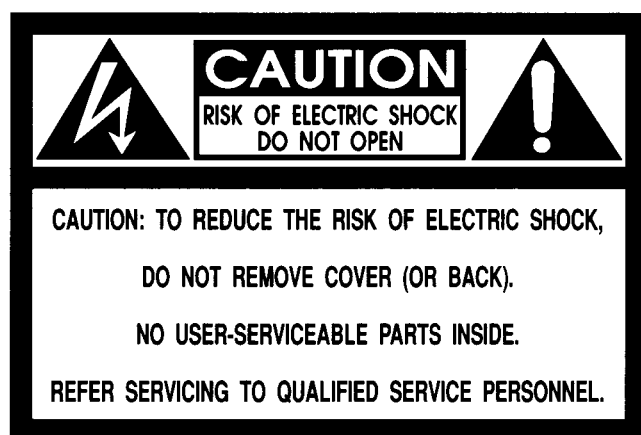


BBE[®]
Sound Inc.

▲
MODEL 386
ACOUSTIC PREAMP
USER MANUAL



Important Safeguards



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

ATTENTION: RISQUE DE CHOC ELECTRIC- NE PAS OUVRIR.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point, within a equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For your protection, please read these safety instructions completely before operating the appliance, and keep this manual for future reference.

Carefully observe all warnings, precautions and instructions on the appliance and described in the operating instructions supplied with the appliance.

INSTALLATION

Water and Moisture - Do not install the appliance near water: for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Heat - Do not install the appliance near sources of heat such as radiators, heat registers, stoves, or other appliances that produce heat.

Ventilation - Situate the product so its location or position does not interfere with its proper ventilation. For example, you should not place the product on a bed, sofa, rug, or similar surface that might block the vent openings, or placed in a built-in installation, such as a bookcase or cabinet that might impede the flow of air through the ventilation openings.

Wall or Ceiling Mounting - If your appliance can be mounted to a wall or ceiling, mount it only as recommended.

USE

Power Source - Connect the appliance to a power supply only of the type described in the operating instructions or as marked on the appliance.

Power-Cord Protection - Route the power cord so that it is not likely to be walked on or pinched by having objects placed on it, paying particular attention to the plugs, receptacles, and the point where the cord exits from the appliance.

Grounding or Polarization - Do not defeat the grounding or polarization feature of the AC power cord. If your AC receptacle will not accept the power cord plug, contact your electrician to install a proper AC receptacle.

When not in use - Unplug the power cord of the appliance from the outlet when left unused for a long period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the plug out by the cord.

AC Receptacle - Check to make sure that the AC receptacle holds the power cord plug firmly and securely. If the power cord plug is loose, contact your electrician to replace the defective and unsafe AC

Foreign Objects - Be careful that foreign objects and liquids do not enter the enclosure through openings.

SERVICE

Unplug the appliance from the wall outlet and consult qualified service personnel when:

- the power cord or the plug has been damaged.
- a solid object or liquid has fallen into the cabinet.

- the appliance has been exposed to rain or moisture.
- the appliance does not appear to operate normally or exhibits a marked change in performance.
- the appliance has been dropped, or the enclosure damaged.

Do not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, refer to qualified service personnel **only**.



TABLE OF CONTENTS

Precautions.....	I
Product Description.....	1
Controls/Connections.....	2-4
General Operation/Applications.....	5
Service/Warranty Information.....	8
Specifications.....	5
Schematic Diagram.....	9-12

Congratulations on your purchase of the **BBE 386 Acoustic Guitar Pre-amp!** The **BBE 386** is an extremely versatile pre-amp which is capable of achieving a wide array of tones while conveniently configuring itself into any application. The **BBE 386** is able to accommodate the most demanding acoustic guitar pickup output levels, from the lowest levels of magnetic style pickups to the most powerful of active piezo style pickups. Additionally, the **BBE 386** has **two** stages of tone processing circuitry to clarify and enrich the acoustic guitar's signal while retaining the integrity of the guitar's original tone. Virtually noise free, the **BBE 386** will quickly configure itself into a channel input of a mixing console to reach audiences of any size. The **BBE 386** is equally versatile when used with a tape recorder when you want the whole world to hear!

The following features will make the **BBE 386** attractive to players of any caliber:

1. **Gain** control to adjust the output level of the **BBE 386 Acoustic Guitar Preamp.**
2. A **Parametric EQ** circuit to boost or reduce any frequency from 500Hz to 2kHz.
3. **BBE Sonic Maximizer** to bring out great clarity and projection without adding noise or harmonic distortion.
4. A bypassable **Notch Frequency** filter to eliminate any resonant frequency that may be created by the guitar's pickup configuration or by a room's tonal characteristics.
5. An input impedance of 3.32 mega ohms to accept all types of acoustic guitar pickups.

