



## TX809 Audio Processing Block Diagram

### Audio Processing

The TX809 audio circuit is comprised of a Stereo De-Multiplexor (IA002) and two (2) amplifier IC's, IA003 and IA502. IA002 is responsible for decoding the stereo signal into left and right channels and also provides for tone and volume control. Amplifier IA003 drives the internal speakers while IA502 provides drive for the external speakers. IA003 also has an output for the headphones. The stereo de-multiplexor is controlled by the System Control uC, IG401 via the I<sup>2</sup>C2 bus. The wide band (WB) audio from the Sound/Pix IF is input to IA002 pin 7. The front and rear audio inputs are applied directly to IA002 pins 36 through 39. All switching and signal selection are accomplished in IA002 via control from the I<sup>2</sup>C2 bus. The sound compressor (IA001) serves to compress the audio dynamic range by minimizing any sudden and undesirable changes in audio level. The output from the Sound Compressor is a DC control signal that is applied back to the system control IC, IG401. IG401 then communicates the desired changes back to IA002 via the I<sup>2</sup>C2 bus.

### Troubleshooting

If an audio problem is suspected check the following:

1. Check for audio power supplies to audio circuits.
2. Confirm speakers are not shorted or open.
3. If problem appears to be stereo related, inject stereo signal (from generator) into pin 7 of IA002 and check signal path.
4. If problem is external input related, inject know mono audio signal and check signal path.