

the  
preamplifier  
of choice



the SP-6B  
from  
Audio Research



While there are a number of high quality preamplifiers available to the audiophile, the SP-6B stands alone in its ability to transmit the listener beyond the reproduction chain to the experience of the live event.

The SP-6B achieves this goal by utilizing a hybrid technology approach to preamplifier design. The SP-6B incorporates massive, electronically regulated, solid-state power supplies coupled with vacuum tubes in the audio amplification stages. While the vacuum tube "lost out" to the transistor in popular consumer electronics where low cost, availability and miniaturization were necessary, the vacuum tube, when incorporated in a classic circuit design with a proper power supply, offers advantages still unobtainable in even the finest solid-state designs.

**Some of these advantages are:**

**Clarity** - The SP-6B presents a clarity of sound that

immediately impresses the listener upon his first audition. The "heaviness" or "veiling of sound" found in many preamplifiers is totally lacking. There is a distinct absence of hardness, edge, and grain which is evident in most, if not all, present-day solid-state designs.

**Increased Definition** - Along with freedom of clarity comes increased definition. The SP-6B reproduces all of the subtle colors, shadings, nuances and ambient information that adds to the illusion of a "you are there" performance. The SP-6B is able to sort out complex musical material and to focus each instrument and voice onto the proper acoustic stage. This HIGH DEFINITION™ capability is unique to all Audio Research products.

**Harmonic Integrity** - While many preamplifiers boast good static specifications, these measurements are normally accomplished through the use of large amounts of negative feedback. Used as a corrective method to obtain good test



bench specifications, these massive doses of "electronic whitewash" are often applied at the expense of sound quality. However, when the vacuum tube is used in a proper circuit design it requires only minimal amounts of feedback. The sonic benefit of this approach is evident in the SP-6B which immediately impresses the listener with a sense of harmonic "rightness." Delicate harmonic structures that are essential to the recreation of a musical event are authentically reproduced by the SP-6B.

**Dynamic Range** - Along with its advantages of clarity, HIGH DEFINITION™ and harmonic integrity, the SP-6B excels in reproducing a musically accurate dynamic range. Its incredible power supplies and essentially overload-proof output sections allow the SP-6B to reproduce the quietest notes to the loudest and most complex passages without a hint of stress. Separation of instruments and voices remain intact with no sense of smearing due to inadequate design.

In the final analysis, it is not only what the preamplifier must produce, but what it must not produce. Its single requirement is to reproduce only the given signal. This extremely complex, intricately defined, highly dynamic signal places heavy demands upon a preamplifier. The SP-6B is a "total-engineered" product which comes closer to achieving this goal than any other product currently available.

We suggest that the SP-6B will be the state-of-the-art preamplifier well into the '80s. We also suggest that its inclusion in any existing high-quality audio system will affect a more dramatic change than that of any other component. To evidence the finest results, the SP-6B should be used with the best available pickup systems, associated electronics and loudspeakers. To fully appreciate its sonic accuracy and value of craftsmanship, contact your local Audio Research dealer and listen to the SP-6B. After hearing it we know that you too will agree that the SP-6B is indeed the preamplifier of choice for the audiophile perfectionist.



## Features:

As expected with a product of this caliber, the SP-6B offers many outstanding features to the audiophile perfectionist.

**Automatic muting** - A two minute warmup timer insures muting of undestrable subsonic output during circuit stabilization. Continuous protection against unwanted DC output due to any cause is provided by four output sensors that automatically mute both main outputs. No troublesome relays or electrical contacts are used. A blinking front-panel LED provides a visual indication when the automatic mute is activated.

**Manual muting** - A front panel mute switch is included for repeat settings, interruptions, etc.

### High accuracy, close tracking, segmented gain control

A metal-film stereo volume control assures trouble free, close tracking volume selection in 2 dB steps (guaranteed 1.5 dB tracking, .5 dB typical).

**Distortion - null adjustments** - Four internal trim-pots allow for optimizing circuit linearity for individual tube characteristics, both initially and throughout tube life.

**Selectable gain "range" switch** - A rear panel switch allows for better gain matching of high efficiency loudspeakers, high output cartridges, transformers, etc.

**Separate front panel power receptacle switch** - A front panel switch operates 3 relay-controlled outlets with a 1600 watt capacity for power amplifiers and other outboard devices.

**Special Off-Chassis construction** - The special isolated-ground construction floats all inputs and outputs from the chassis. Special rejection filters are also included to minimize or eliminate RFI, TVI, and CB interference.

**Sonically-Selected Components** - Extensive use of selected low-noise premium grade vacuum tubes, special metal film resistors, and multiple shunt capacitors provide optimum sonic accuracy.

**Other features include** a rear panel provision for disconnecting the common ground from the chassis so that rack mounted installations may be accomplished without ground loop induced hum. Front and rear panels are of two-color anodized aluminum construction for permanent finish and lettering. Industrial grade components and construction are used for long service life.

## Specifications:

### Frequency Response:

High level section,  $\pm 25$  dB, 5 Hz to 30 kHz.  
- 3 dB points below 1 Hz and above 100 kHz.

Magnetic phono,  $\pm 25$  dB of RIAA from 30 Hz to 40 kHz.

### Harmonic Distortion:

Less than .01% at 2 volts RMS output, 20 Hz to 20 kHz (typically .0005% in midband).

### Intermodulation Distortion:

Less than .002% at 2 volts RMS output.

### Gain:

Magnetic phono input to tape output, 34 dB.  
Magnetic phono input to main output, 60 dB.  
High level inputs to tape output, 0 dB.  
High level inputs to main output, 26 dB.

### Input Impedance:

50k ohms, all inputs. (Magnetic phono may have any value substituted from 10 ohms to 100k. Also has provision to add to the 40 pF input capacitance for matching certain magnetic cartridges).

### Output Impedance:

Less than 500 ohms main output, 1000 ohms tape output. Recommended minimum load for maximum audio quality, 50k ohms and 250 pF maximum capacitance.

### Maximum Inputs:

Magnetic phono, 500 mV at 1 kHz (1.5V RMS, 10 kHz).  
High level inputs are essentially overload proof.

### Rated Outputs:

2V RMS 5 Hz to 30 kHz, all outputs, 60 ohm load.  
(Main output capability is 60V RMS output at .5% THD at 1 kHz into a 500k ohm load with 3V RMS high level input.)

### Power Supplies:

4 electronically-regulated solid-state supplies. Frequency-compensated high voltage supplies have a total equivalent low frequency stability of greater than 3 farads of capacitance. Line regulation better than .001%.

### Noise:

High level, (1) 250 uV RMS maximum residual unweighted wideband noise at main output with gain control minimum.  
(2) More than 90 dB below 1 volt RMS input (less than 20 uV equivalent input noise).  
Magnetic phono, 5 uV equivalent input noise, wideband RMS (-66 dB reference 10 mV input).

### Tube Complement:

6 premium grade ECC83 dual triodes.

### Power Requirements:

100-120/190-240 VAC, 50/60 Hz, 35 watts.

### Dimensions:

19" x 5 $\frac{1}{4}$ " x 10 $\frac{1}{4}$ " (48cm x 13.4cm x 26cm).

### Weight:

22 lbs net, 30 lbs shipping (10 kg net, 13.75 kg shipping).

**Optional walnut or oak cabinet available at additional cost.**



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