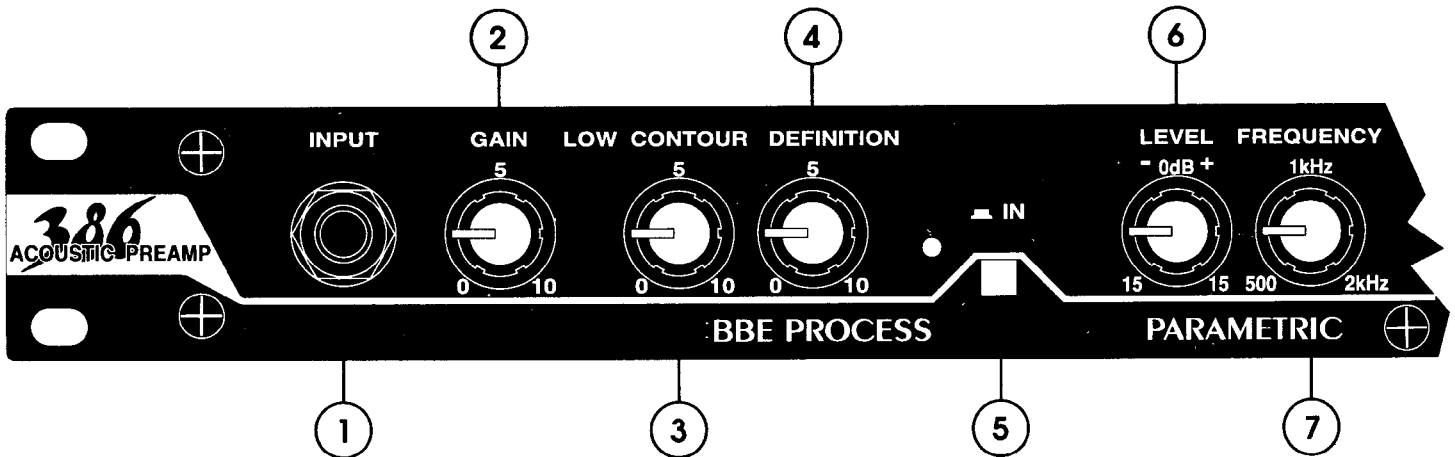
IMPORTANT

Before you begin, please check the contents within this box to insure that included are:

1. The **BBE 386 Acoustic Guitar Pre-amp.**
2. The **BBE 386 User's manual.**

If either of these items are found to be damaged or missing, immediately contact the **BBE** dealer from whom the unit was purchased.

CONTROLS AND CONNECTIONS



FRONT PANEL

1. INPUT: This jack allows for the connection of an acoustic guitar to the **BBE 386**.
2. GAIN: This control varies the output level of the **BBE 386**. The maximum gain of this section is 40dBu.

BBE PROCESS

3. LO CONTOUR: This control is a low frequency adjustment for the **BBE Process**. It provides a boost of 10dBu when turned to its maximum position (clockwise) at 50Hz. When turned to its minimum position (counter-clockwise) it reduces the 50Hz signal by 10dBu. The middle position would be flat or no change. This control differs from that of the 60Hz adjustment in the **Equalization** section due to the inherent phase shift of the **BBE Process**.
4. PROCESS: This control introduces the popular **BBE Process** which has been specially modified for the **BBE 386 Acoustic Guitar Pre-amp**. The **BBE Process** gives the user a more detailed perception of tonality, added "bite" and an increase in clarity. The low end of the acoustic guitar will be tightened while the high end will be crystal clear without adding or creating any additional noise or harmonic distortion. When the knob is in its minimum position, completely counter-clockwise, no process is taking effect. Turning the knob clockwise will introduce the **BBE Process**. Adjust the knob to mix the desired amount of process to suit your taste. The **BBE Process** also has its own in/out switch for comparison of the processed to unprocessed signal located on the front panel. Experiment with the process. Use the **BBE Process** as an extension of the tone controls.

The **BBE Process** is not an effect, but an improvement. To start, set the **BBE Process** knob to its 12 o'clock position, then adjust accordingly.



5. IN: This switch engages the **BBE Process**. When depressed, the "IN" position, the "GREEN" LED will illuminate. When in the "OUT" position, the LED will illuminate "RED", indicating that the **BBE Process** has been disengaged.

PARAMETRIC EQ

6. LEVEL: This control adjusts the level of the peak frequency, as determined by the **FREQUENCY** control. The maximum boost is 15dB while the maximum reduction is 15dB.
7. FREQUENCY: This control adjusts the peak frequency at which the parametric EQ takes place. The frequency range is from 500-2kHz.
8. FREQUENCY NOTCH: This control adjusts the frequency of the notch filter. This high Q filter is adjustable from 85 to 250Hz.
9. IN/OUT: This switch engages/disengages the **NOTCH** filter on the **BBE 386**. When in the "IN" position, the **NOTCH** filter is engaged, reducing the selected frequency, as determined by the **FREQUENCY** knob, 18dBu. When in the "OUT" position, the **NOTCH FILTER** circuit is disengaged.

POWER

10. POWER: This switch applies AC power to the **BBE 386 Acoustic Guitar Pre-amp**. The LED for the **BBE PROCESS** will illuminate "RED" or "GREEN" as determined by the bypass switch when the **power switch** is in the "ON" position. When the switch is in the "OFF" position, the LED for the **BBE PROCESS** circuit will not illuminate.

