

## PRODUCT MANUAL

# TRINITY PRO SYSTEM

Thank you for choosing the K&K Trinity Pro Pickup/Microphone Combination System!

In this installation packet, you will find:

- Trinity Microphone Installation (follows)
- Pure Pickup installation (separate manual)
- Trinity Pro Preamp installation and use (separate manual)

### TRINITY MICROPHONE INSTALLATION

1. Cut a 2 1/2" piece of the supplied dual-lock and locate the base of the gooseneck (gooseneck is thicker and stiffer than the mic cable). Loop the dual-lock piece around the base of the gooseneck. Pinch the sticky sides together to get a tab as shown in fig.

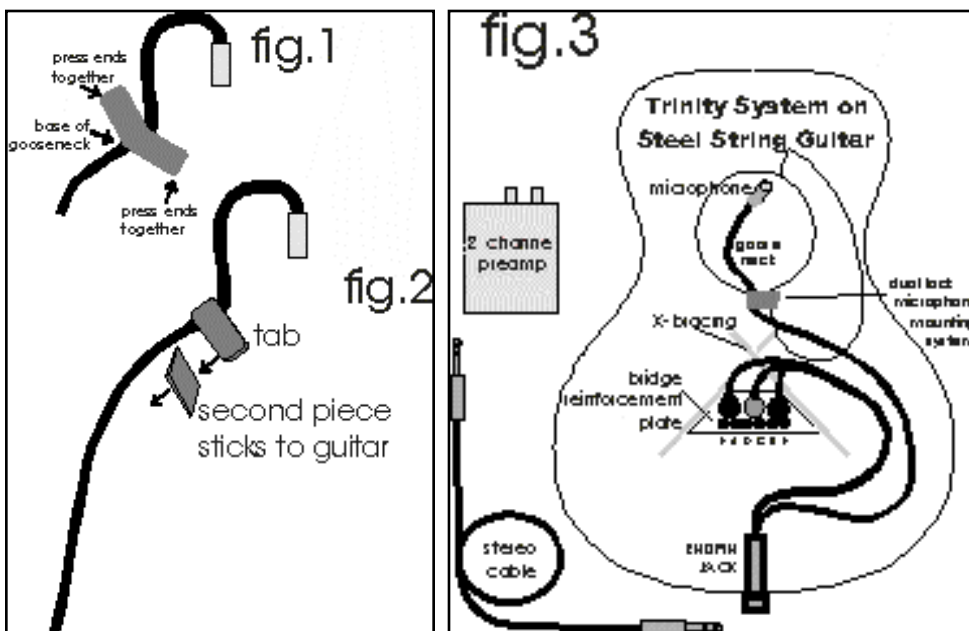
2. Cut a second piece of dual-lock approx. 1" long (see fig. 2) and stick it to a suitable spot inside your guitar close to the edge of the sound hole (fig. 3).

3. Form the gooseneck to achieve a mic position as shown in fig. 3. This position is recommended to avoid picking directly over the mic. The mic should aim outwards, towards the strings, between the G and B string. The distance between strings and mic should be about 3/8 inch (ca 10 mm).

4. Press the dual-lock mic tab onto the second dual-lock piece inside your guitar and re-adjust the mic's gooseneck.(fig. 3) The dual-lock works like "super" velcro and can be re-opened.

5. You have the option to experiment with different mic angles and positions to obtain your personal best sound.

6. Secure all wiring inside the guitar with tape.



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# TRINITY PRO PREAMP

This 2-channel preamp is an extremely powerful yet small mixer in a belt clip box. It is designed for mixing a combination of a transducer and an electret condenser microphone on one instrument to achieve the best possible transmission.

It offers volume, gain, bass, mid, and treble controls on each individual channel, and a phase switch on the mic channel. The tone controls feature an extended range of up to +/- 20 dB, which exceeds many mixers on the market today. To keep the box as small as possible, the gain and tone controls are trim pots inside the unit (small potentiometers for adjustment with a supplied tiny screwdriver).

