier Strip, 8 Terminals	412-0027	1
----	Transformer/Rectifier Assembly	376-0252	1
----	Circuit Board Assembly, Alpha I	910-0081	1
----	Circuit Board Assembly, Alpha II	910-0086	1

REV.	DESCRIPTION	DATE	APPROVED

SEE NOTE 1



NOTES:
1. COMPONENTS SHOWN IN SHADED
AREA FOR ALPHA II (TERR) ONLY.
SEE B/M 910-0086 - ALPHA II (TERR)
SEE B/M 910-0081 - ALPHA I (MONO)

BROADCAST ELECTRONICS INC. —A FILMWAYS COMPANY—	
DATE 11/19/82	DATE 11/19/82
DESIGNED BY	DATE
PROJECT	DATE
EMER	DATE
APPROVED BY	DATE
TITLE ASSEMBLY - PRE-AMP BOARD ALPHA	
REV	REV
910-0086	910-0086
910-0081	910-0081
ALPHA II (TERR)	ALPHA II (TERR)
SHEET 1	OF 1

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TOLERANCE UNLESS OTHERWISE SPECIFIED
DECIMAL 2 PL = 21 3% = 005
FRACTIONAL ± 1/16
HOLE DIMENSIONS TO
SHAPE EDGES
BEND RADIUS
FILLET RADIUS
MATERIAL

TREATMENT OR FINISH

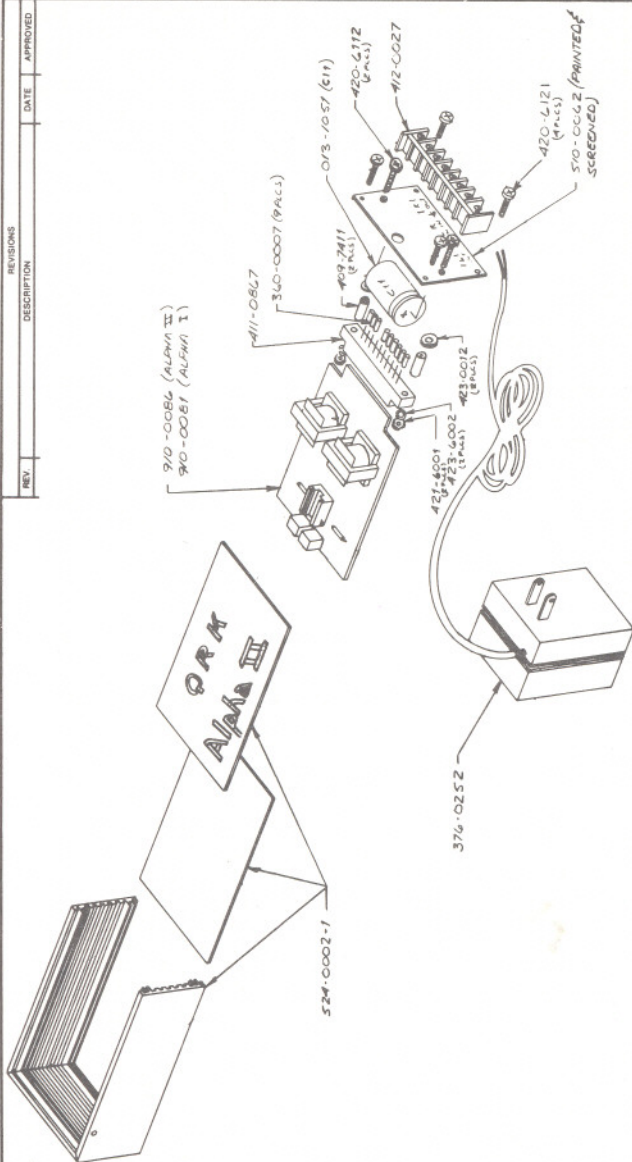
Printed Circuit Board Assembly, Alpha II - 910-0086