REAR PANEL CONTROLS



REAR PANEL

1. **POWER CORD:** This is a standard two-pronged, polarized AC power cable (U.S. version only) for connection to any standard polarized 110Vac outlet.
2. **FUSE:** Replace **ONLY** with same type Fastblow fuse.
U.S., Canada and Japan models:
250Vac, 1/2A Fastblow
Standard model:
250Vac, .125A Fastblow

OUTPUTS

3. **UNBALANCED:** This output, a 1/4" monaural phone jack, is to connect the **BBE 386 Acoustic Guitar Pre-amp** to the next subsequent component in the system. The maximum output is rated at +18dBu. **NOTE: Actual output may vary due to the selected position of the BBE PROCESS, PARAMETRIC EQ and NOTCH FILTER controls.**



SPECIFICATIONS

Input Impedance: 3.32 Mega Ohms
Noise: -95dBu
THD: less than 0.04% in **BBE PROCESS MODE**
Maximum Output: +18dBu (may vary due to control settings)

Power Requirements: U.S., Canada & Japan models:
120VAC, 50/60Hz, 8 WATTS
Standard model:
220VAC, 50/60Hz, 8 WATTS

Fuse: Replace with the same type **FASTBLOW** fuse.
U.S., Canada & Japan models:
250Vac, 1/2A Fastblow type fuse
Standard model:
250Vac, .125A Fastblow type fuse

Dimensions: 19"(W) x 5.5"(D) x 1.7"(H)

Shipping Weight: 6.5 lbs.



GENERAL OPERATIONS

In order to reduce the risk of damage to any equipment, properly connect all cables and power cables before turning on any components in the system. Most important of all, **ALWAYS TURN ON THE POWER AMPLIFIER LAST TO AVOID DAMAGING THE SPEAKERS OR THE AMP.**

Different acoustic guitars will vary in output level because of the different types of pickups that are available. For this reason, the **BBE 386 Acoustic Guitar Pre-amp** has an input **Gain** control. Adjust this knob to achieve a strong signal input to the **BBE 386**. As a starting suggestion, acoustic guitars with piezo type pick-ups will usually require a higher setting than acoustic guitars with magnetic type pick-ups.

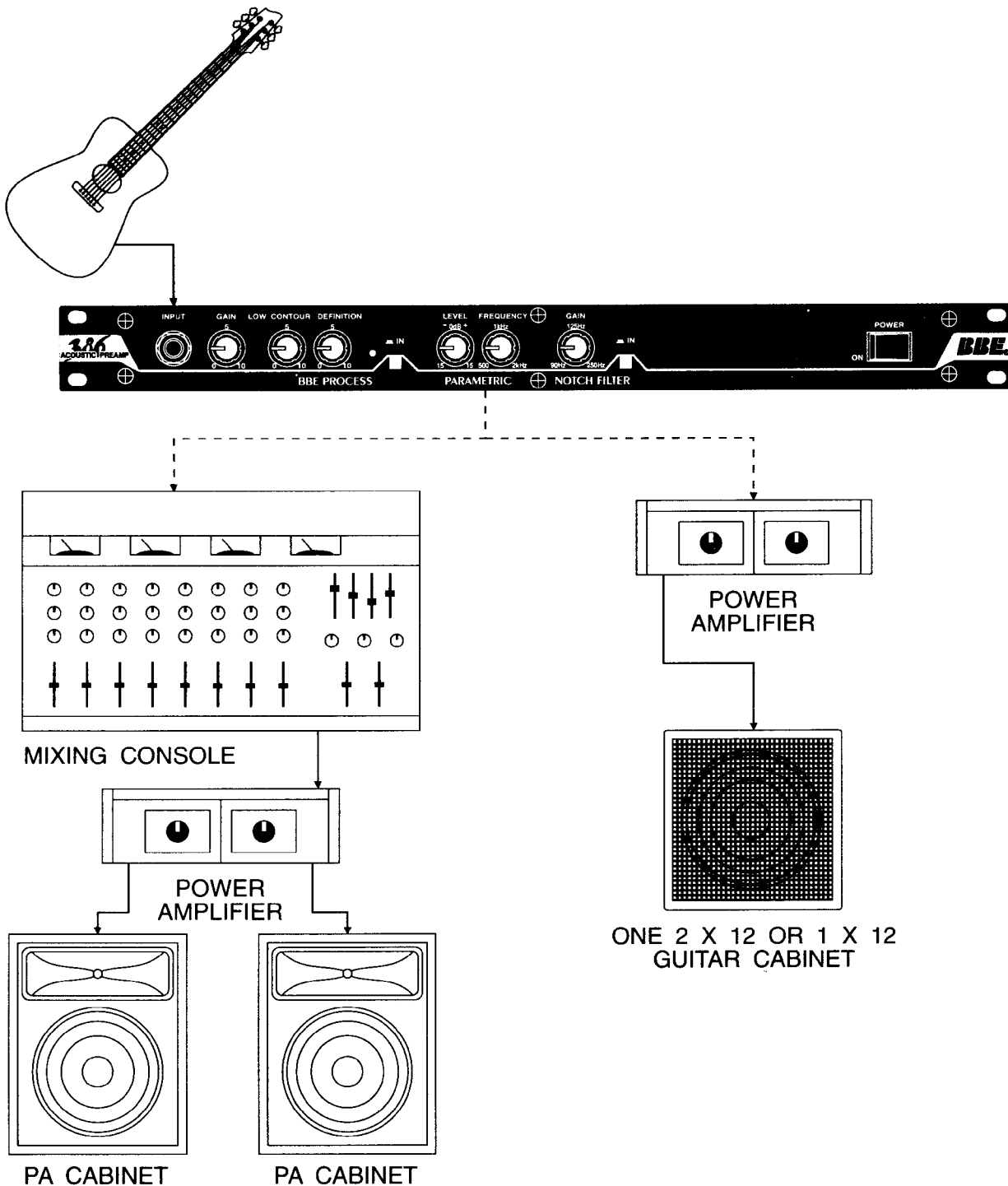
The **BBE Process** is a unique feature that only the BBE series of pre-amps possess. With the **Lo Contour** and **Definition** controls, the **BBE Process** will produce a clear, crisp, full-bodied sound without adding any noise or harmonic distortion to the signal. The **BBE Process** should be used as an extension of the **Equalization** controls to improve the overall quality of the acoustic guitar's tone.

