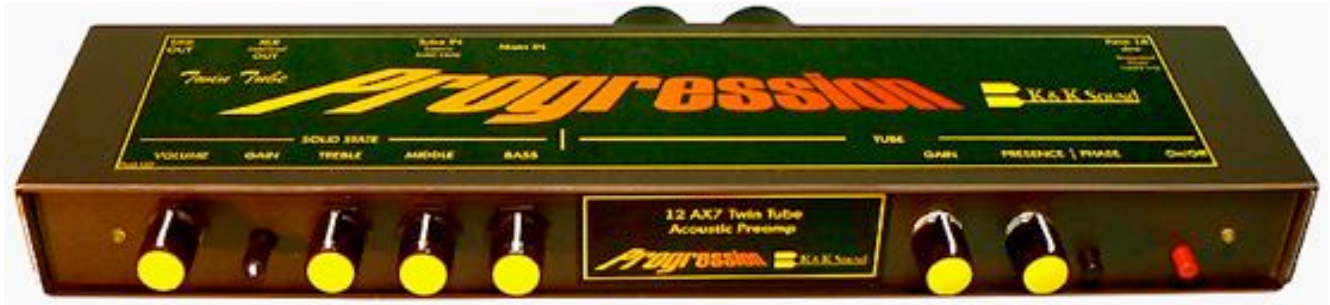


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## PROGRESSION TWIN TUBE ACOUSTIC PREAMP



The Progression contains a power converter, which transforms the input voltage into 200 volts. It has no user serviceable parts other than the two 12AX7 tubes. Do not open the unit due to the possibility of an electric shock even if the unit is not powered up! In the event it would need to be serviced, please send it to K&K.

The Progression is built for the acoustic musician who seeks an undistorted tone with the warm and crisp sound only a true tube circuit can provide. Unlike solid-state circuits, which tend to sound artificial if treble response is pushed, the Progression can add a special elegant "mic-like" high-end shimmer and the warmth only a high voltage tube circuit can produce.

### Features

- Initial solid state stage with volume, gain, 3 band EQ and peak LED
- Final tube stage with Twin 12AX7 in- and output tubes, gain and presence controls
- Individual outputs for both stages
- Phase shifting capability fully based within the tube circuitry
- ¼" main line out, solid state ¼" out, balanced main XLR out

### Important General Information

Tubes need a bit to warm up when switched on, and it takes 20-30 seconds until you hear sound. Tubes, by nature, distort a lot sooner than transistors do. For undistorted tube-sound, the Progression needs a higher amplifier master volume than a solid state preamp. Most amps easily provide this extra headroom. In order to provide the truest tube sound possible, we purposely feed Progression's line output directly from the 12AX7 tubes without going through another solid state stage. To achieve a clean tone, set Progression's "TUBE STAGE GAIN" low enough to NOT distort and turn the master volume on your amp or the channel-gain/volume on the mixing board a little higher.

If you hear a slight hum you may have created a "ground loop". Use a 3- into 2-prong (groundless) adapter on the 120-volt power plug of Progression's gray power-supply cable.

The "Main IN" input utilizes both, Progression's "Solid State" and "Tube" stage. The two-stage design allows to perfectly pre-amplify and pre-EQ the signal of a transducer in the solid state stage and then feed the strong and noise-free signal into the tube circuit. This keeps the overall noise level low and permits us keeping the full frequency response throughout the entire tube stage without any limit in treble frequencies.

## Outputs

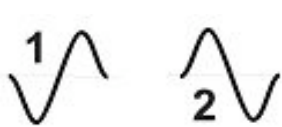
For the true tube enthusiast, the "LINE OUT" output carries the purest tube sound, because it feeds directly from the 12AX7 output tube. The "XLR OUT" feeds from the tubes as well but it uses one additional solid state OP-amp in order to provide the balanced signal output.

The "SOLID STATE OUT" feeds from the solid state preamp only and bypasses the tube stage. It does NOT use the phase switch and presence control. It provides higher headroom before distortion and super low noise level. It may be used in conjunction with small amps which do not provide enough power to utilize the tube stage. This output can be used for a tuner, too.

