THEORY OF OPERATION AR-323

DUAL MIXER

Signals from inputs A3 and A4 are mixed by R1 and R2 into A1, which inverts the signals. A2 re-inverts the signals to come out non-inverted again. A1 and A2, however, are first controlled in level (attenuated) by P1 and P2, and switch selected to go either directly into A2, in which case they come out inverted, or into A1, in which case they come out non-inverted.

Mixer B works the same way.Now, A3 is a differential amplifier which mixes the outputs of mixer A and mixer B, but B is inverted, while A is not.Thus, the output is A-B.

A6, on the other hand, is a non-inverting mixer which adds the two outputs from A and B to give A+B.

All 6 amplifiers are LM 301A op amps with feed-forward compensation (the 150 pf capacitor) for good high frequency response.