What is claimed is:

1. An apparatus, comprising:

an electronic amplifier;

an electrical feedback line connecting an output of the electronic amplifier to an input of the electronic amplifier;

a plurality of electrical sources connected to nodes on the electronic feedback line; and

an electronic controller configured to adjust the electrical sources in a manner responsive to a current input to the electrical feedback line.

2. The apparatus of claim 1, wherein the plurality of electrical sources includes a current source connected to each node and/or a current sink connected to each node.

3. The apparatus of claim 1 or claim 2, wherein the controller is configured to cause a difference to evolve to a preset value, the difference being a DC voltage at an input of the electronic amplifier minus a DC voltage at an output of the electronic amplifier.

4. The apparatus of claim 1, claim 2, or claim 3; wherein the controller is configured to cause input DC voltage of the electronic amplifier to evolve to a preset value.

5. The apparatus of claim 1, claim 2, claim 3, or claim 4; wherein the electronic controller includes a second electronic amplifier connected to operate the current sources and sinks in a manner responsive to a current input to the electronic feedback line.

6. The apparatus of claim 1, claim 2, claim 3, claim 4, or claim 5; further comprising a photodiode connected to one input of the amplifier.

7. The apparatus of claim 1, claim 2, claim 3, claim 4, or claim 5; further comprising:

a second electrical feedback line connecting a second output of the electronic amplifier to a second input of the amplifier and having one or more second resistors thereon;

a plurality of second electrical sources connected to nodes on the second electronic feedback line; and

wherein the electronic controller is configured to adjust the second electrical sources in a manner responsive to input to one of the electrical feedback lines.

8. A method of operating an ATIA, comprising:

inputting a current having a DC component to a linear electrical feedback line, the linear electrical feedback line connecting to an output of an electronic amplifier to an input of the electronic amplifier; and

adjusting first and second electronic sources to remove the DC component of the current from a segment of the linear electrical feedback line between the sources in response to the receiving, the sources connecting nodes on the linear electrical feedback line.

9. The method of claim 8, further comprising operating a set of current sinks or current sources to source or sink said inputted current.

10. The method of claim 8 or claim 9, wherein the adjusting further comprises biasing a pair of current sources or current sinks to source or sink the DC component such that DC component is removed from the segment.

What is claimed is:

1. An apparatus, comprising:

an electronic amplifier;

an electrical feedback line connecting an output of the electronic amplifier to an input of the electronic amplifier;

a plurality of electrical sources connected to nodes on the electronic feedback line; and

an electronic controller configured to adjust the electrical sources in a manner responsive to a current input to the electrical feedback line.

2. The apparatus of claim 1, wherein the plurality of electrical sources includes a current source connected to each node.

3. The apparatus of claim 2, wherein the plurality of electrical sources includes a current sink connected to each node.

4. The apparatus of claim 1, wherein the plurality of electrical sources include a current sink connected to each node.

5. The apparatus of claim 1, wherein the controller is configured to cause a difference to evolve to a preset value, the difference being a DC voltage at an input of the electronic amplifier minus a DC voltage at an output of the electronic amplifier.

6. The apparatus of claim 1, wherein the controller is configured to cause input DC voltage of the electronic amplifier to evolve to a preset value.

7. The apparatus of claim 1, wherein the electronic controller includes a second electronic amplifier connected to operate the current sources and sinks in a manner responsive to a current input to the electronic feedback line.

8. The apparatus of claim 1, further comprising a photodiode connected to one input of the amplifier.

9. The apparatus of claim 1, further comprising:

a second electrical feedback line connecting a second output of the electronic amplifier to a second input of the amplifier and having one or more second resistors thereon;

a plurality of second electrical sources connected to nodes on the second electronic feedback line; and

wherein the electronic controller is configured to adjust the second electrical sources in a manner responsive to input to one of the electrical feedback lines.

10. The apparatus of claim 9, wherein the plurality of second electrical sources includes a second current source connected to each second node on the second electrical feedback line.

11. The apparatus of claim 9, wherein the plurality of second electrical sources includes a second current sink connected to each second node on the second electrical feedback line.

12. The apparatus of claim 9, wherein the electronic controller includes a second electronic amplifier connected to operate the first and second electrical sources in a manner responsive to a current input to the first electronic feedback line.

13. The apparatus of claim 9, further comprising an electronic controller configured to compensate for a difference between a magnitude of a current in the first feedback line and a magnitude of a current in the second feedback line.

14. A method of operating an ATIA, comprising:

inputting a current having a DC component to a linear electrical feedback line, the linear electrical feedback line connecting to an output of an electronic amplifier to an input of the electronic amplifier; and

adjusting first and second electronic sources to remove the DC component of the current from a segment of the linear electrical feedback line between the sources in response to the receiving, the sources connecting nodes on the linear electrical feedback line.

15. The method of claim 14, further comprising operating a set of current sinks or current sources to source or sink said inputted current.

16. The method of claim 14, wherein the adjusting includes generating one or more control voltages for said sources with an electronic amplifier having one input connected to receive a voltage at an input of the electronic amplifier and having a second input connected to receive a reference voltage.

17. The method of claim 14, wherein the adjusting further comprises biasing a pair of current sources or current sinks to source or sink the DC component such that DC component is removed from the segment.