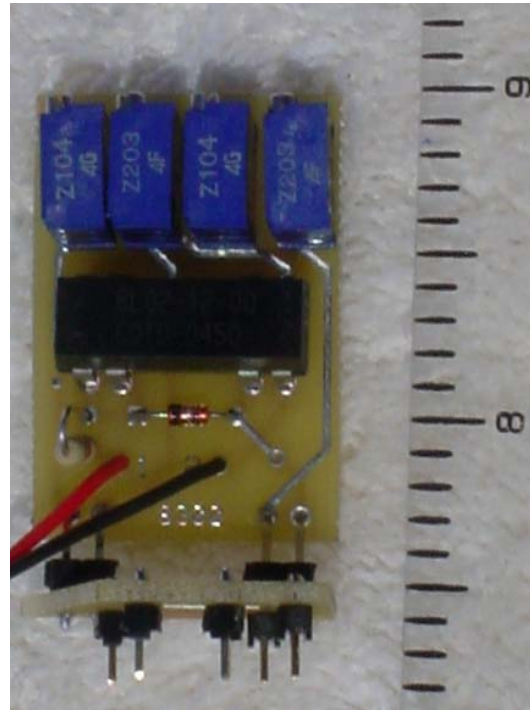


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## KT-8300 Dual IF Band Stereo Separation Control PCB

The KT-8300 Dual IF Band Stereo Separation Control PCB upgrades the KT-8300 to provide a second set of stereo separation controls. In stock form the KT-8300 only has one adjustment control per channel. Normally this control is optimized to give the best stereo separation in the WIDE IF mode. When the unit is operated in the NARROW IF mode, stereo separation is not optimized. As the NARROW IF bandwidth is decreased further, stereo separation drops quickly. Four 15 turn sealed pots allow easy drift free adjustment of stereo separation. This new PCB can easily provide an additional 15 to 25 dB of stereo separation in the NARROW IF mode.



### HOW IT WORKS

This PCB has two sets of separation controls: one for the WIDE IF mode and one for the NARROW IF mode.

The stereo separation control circuitry in the KT-8300 operates by applying a set of correction signals to the stereo decoder 38 kHz switching matrix. These correction signals help null out the non-linearities that are caused by phase and amplitude errors introduced mainly in the IF signal chain. The WIDE IF chain of the KT-8300 is very linear, so a small correction signal is needed to null out the errors and maximize stereo separation.

In many cases the NARROW IF chain of the KT-8300 is modified for a much narrower bandwidth. Narrowing the IF bandwidth will introduce more phase and amplitude errors, and increase the amount of correction signal needed to maximize stereo separation. When the KT-8300 is switched into the NARROW IF mode a relay on the PCB switches out a second set of separation control pots.

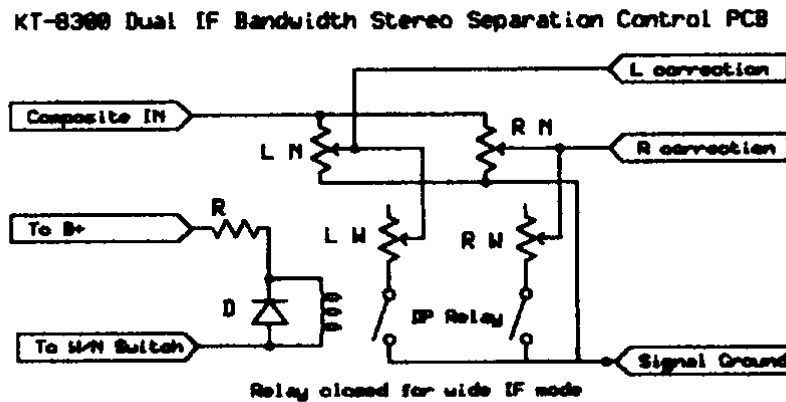
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## APPLICATION

The PCB mounts in place of the two stereo separation adjustment pots found on the main PCB of the KT-8300. The two stock pots, and one resistor are removed. The PCB is mounted in the holes where the removed pots were located and soldered in place. Two wires from the PCB are wired to the (+) power supply and signal ground. The PCB is activated by the WIDE/NARROW IF MODE switch on the unit's front panel

Stereo separation is optimized by aligning the unit with a stereo signal generator as you would a stock unit. Since there are two separation controls per channel, the NARROW IF mode stereo separation is adjusted first, followed by the WIDE IF mode separation. The PCB uses 15 turn pots to allow for easy drift free nulling of both channels.



The PCB operates off the unit's B+ supply and takes about 10 mA of current. Full installation instructions are included. Average installation time of the PCB (not including alignment/stereo separation optimizing is just 20 minutes.

For More information Contact

William Ammons  
[ammonsphx@earthlink.net](mailto:ammonsphx@earthlink.net)

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