## How a Phase Switch Works

Phase switches are usually marketed as a feedback-controlling device, but they accomplish more than just that.

What is phase? Phase determines at what point in time a sound wave has its peak or trough.



This picture shows two (basically identical) waves, but the wave on the right (2) is inverted with respect to the wave on the left (1). Interestingly, if these two waves were played back simultaneously from the same speaker source with the same volume, they would completely cancel each other out and no sound would be heard. There would be silence.

When you amplify your guitar, your sound will also suffer from a degree of phase cancellations. Amplification systems, effect units, or any electronic audio device may or may not invert the phase of the signal coming in. In most cases the manufacturers do not specify.

Every acoustic instrument projects sound waves in a certain phase when it is played unplugged. The phase that is projected from the amplified speaker source needs to be "in phase" with the acoustic instrument's own sound waves or the result will not be optimal.

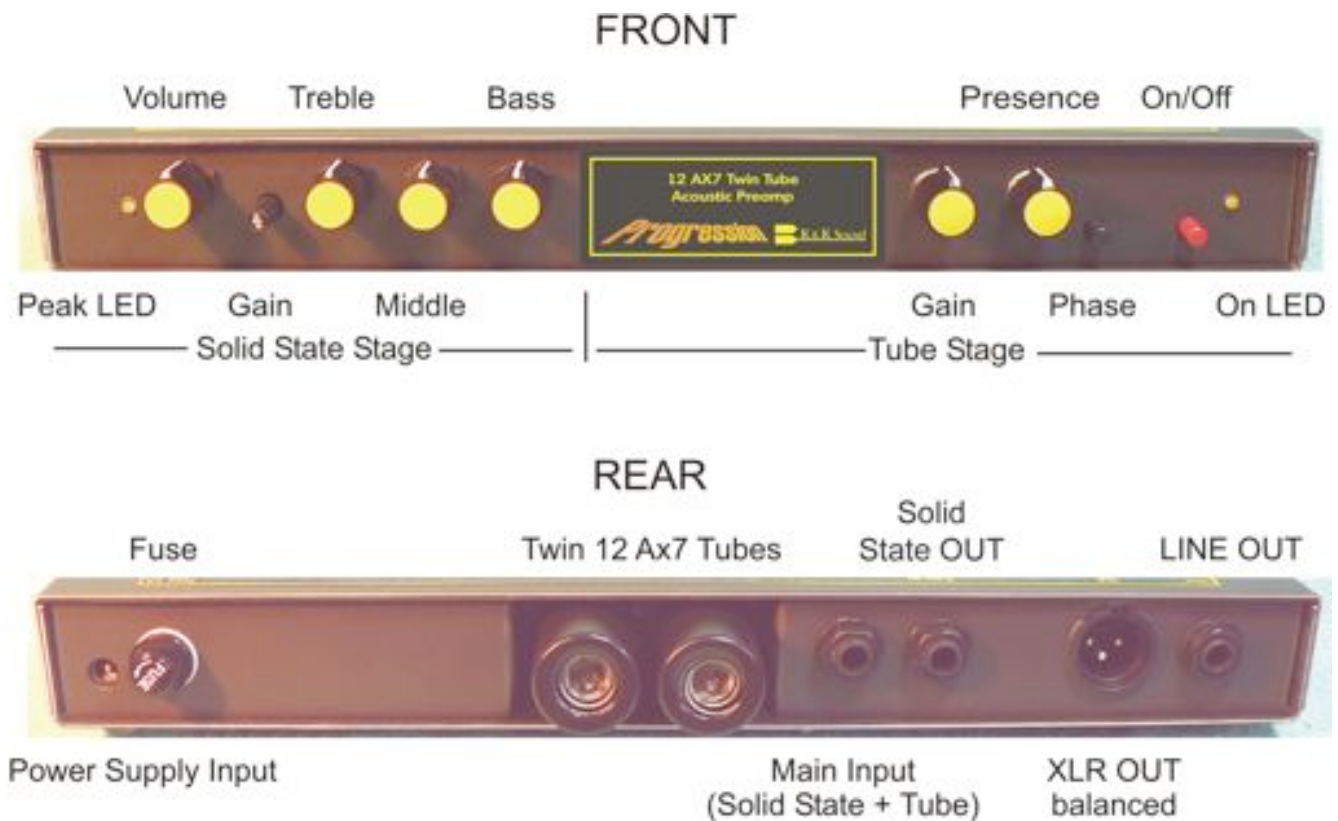
An out-of-phase problem is indicated by early feedback and tinny, unbalanced sound. This may be tolerable in some tone ranges (positions on the fret board) and quite noticeable in others, even resulting in sound cancellations on some notes.