The **Parametric Equalization** circuit of the **BBE 386** has been designed to accent or reduce the frequency range that helps to define a player's particular "sound." The **Frequency** control selects a frequency range while the **Level** boosts or reduces that range, as determined by the user, to get tone "just right."

A common dilemma of acoustic instruments is that the body of the instrument, along with the room it occupies, induces a resonant frequency. This is most noticed as a "hum" when a particular note, or harmonic of that note is played. The **BBE 386** has been designed with a **Notch Filter** to "de-emphasize" that particular frequency. Once the resonant note has been found, adjust the **Notch filter** until there is no noticeable tonal resonance of the guitar to the room.

Connecting the **BBE 386** to a mixing console/power amplifier for live use or directly to a multitrack tape deck for recording applications will be the final step in incorporating the pre-amp into a practical situation. Use the following illustrations as a guide for placing the **BBE 386** into the signal chain.

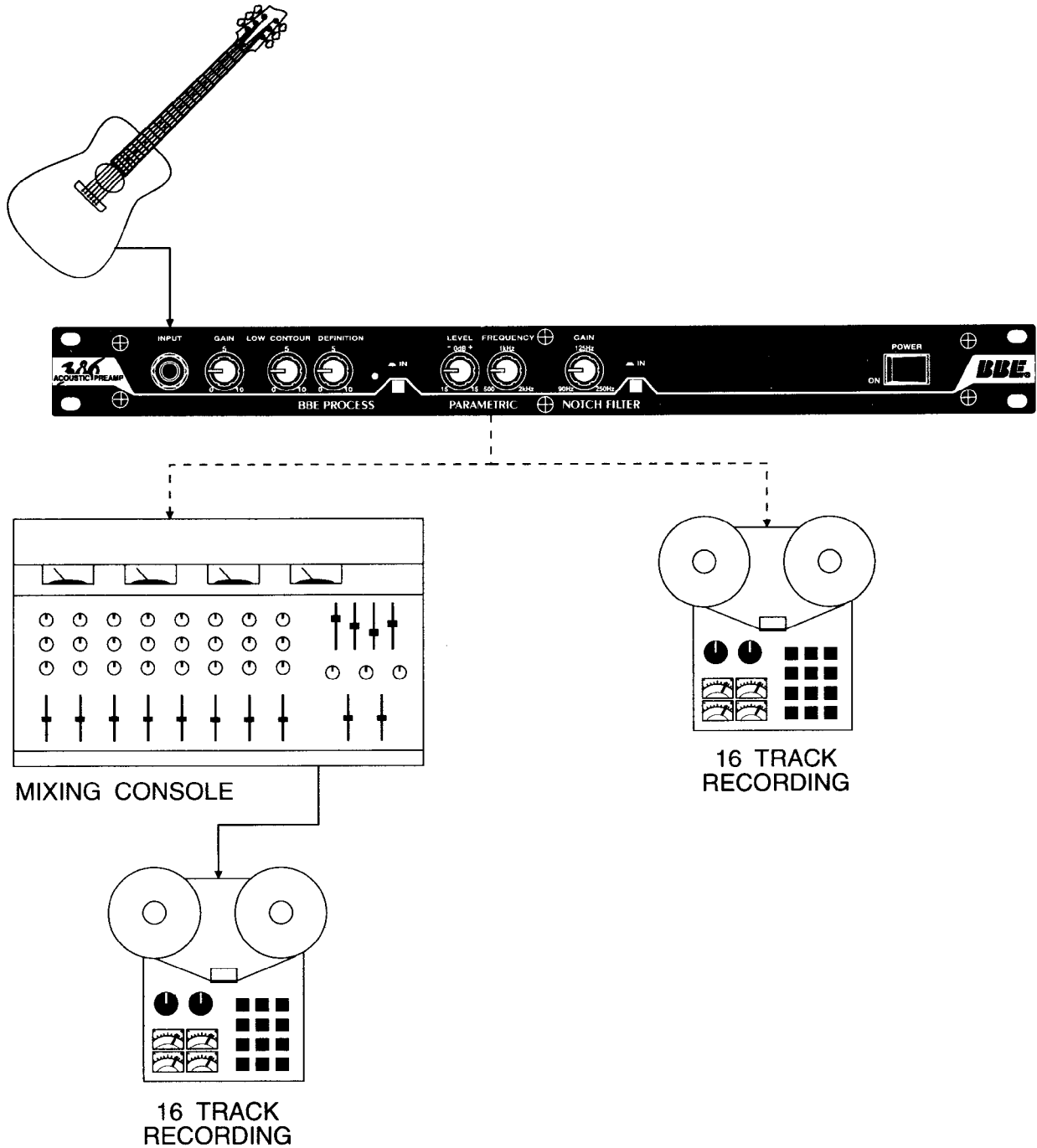
USING THE BBE 386 ACOUSTIC GUITAR PRE-AMP IN A LIVE APPLICATION



In the past, to be heard properly, an acoustic guitar had to share the same amplifier as an electric guitar. It worked, but did not compliment the acoustic guitar too well. Now, with the addition of the **BBE 386 Acoustic Guitar Pre-amp**, proper amplification of the acoustic guitar can be achieved.

The two means of configuration shown in the above diagram are meant as a starting point for live sound reinforcement. Utilizing a P.A. system or a amp/speaker combination will depend on your individual requirements.

USING THE BBE 386 ACOUSTIC GUITAR PRE-AMP IN A STUDIO APPLICATION



The **BBE 386** is a great way to amplify an acoustic guitar signal to an adequate recording level. With its low noise level, the **BBE 386** can be connected directly to a tape recorder for the purest sound possible or through a mixing console for the addition of effects or secondary tone modification.