During performance, the musician can conveniently balance the two channels on the volume control knobs.

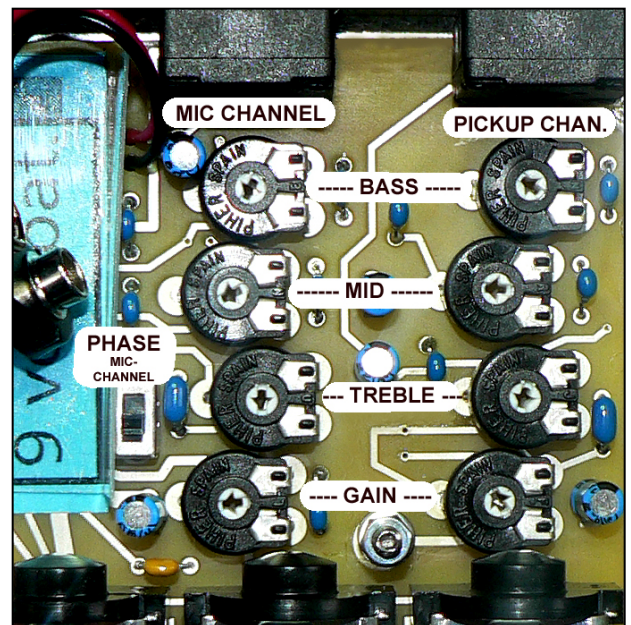
***Before first use, please insert a 9-volt battery. To switch the battery off, always unplug the MAIN/MIX OUT jack.***

## SETTING UP YOUR PREAMP

1. Remove the snap-off lid by simply lifting it off. There is no need to undo any screws. **Important: Please do not tamper with the screw on the bottom of the preamp!**
2. Insert 9-volt battery into the designated compartment.
3. There is a diagram for the internal trim pot controls on the inside of the lid. In the box you will find a little screwdriver for the adjustment of the trim pots. It is attached with a velcro fastener.
4. Connect your pickups to the stereo input via a **shielded ¼" stereo cable** (not supplied)

and connect MONO/MIX OUT via a **mono ¼" guitar cable** into an amplifier.

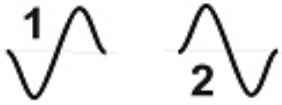
5. If a second mono cable is inserted into MIC OUT, the channels will be carried separately. In other words, MIC OUT will carry only the microphone and MAIN/MIX OUT will carry only the pickup. **A cable must be inserted in the MAIN/MIX OUT in order to switch on the battery power.**
6. Set your amp to a flat setting first. Our preamps are shipped with a factory setting that gets you started. Adjust the gain trim pot the transducer channel. Adjust bass and treble trim pots to your preference.



## HOW THE PHASE SWITCH WORKS

The Trinity Pro Preamp has a miniature phase switch mounted inside, next to the battery. It is a sliding switch and you can slide the little tab up or down with your finger. There are only two settings.

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

You know when an amplified signal just doesn't "sound right"? In a dual-source system, chances are it's a phase-match problem when the sound waves coming from one source are partially canceling out the waves coming from another source.

In pickup/mic combination systems, it's actually a very common problem that the mic is out of phase with the pickup. The phase switch allows you to simply "flip" the sound waves of the mic so that they match the pickup. The result is that "aaaaahh" smooth tone that just sounds right.

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.

The phase switch allows for instant correction of this problem. By toggling the phase switch back and forth, you will notice fuller, warmer and nicely balanced tone with less feedback in one setting. This is the correct phase switch setting. Keep in mind that it may be different with different amplification systems.

## PREAMP TECHNICAL DATA

Frequency response: 10-30,000 Hz  
 Inputs: Instrument jacks 1 Mega Ohm  
 Output: Instrument jack 10 Kilo Ohm  
 Battery consumption: 4.5 Milli Amp  
 Battery life: about 50 hours

**All K&K products are designed, assembled and packaged in USA using mainly US and European components. Thanks again for choosing K&K.**