Claim rejection under 35 USC 112

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains,or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctlyclaiming the subject matter which the inventor or a joint inventor regards as the invention.  
The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA),second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor,

**Regarding claim 1**. A control console for generating an AC drive signal applied to an ultrasonic handpiece to vibrate a tip of the ultrasonic handpiece, the control console comprising:  
a linear amplifier comprising:  
a transformer including a primary winding having first and second opposed ends and a center tap to which a DC voltage is applied, and including a secondary winding across which the AC drive signal is developed for vibrating the tip of the ultrasonic handpiece;  
a first transistor connected between the first opposed end of the primary winding and a ground;  
a second transistor connected between the second opposed end of the primary winding and the ground; and  
a control circuit coupled to the first and second transistors and configured to:  
receive an external control signal corresponding to a target drive signal for the ultrasonic handpiece that is a linear amplification of the external control signal; and  
vary a resistance of each of the first and second transistors using the external control signal to generate a first AC voltage across the primary winding that causes the target drive signal to develop across the secondary winding.   
   
**Regarding claim 2**. The control console of claim 1, wherein the control circuit is configured to:  
compare a second AC voltage across the primary winding to the external control signal to generate an adjusted feedback signal; and vary the resistance of each of the first and second transistors to generate the first AC voltage across the primary winding that causes the target drive signal to develop across the secondary winding based on the adjusted feedback signal.   
   
**Regarding claim 3**. The control console of claim 2, wherein the control circuit is configured to compare the second AC voltage across the primary winding to the external control signal to produce the adjusted feedback signal by being configured to:  
invert the second AC voltage across the primary winding to generate an inverted signal; and add the inverted signal to the external control signal.   
   
**Regarding claim 4**. The control console of claim 2, wherein the adjusted feedback signal includes positive and negative components, and the control circuit is configured vary the resistance of each of the first and second transistors to generate the first AC voltage across the primary winding that causes the target drive signal to develop across the secondary winding based on the adjusted feedback signal by being configured to:  
generate a first signal corresponding to the positive components of the adjusted feedback signal; generate a second signal corresponding to the negative components of the adjusted feedback signal; vary the resistance of the first transistor using the first signal; and vary the resistance of the second transistor using the second signal.   
   
**Regarding claim 5**. The control console of claim 4, wherein the linear amplifier comprises:  
a first voltage controlled current source connected to the first transistor and configured to generate a first current that varies the resistance of the first transistor based on the first signal; and a second voltage controlled current source connected to the second transistor and configured to generate a second current that varies the resistance of the second transistor based on the second signal.   
   
**Regarding claim 6**. The control console of claim 1, wherein the control circuit is configured to:  
monitor a state of the first and second transistors; and maintain the first and second transistors in a saturation mode based on the monitored state.   
   
**Regarding claim 7**. The control console of claim 6, wherein the control circuit is configured to monitor the state of the first and second transistors by being configured to determine a value representative of a voltage across the first and second transistors, and is configured to maintain the first and second transistors in the saturation mode based on the monitored state by being configured to adjust the DC voltage suppled to the center tap of the primary winding based on the value representative of the voltage across the first and second transistors.   
   
**Regarding claim 8**. The control console of claim 7, wherein the control console is configured to determine the value representative of the voltage across the first and second transistors based on a lowest drain voltage and a highest source voltage of the first and second transistors.   
   
**Regarding claim 9**. The control console of claim 1, further comprising:  
a sensor that measures a current of the AC drive signal; a sensor that measures a voltage of the AC drive signal; and a processor coupled to the sensors and programmed to generate the external control signal based on the measured current and the measured voltage of the AC drive signal.   
   
**Regarding claim 10**. The control console of claim 1, wherein the external control signal has a frequency corresponding to an updated resonant frequency of the ultrasonic handpiece.   
   
**Regarding claim 11**. A method for generating an AC drive signal applied to an ultrasonic handpiece to vibrate a tip of the ultrasonic handpiece using a linear amplifier including a transformer, a first transistor, and a second transistor, the transformer including a primary winding having first and second opposed ends and a center tap to which a DC voltage is applied and a secondary winding across which the AC drive signal is developed for vibrating the tip of the ultrasonic handpiece, the first transistor connected between the first opposed end of the primary winding and a ground, and the second transistor connected between the second opposed end of the primary winding and the ground, the method comprising:  
receiving an external control signal corresponding to a target drive signal for the ultrasonic handpiece that is a linear amplification of the external control signal; and varying a resistance of each of the first and second transistors using the external control signal to generate a first AC voltage across the primary winding that causes the target drive signal to develop across the secondary winding.   
   
**Regarding claim 12**. The method of claim 11, further comprising:  
comparing a second AC voltage across the primary winding to the external control signal to generate an adjusted feedback signal; and varying the resistance of each of the first and second transistors to generate the first AC voltage across the primary winding that causes the target drive signal to develop across the secondary winding based on the adjusted feedback signal.   
   
**Regarding claim 13**. The method of claim 12, wherein comparing the second AC voltage across the primary winding to the external control signal to produce the adjusted feedback signal comprises:  
inverting the second AC voltage across the primary winding to generate an inverted signal; and adding the inverted signal to the external control signal.   
   
**Regarding claim 14**. The method of claim 12, wherein the adjusted feedback signal includes positive and negative components, and varying the resistance of each of the first and second transistors to generate the first AC voltage across the primary winding that causes the target drive signal to develop across the secondary winding based on the adjusted feedback signal comprises:  
generating a first signal corresponding to the positive components of the adjusted feedback signal; generating a second signal corresponding to the negative components of the adjusted feedback signal; varying the resistance of the first transistor using the first signal; and varying the resistance of the second transistor using the second signal.   
   
**Regarding claim 15**. The method of claim 14, further comprising:  
generating, by a first voltage controlled current source connected to the first transistor, a first current that varies the resistance of the first transistor based on the first signal; and generating, by a second voltage controlled current source connected to the second transistor, a second current that varies the resistance of the second transistor based on the second signal.   
   
**Regarding claim 16**. The method of claim 11, further comprising:  
monitoring a state of the first and second transistors; and maintaining the first and second transistors in a saturation mode based on the monitored state.   
   
**Regarding claim 17**. The method of claim 16, wherein monitoring the state of the first and second transistors comprises determining a value representative of a voltage across the first and second transistors, and maintaining the first and second transistors in the saturation mode based on the monitored state comprises adjusting the DC voltage applied to the center tap of the primary winding based on the value representative of the voltage across the first and second transistors.   
   
**Regarding claim 18**. The method of claim 17, wherein determining the value representative of the voltage across the first and second transistors is based on a lowest drain voltage and a highest source voltage of the first and second transistors.   
   
**Regarding claim 19**. The method of claim 11, further comprising:  
measuring, by a sensor coupled to a processor, a current of the AC drive signal; measuring, by a sensor coupled to the processor, a voltage of the AC drive signal; and generating, by the processor, the external control signal based on the measured current and the measured voltage of the AC drive signal.   
   
**Regarding claim 20**. The method of claim 11, wherein the external control signal has a frequency corresponding to an updated resonant frequency of the ultrasonic handpiece.