SERVICE

We recommend that if at all possible a **BBE 386 Acoustic Guitar Pre-amp** which requires service be sent to our facility in Huntington Beach, CA. We request that a "RETURN AUTHORIZATION" be issued by the dealer from whom you purchased the unit. If this is not possible, call BBE Sound, Inc. directly at (714) 897-6766, to obtain a "RETURN AUTHORIZATION." Include a copy of the bill of sale with the unit when it is shipped to BBE Sound Inc., so that the service process can be expedited.

As the repair turnaround time is minimal, we request that the unit be sent directly to BBE Sound, Inc. This helps us add reliability data to our files for use in designing future products.



MAINTENANCE

Maintenance of the **BBE 386 Acoustic Guitar Pre-amp** is limited to proper cleaning of the unit with a mild household cleaner such as Formula 409[™] or Windex[™]. The chassis and cover are steel finished with a durable polyurethane paint, while the front panel is an anodized aluminum extrusion.

There are no user replaceable parts and the unit should not be opened for any reason unless you are a qualified technician.

Calibration should be performed if parts are replaced or if a performance check-out indicates a problem with calibration. Long term use has shown that over the life of the unit there is little or no drift of the components in the **BBE 386** which would cause a change in calibration. A conservative design philosophy has resulted in a piece of equipment which should give years of trouble-free service.



WARRANTY

Warranty registration of the unit to BBE Sound Inc. is not necessary. However, it is strongly recommended that a copy of the bill of sale is retained for future reference.

IT IS THE SOLE RESPONSIBILITY OF THE END USER TO PROVIDE THE BILL OF SALE OR OTHER MEANS OF PROOF OF PURCHASE TO VALIDATE THE WARRANTY IF WARRANTY SERVICE IS REQUIRED.

The **BBE 386 Acoustic Guitar Pre-amp** is warranted against defects in material and workmanship for a period of **one (1) year** from date of purchase from BBE Sound, Inc. or from an authorized dealer.