REF. DES.	DESCRIPTION	PART NO.	QTY.
C1	Capacitor, 0.1 uF @ 80V	038-1050	1
C2	Capacitor, 30 uF @ 16V	013-3050	1
C3	Capacitor, 3900 uF @ 500V	042-3932	1
C4	Capacitor, 820 pF @ 300V	042-8222	1
C5	Capacitor, 50 uF @ 25V	013-5050	1
C6	Capacitor, 0.1 uF @ 80V	038-1050	1
C7	Capacitor, 30 uF @ 16V	013-3050	1
C8	Capacitor, 3900 uF @ 500V	042-3932	1
C9	Capacitor, 820 pF @ 300V	042-8222	1
C10	Capacitor, 50 uF @ 25V	013-5050	1
IC1	Integrated Circuit, LM381	225-0009	1
R1	Resistor, 220k Ohm $\pm 5\%$, 1/4 W	100-2263	1
R2	Resistor, 4.7k Ohm $\pm 5\%$, 1/4 W	100-4743	1
R3	Resistor, 470 Ohm $\pm 5\%$, 1/4 W	100-4733	1
R4	Resistor, 680k Ohm $\pm 5\%$, 1/4 W	100-6863	1
R5	Resistor, 82k Ohm $\pm 5\%$, 1/4 W	100-8253	1
R6	Resistor, 47k Ohm $\pm 5\%$, 1/4 W	100-4753	1
R7	Potentiometer, 50k Ohm $\pm 10\%$, 1/2 W	178-5054	1
R8	Resistor, 220k Ohm $\pm 5\%$, 1/4 W	100-2263	1
R9	Resistor, 4.7k Ohm $\pm 5\%$, 1/4 W	100-4743	1
R10	Resistor, 470 Ohm $\pm 5\%$, 1/4 W	100-4733	1
R11	Resistor, 680k Ohm $\pm 5\%$, 1/4 W	100-6863	1
R12	Resistor, 82k Ohm $\pm 5\%$, 1/4 W	100-8253	1
R13	Resistor, 47k Ohm $\pm 5\%$, 1/4 W	100-4753	1
R14	Potentiometer, 50k Ohm $\pm 10\%$, 1/2 W	178-5054	1
T1, T2	Audio Transformer	376-0251	2
XIC1	Integrated Circuit Socket, 14-Pin	417-1404	1
----	Blank Circuit Board	B510-0081	1

Printed Circuit Board Assembly, Alpha I - 910-0081

REF. DES.	DESCRIPTION	PART NO.	QTY.
C1	Capacitor, 0.1 uF @ 80V	038-1050	1
C2	Capacitor, Electrolytic, 30 uF @ 16V	013-3050	1
C3	Capacitor, 3900 pF @ 500V	042-3932	1
C4	Capacitor, 820 pF @ 300V	042-8222	1
C5	Capacitor, Electrolytic, 50 uF @ 25V	013-5050	1
IC1	Integrated Circuit, LM381	225-0009	1
R1	Resistor, 220k Ohms $\pm 5\%$, 1/4 W	100-2263	1
R2	Resistor, 4.7k Ohm $\pm 5\%$, 1/4 W	100-4743	1
R3	Resistor, 470 Ohm $\pm 5\%$, 1/4 W	100-4733	1
R4	Resistor, 680k Ohm $\pm 5\%$, 1/4 W	100-6863	1
R5	Resistor, 82k Ohm $\pm 5\%$, 1/4 W	100-8253	1
R6	Resistor, 47k Ohm $\pm 5\%$, 1/4 W	100-4753	1
R7	Resistor, 50k Ohm $\pm 10\%$, 1/2 W	178-5054	1
T1	Audio Transformer	376-0251	1
XIC1	Integrated Circuit Socket, 14-Pin	417-1404	1
----	Blank Circuit Board	B510-0081	1

REVISIONS				
REV.	DESCRIPTION		DATE	APPROVED



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