Progression's phase switch allows for instant correction of this problem. Play your instrument and flip the phase switch back and forth. You will experience a fuller, warmer and nicely balanced tone with less feedback one way. This is the correct phase switch setting. Keep in mind that it may be different with different amplification systems.

## Adjusting the Progression for a Passive Pickup (like the Pure Mini)

- Connect the instrument to Progression's "MAIN IN" (this uses solid state first stage plus final tube stage). Connect the "LINE OUT" or the "XLR OUT" to an amplification system/PA and set your amp to a low-medium volume for a start.
- TUBE STAGE: turn the "TUBE GAIN" all the way down and set the "PRESENCE" control to center. Progression's output volume is now turned off for pre-adjustment.
- SOLID STATE STAGE: turn the "VOLUME" fully up and set the 3 EQ's to center.
- Play your guitar the loudest level you actually use (not as hard as you ever could!!) and adjust the "SOLID STATE GAIN" so that the "Peak LED" flashes sometimes. With a low volume pickup and light playing, the LED may not flash at all, even at highest gain setting. This is normal, in this case simply use the maximum available "SOLID STATE GAIN".
- Slowly raise the "TUBE GAIN" until slight distortion is occurs when you play hard. Then turn back a tiny bit for undistorted sound. The usable tube "TUBE GAIN" range will be only about ¼ turn, this is normal. The rest of the tube "GAIN" range will provide different ranges of distorted sound.
- Flip the phase switch to find the correct phase setting (see paragraph above).

- If you need higher overall volume, turn up the master volume on your amp or the channel-gain/volume on the mixing board.
- Boost or reduce "PRESENCE" with the tube stage's "PRESENCE" control. Turn fully right for maximum high-end "shimmer" or left for a mellower tone.
- You can finally apply EQ in the solid state stage. Turn left from center to cut - turn right to boost. Center is neutral.
- When a lot of EQ is used, both the "SOLID STATE GAIN" and the "TUBE GAIN" may need to be slightly re-adjusted.
- The signal output level of Progression's (tube section) MAIN OUT is naturally lower than the SOLID STATE OUT signal level. This is a normal phenomenon. As long as we compare undistorted signal levels, the tube circuit will put out only about half the volume than the solid state. It is important to have enough volume reserve in your amplification system to perfectly utilize Progression's tube circuit. If you occasionally only have just a very small amp on hand, it might be beneficial to use Progression's SOLID STATE OUT.



**USE DESIGNATED EXTERNAL POWER SUPPLY ONLY!**

**Technical Data**

Frequency response: 20-20,000 Hz  
 Inputs: Main In 1 Mega Ohm - Tube In 1.5 Mega Ohm  
 Outputs: Tube: ¼" Line 1 K - XLR 100 Ohm, Solid state: ¼" Line 10K  
 Tubes: 2 x 12 AX7 EH  
 EQ: bass 100 Hz highpass +/-20db, mid 1500Hz wideband +/-20db, treble 10KHz lowpass +/-20db  
 Fuse: 1 amp slow  
 Dimensions: 12 ½" wide x 4 ½" deep x 1 ½" high.

Internal Voltage: 200 volt

Progression is powered by a designated external power supply (included). Progression's tube section is hand-wired exclusively in the K&K custom shop. Hand-wiring is a quality hallmark with tube technology.