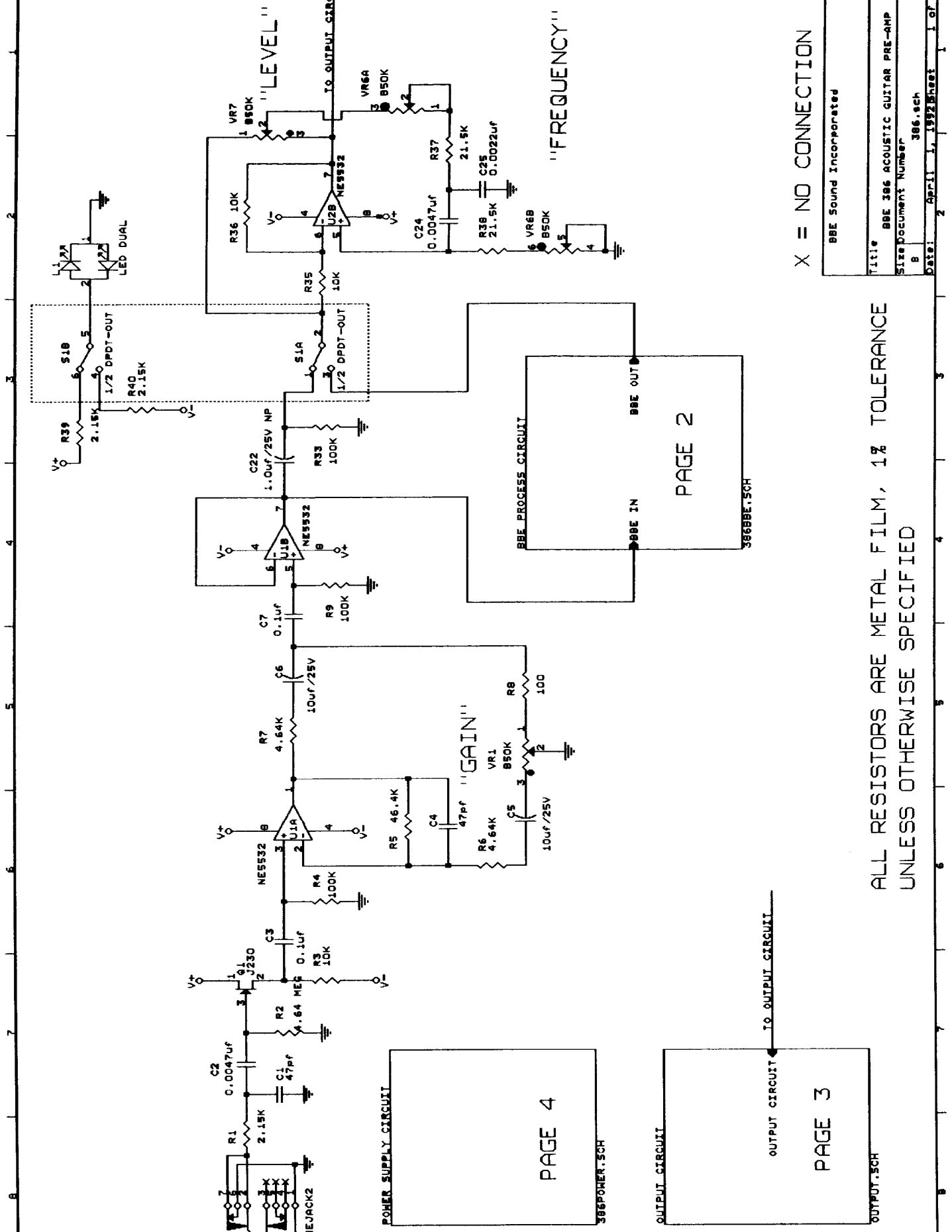
During this period, we will repair units free of charge providing that they are shipped prepaid to BBE Sound, Inc., 5381 Production Drive, Huntington Beach, CA 92649. BBE Sound, Inc. will pay return UPS shipping charges within the USA. All charges related to non-US shipping, including customs clearance, will be billed. The warranty will be honored for the longer of either 90 days from the date of any service or the remainder of the original **1 Year** factory warranty.

This warranty will be considered null and void by BBE Sound, Inc. if any of the following is found:

1. The equipment has been physically damaged.
2. The equipment shows signs of abuse.
3. The equipment has been electrically damaged by improper connection or attempted repair by the customer or a third party.
4. The equipment has been modified without authorization.
5. The bill of sale indicates that the purchase date of the equipment is not within the warranty period.

All non-warranty repairs are warranted for a period of 90 days from the date of service.

BBE Sound, Inc. is NOT LIABLE FOR CONSEQUENTIAL DAMAGES. Should the pre-amp fail to operate for any reason, our sole obligation is to repair the unit as described above.



