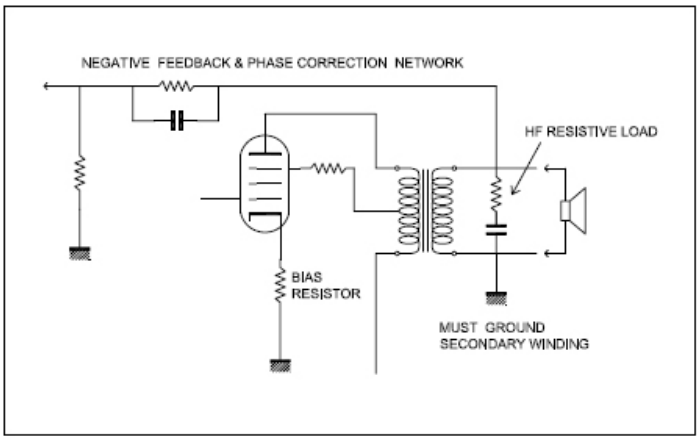
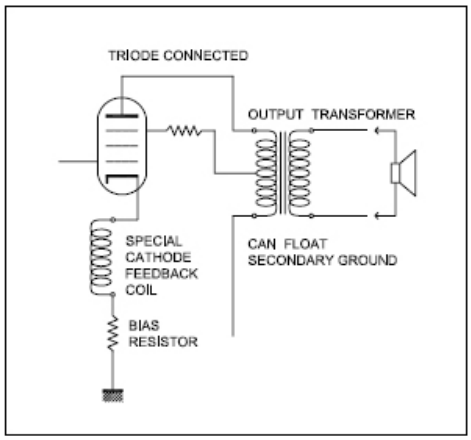
SAC are pleased to introduce the new 2010 Minute EL-34 SE integrated amplifier to be

the newest member of the "Smart Amplifier" category. Four years after the launching of the old model "2006 Minuet EL-34SE" SAC is certain that they have created a better Integrated amplifier not just for a better cosmetics and feel, but to another level of refinement in sound. Not only are some of the proven technologies retained, but they have also tried to perfect all of them in this new amplifier. The Minute SMART Amplifier delivers a sensational tube amp sound with stunning dynamic, accurate rhythm and pace, incredible transparency and great ambiance all of these at a remarkable compact package and affordable for everyone.

In the past SAC introduced "Cathode Feedback" circuit topology in 2006 Minuet EL-34SE with great success and received many praises from listeners around the world. The new 2010 Minute EL-34SE has further realised the scheme to "Super Cathode Feedback" circuit. This circuit greatly reduces harmonic



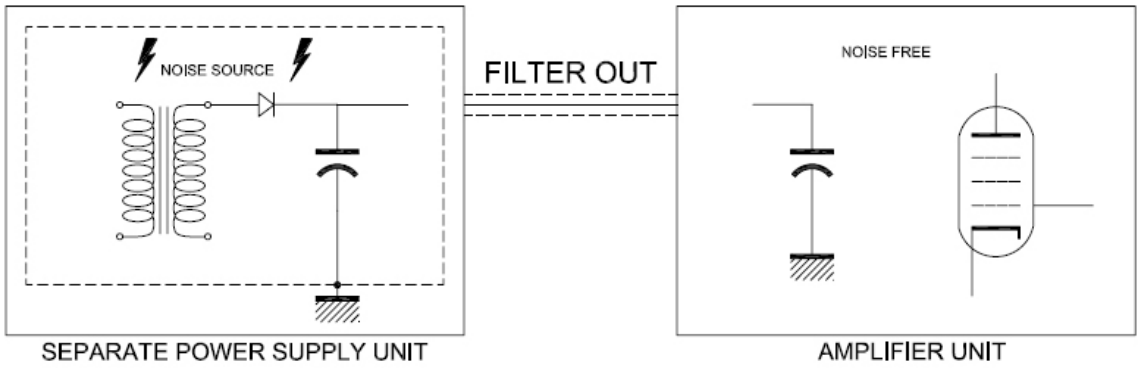
GLOBAL NEGATIVE FEEDBACK



SUPER CATHODE FEEDBACK

distortion in quite a different approach than conventional "Global Negative Feedback" and improve sonic performance without disturbing other circuit parameters. By having the output transformer with dedicated cathode feedback winding that is connected directly to cathode of output tube, the feedback current path is totally isolate from other component. Unlike notorious global negative feedback which gains the feedback signal from secondary winding of the output transformer, cathode feedback coil is virtually free from back EMF induced by the loudspeaker or other kind of spurious noise, phase shift from any network circuit; therefore, only pure feedback signal is applied back to cathode of EL-34. This technique reduces THD by the factor of 10 times. Total Harmonic Distortion of 2010 Minute is less than 0.3% at 1 watt RMS while most conventional SE amp like

300B will start producing more than 1~2% of THD at same output level. Further we are able to fine tune the circuit and output transformer so that the combination will produce so pure signal with absent of higher than the 4th Harmonic at regular listening level. Moreover since cathode feedback topology does not require a secondary winding to connect with ground, we can design and make output transformer to neglect any grounding effect and make this new output transformer to perform much better than ever before. Stereo image also improves with our new output transformer since both loudspeakers are totally isolate from one another because they are floated in respect to each other (in conventional SE design the grounding path of each loudspeaker shares the same path and signal can be mutually coupled causing weak stereo separation).



Besides the use of all high quality power supply parts like UltraFast recovery rectifier, Electro-static shield handwound power transformer and high quality capacitor, we still faced same old problem...." A tube rectifier will produce a nicer tone". To combat this, SAC uses a separated power supply unit, which is very simple by keeping all noise generators away from the main amplifier unit and shield all noise within the power supply casing. This new radical design for such a small amplifier proved to be outstanding solution and not only it help bring down hum and noise to lowest level, but also improve the tonal and clarity of the main amplifier to exceed that of tube rectifier. By separating the power supply unit from main amplifier, SAC is able to reduce the heat exchange between the two sections. When heat is reduced, both units run cooler and can be operated for extended period of time without the need for forced air-cooling or air-conditioning. This also greatly extends the life expectancy of all elements in the amplifier.

Stereo Vacuum Tube Integrated amplifier with separated power supply 5 selectable RCA inputs, EL34 output tube operating with Super Cathode Feedback circuit running in pure Class-A in all stages.	
Output Power	10watt/RMS per Channel
Total Harmonic Distortion	less than 1.0% at 6 watt/RMS, less than 0.3% at 1 watt/RMS
Intermodulation Distortion	Less than 0.3% SMPTE
Frequency Response	15-30,000Hz (-1.0dB) at 1W/RMS power, 30-30,000Hz (-1.0dB) at 10W/RMS
Cathode Feedback	Super Cathode Feedback
Circuit Gain	42dB
Damping Factor	3.2
Output Impedance	2.3 ohm
Signal to Noise figure (SINAD)	below -87dB, Hum less than 2.5mV
Power consumption	100 watts
Power requirement	220-240V at 50/60Hz (stock version), 110-120V at 50/60Hz (special order)
Power Supply Unit Dimension	19 x 26 x 10 cm. (W x D x H) Weight: 4.5 kg.
Amplifier Unit Dimension	19 x 29 x 19 cm. (W x D x H) Weight: 5.5 kg