



MODEL SC-40
INSTRUMENT PREAMP

OPERATING INSTRUCTIONS

manufacturer of professional audio equipment

I. INTRODUCTION

The Ashly Audio model SC-40 instrument preamp was designed to help solve some of the problems associated with modern electronically reproduced music. In particular, it provides a means of performing the critical first stage of amplification for a wide variety of musical instruments with an absolute minimum of noise and signal loss, has provision for the connection of studio type line-level effects devices, operates with either line-level power amplifiers or musical instrument amps, and includes a direct output with a separate level control for connection to studio or PA console microphone inputs.

Tone control is accomplished using a sophisticated 3-band tunable equalizer borrowed from our large mixing consoles making possible a wide range of voicings.

A "peak" indicator warns of approaching overload anywhere in the preamp and the overload characteristic is one of "clean" clipping free from spikes or transients.

II. INPUT, OUTPUT, AND POWER CONNECTIONS

The preamp should be connected to a 3-wire grounded outlet supplying 120 Volts, 50-60 Hz. Power consumption is 5 watts.

Except for the mic-level PA output, all input and output connections are standard 1/4" phone jacks which mate with a standard phone plug such as a Switchcraft model 280. The mic-level PA output is a 3-pin male XLR connector and is wired as follows:

| | |
|-------|-------------|
| Pin 1 | Ground |
| Pin 2 | Signal low |
| Pin 3 | Signal high |

III. FUNCTIONS OF INPUTS AND OUTPUTS

A. INPUT

The front panel input impedance is 2.2 megohms which will impose virtually no load on any musical instrument, insuring maximum level and high frequency response. Nominal operating level is -20 dBV, but levels from -50 to +10 dBV provide good results. Low or high impedance sources are acceptable.

B. EFFECTS SEND-RETURN

These two jacks may be used to insert line-level effects or signal processing devices into the signal path. Connect the EFFECT SEND to the device input and connect the device output to the EFFECT RETURN. Low-level effects devices should be connected between the instrument and the SC-40 front panel input.

C. STAGE OUTPUTS

Use the HIGH-level output to directly drive a power amplifier (Crown, BGW, Phase Linear, etc.) and use the LOW-level output to drive conventional musical instrument amps. If you need more or less level and can't correct the problem by adjustment, try the other output.

D. PA OUTPUTS

Use the mic-level PA output to directly connect the SC-40 to a studio or PA system mixing console microphone input, or use the LINE-level output to drive a line input. The mic. connection should be used for long cable runs because it is a balanced line which helps to minimize noise. (This mic-level output can be used with any console mic input including balanced, unbalanced, and phantom powered types.)

IV. OTHER HOOKUPS

With the multitude of inputs and outputs available on the SC-40, there are many possible variations in its use. A few are presented here as an illustration. Experimentation will be necessary to exactly meet individual needs.

1. When not using the PA output as a direct feed, it may be used to feed a second stage amplifier, with separate level control.
2. When taking a line-level feed from another amplifier or preamp, connect it into the EFFECT return rather than the front panel input thus bypassing the preamp section of the SC-40, but still using the equalizer.
3. Smooth distortion may be produced by wiring (2) 1N914 diodes paralleled in opposite directions between the tip and sleeve of a phone plug and inserting it into the EFFECTS send. A foot switch can be wired in series with the tip of the plug to switch out the distortion.

V. CONTROLS

A. GAIN

The GAIN control adjusts the gain of the input stage of the SC-40 to accommodate a wide range of input levels. Start with this control at its minimum setting and increase as necessary. Decrease the gain if the "peak" indicator illuminates unless deliberate overdrive is desired.

B. EQUALIZER

The six equalizer controls are divided into three bands. Each band has a boost-cut and a frequency control. The low and high bands have a "shelving" type action, meaning that all frequencies below the low setting and above the high setting are affected by the boost-cut control. The mid equalizer is a "peaking" type, having maximum effect at the mid frequency setting and less effect on lower and higher frequencies. Equalization settings will vary widely depending on the type of instrument, speakers and cabinets used, and the type of sound desired. It is always a good idea to start with a "flat" setting as a reference and adjust from this point.

C. PRE-POST

This switch selects the signal sent to the PA outputs. The PRE position provides a "flat" signal to the PA regardless of the SC-40 equalizer settings, while the POST position includes the equalizer in the PA signal. Note that this switch affects only the PA outputs and that the STAGE signal is always equalized. As a general rule, use the PRE position if the PA or studio console has a good input tone control, and use the POST position if it does not.

D. LEVEL

These two controls independently adjust the levels of the signals at the PA and STAGE outputs. They should be adjusted to the desired level after the GAIN and EQUALIZER controls are set.