POWER SUPPLY CIRCUIT

PAGE 4

3866PRE.SCH

OUTPUT CIRCUIT

TO OUTPUT CIRCUIT

PAGE 3

OUTPUT.SCH

BBE PROCESS CIRCUIT

BBE IN

BBE OUT

PAGE 2

3866BE.SCH

X = NO CONNECTION

BBE Sound Incorporated

ALL RESISTORS ARE METAL FILM, 1% TOLERANCE
UNLESS OTHERWISE SPECIFIED

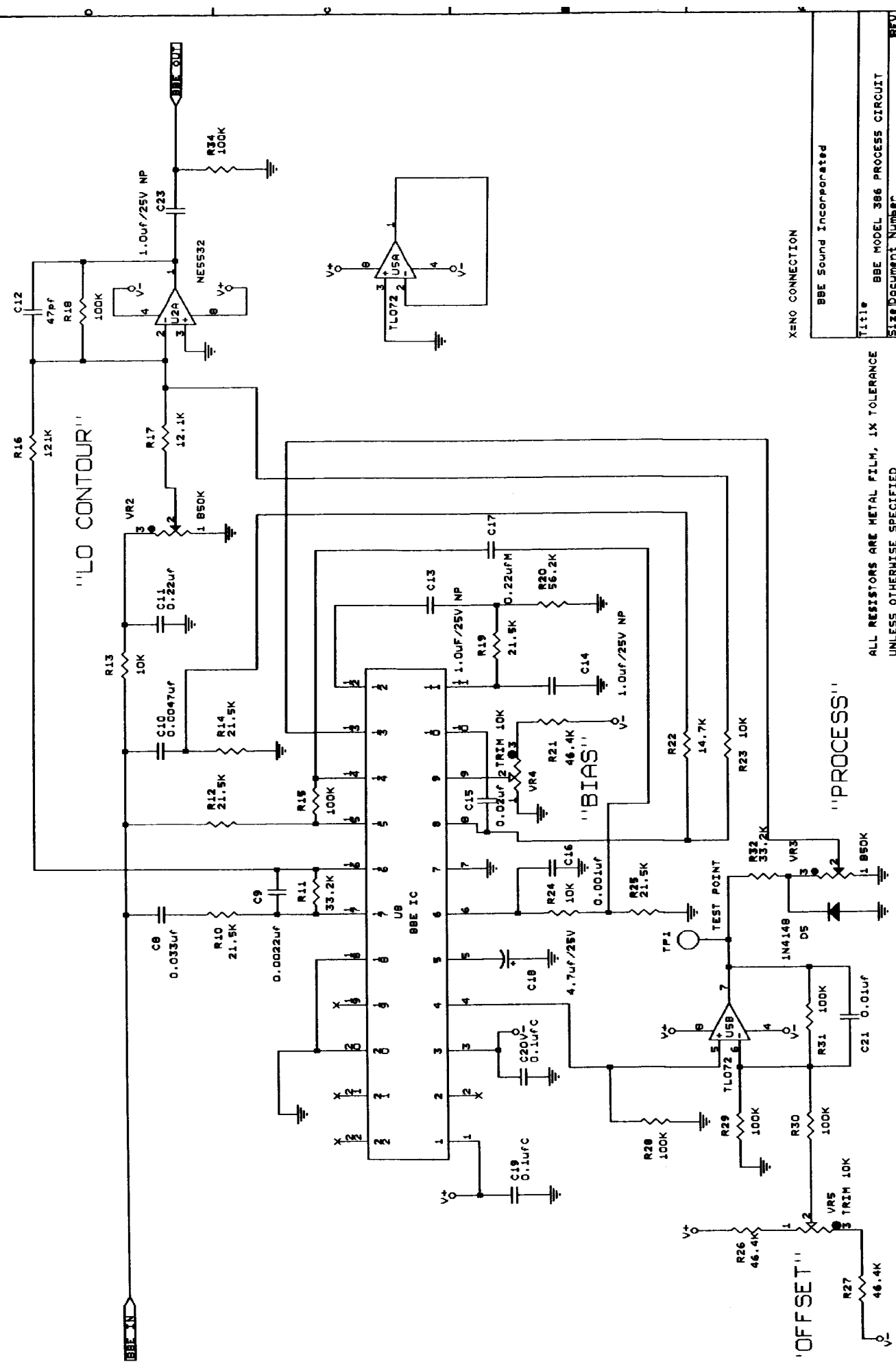
Title BBE 386 ACOUSTIC GUITAR PRE-AMP

Size Document Number

B 386.sch

REV A

Date: 2 April 1, 1992 Sheet 1 of 2



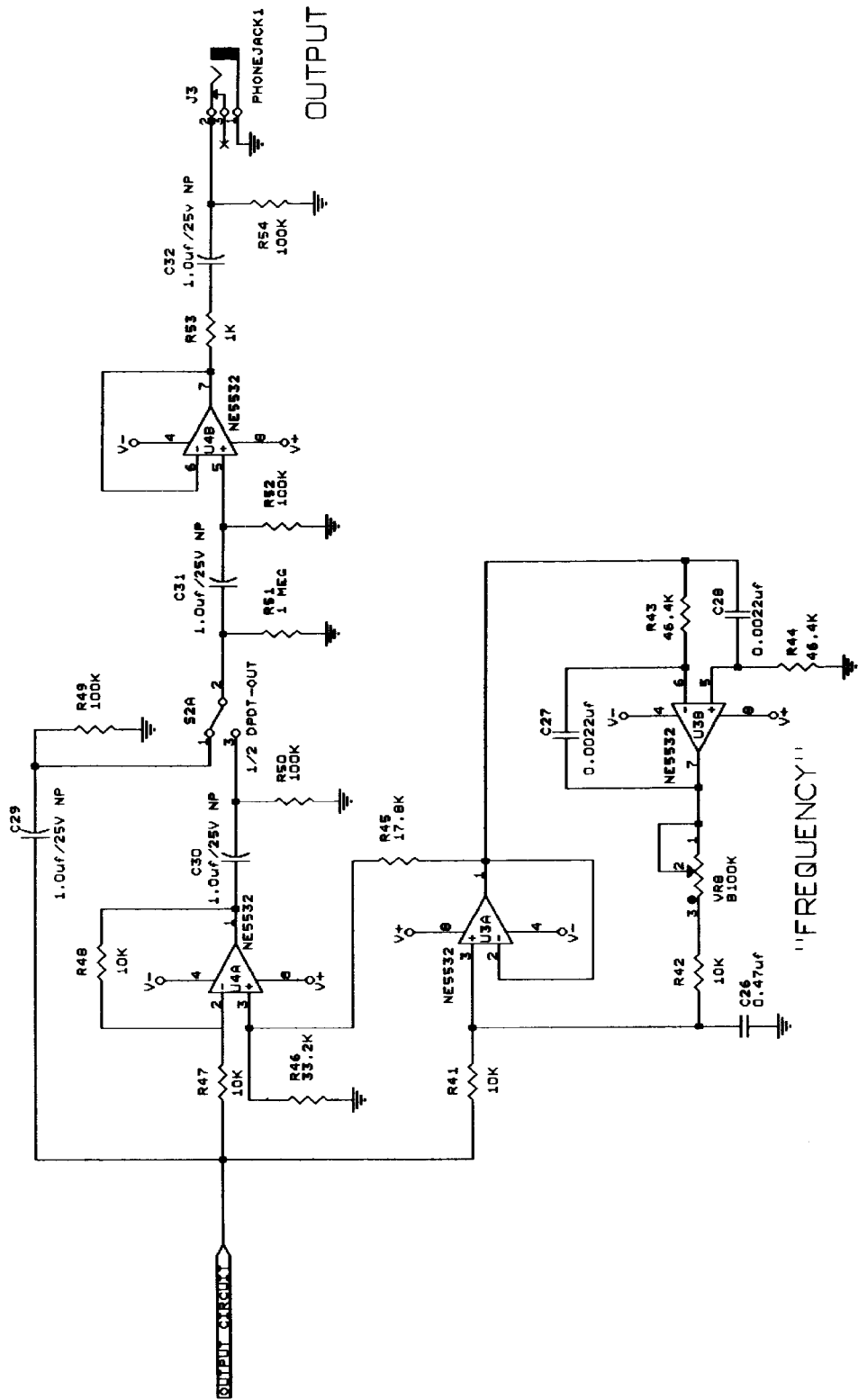
XENO CONNECTION

BBE Sound Incorporated

ALL RESISTORS ARE METAL FILM, 1% TOLERANCE
UNLESS OTHERWISE SPECIFIED

'PROCESS'

Title	BBE MODEL 386 PROCESS CIRCUIT
Size/Document Number	FILE # 306BBE.SCH
REV	A
Date:	1. 1992/5/28
	2 of 4



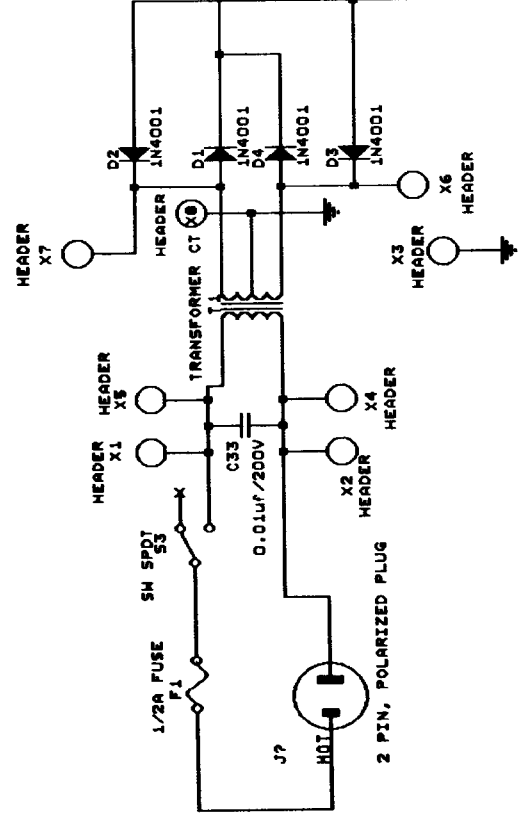
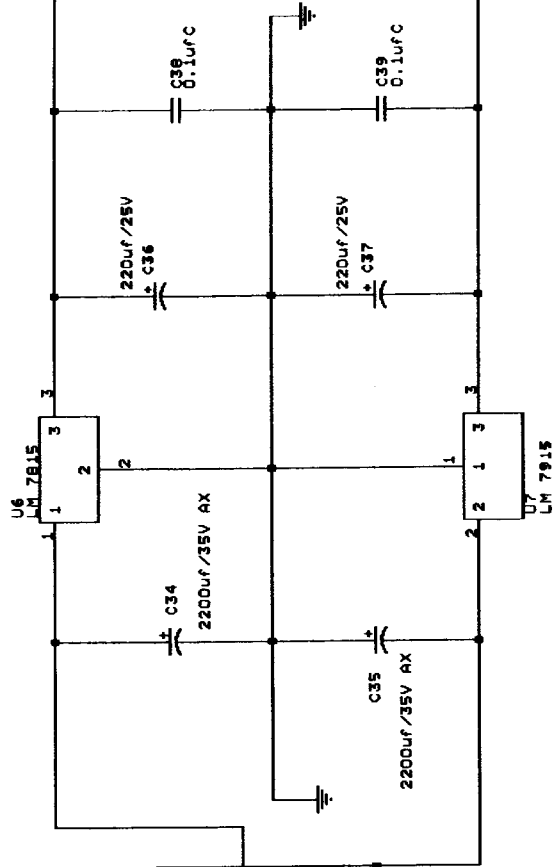
ALL RESISTORS ARE METAL FILM, 1% TOLERANCE
UNLESS OTHERWISE SPECIFIED

BBE Sound Incorporated

Title	BBE 386 OUTPUT CIRCUIT
Size/Document Number	B
REV	A
FILE #	OUTPUT.SCH
Date:	2 APR 81 11:52Z
	3 of 4

+15VDC
V+

-15VDC
V-



BBE Sound, Incorporated

Title

MODEL 386 POWER SUPPLY

Size Document Number

REV B FILE # 386POWER.SCH

Date: April 1, 1992 Sheet 4 of 4

BBE[®]
Sound Inc.

CALIFORNIA, U.S.A.
(714)897-6766 * FAX(714)895-6728

BBE is a registered trademark of BBE Sound, Inc.