WHAT IS CLAIMED IS:

1. An antenna controlled by an antenna controller, the antenna comprising:

a radiating structure;

a plurality of switchable terminal locations disposed on the radiating structure; and

wherein the controller selects one of the plurality of terminal locations for controlling an antenna impedance.

2. The antenna of claim 1 wherein the plurality of switchable terminal locations comprises a plurality of switchable feed terminal locations.

3. The antenna of claim 1 wherein the plurality of switchable terminal locations comprises a plurality of switchable ground terminal locations.

4. An apparatus comprising:

an antenna for transmitting signals, the antenna having an input impedance;

a power amplifier supplying a first signal to the antenna for transmitting; and

a controller for controlling the input impedance.

5. The apparatus of claim 4 further comprising a module for determining a power level of the first signal, wherein the controller controls the input impedance in response to the power level.

6. The apparatus of claim 4 further comprising a module for determining an efficiency of the power amplifier, wherein the controller controls the input impedance responsive to the efficiency.

7. An apparatus comprising:

an antenna;

a plurality of switchable terminal locations disposed on the antenna; and

a controller for selecting one of the plurality of terminal locations for controlling an antenna impedance.

8 The apparatus of claim 7 wherein the plurality of switchable terminal locations comprises a plurality of switchable feed terminal locations.

9. The apparatus of claim 7 wherein the plurality of switchable terminal locations comprises a plurality of switchable ground terminal locations.

10. A wireless communications device comprising:

an antenna for transmitting signals, the antenna having an input impedance;

a power amplifier supplying a first signal to the antenna for transmitting; and

a controller for controlling the input impedance responsive to a power level of the first signal.

11. The wireless communications device of claim 10 wherein the input impedance is controlled to a predetermined impedance value responsive to a power level of the first signal.

12. The wireless communications device of claim 10 wherein the input impedance is controlled to maintain the input impedance between a first and a second value.

13. The wireless communications device of claim 10 wherein the input impedance is continuously controlled responsive to the power level of the first signal to maintain the power level substantially at a predetermined power level.

14. The wireless communications device of claim 10 wherein an efficiency of the power amplifier increases responsive to the controller controlling the input impedance.

15. The wireless communications device of claim 10 wherein the antenna further comprises a radiating element and a feed terminal connected thereto, and wherein the controller controls a location of the feed terminal relative to the radiating element to control the input impedance.

16. The wireless communications device of claim 10 wherein the antenna further comprises a radiating element and a ground terminal connected between the radiating element and a ground, and wherein the controller controls a location of the ground terminal relative to the radiating element to control the input impedance.

17. The wireless communications device of claim 10 wherein the antenna further comprises a radiating element, a feed terminal connected to the radiating element and a ground terminal connected between the radiating element and a ground, and wherein the controller controls a distance between the feed terminal and the ground terminal to control the input impedance.

18. The wireless communications device of claim 10 further comprising transmitting circuits for producing an information signal supplied to the power amplifier, wherein the power amplifier supplies the first signal in response to the information signal, and wherein the transmitting circuits produce a second signal input to the controller for use by the controller to control the input impedance.

19. The wireless communications device of claim 10 wherein the power amplifier supplies a second signal to the controller for use by the controller to control the input impedance, wherein the second signal represents an operating parameter of the power amplifier.

20. The wireless communications device of claim 19 wherein the operating parameter comprises one of the power level of the first signal, an output impedance of the power amplifier and a voltage standing wave ratio of the first signal.

21. The wireless communications device of claim 10 wherein the controller controls a resonant frequency of the antenna.

22. The wireless communications device of claim 10 wherein the antenna comprises a radiating element and the controller controls an effective electrical length of the radiating element to control a resonant frequency of the antenna.

23. The wireless communications device of claim 22 wherein the radiating element comprises a plurality of radiating segments, and wherein the controller selects one or more of the plurality of radiating segments to control the resonant frequency of the antenna.

24. The wireless communications device of claim 10 wherein the antenna comprises a plurality of meanderline segments, and wherein the controller selects one or more of the plurality of meanderline segments to control a resonant frequency of the antenna.

25. The wireless communications device of claim 10 further comprising a manually operated control element for controlling the input impedance in response to manual manipulation of the control element.

26. The wireless communications device of claim 10 further comprising a manually operated control element for controlling an antenna resonant frequency in response to manual manipulation of the control element.

27. An apparatus comprising:

an antenna for transmitting a signal;

a detector for determining a frequency of the signal; and

a controller for tuning the antenna in response to the frequency.

28. The apparatus of claim 27 wherein the antenna comprises a radiating element and the controller controls a length of the radiating element to control a resonant frequency of the antenna.

29. The apparatus of claim 28 wherein the radiating element comprises a plurality of radiating segments and wherein the controller selects one or more of the plurality of radiating segments to control the resonant frequency of the antenna.

30. The apparatus of claim 28 wherein the antenna comprises a plurality of meanderline segments, and wherein the controller selects one or more of the plurality of meanderline segments to control a resonant frequency of the antenna.

31. The apparatus of claim 27 wherein the antenna comprises a radiating structure comprising multiple radiating segments with a parasitic capacitance between multiple radiating segments, and wherein the controller modifies at least one of the parasitic capacitances to tune the antenna.

32. The apparatus of claim 31 wherein the multiple radiating segments each comprise a varactor diode, and wherein the controller applies a voltage to the varactor diode to change a capacitance thereof and thereby modify at least one of the parasitic capacitances to tune the antenna.

33. The apparatus of claim 27 wherein the controller controls a reactance of the antenna to control a resonant frequency of the antenna.

34. The apparatus of claim 27 further comprising a manually operated control element for controlling the antenna resonant frequency in response to manual manipulation of the control element.

35. An apparatus comprising:

transmitting circuits for producing a signal having a frequency in a selected one of a plurality of frequency bands, the signal to be transmitted;

a multiband antenna selectively operable in one of a plurality of frequency bands, the antenna responsive to the transmitting circuits for transmitting the signal; and

a controller for determining the frequency and for controlling the antenna to operate in the one of the plurality of frequency bands including the frequency.

36. The apparatus of claim 35 further comprising a power amplifier for amplifying the signal, the controller for controlling an antenna impedance responsive to a power amplifier efficiency.

37. The apparatus of claim 35 further comprising a power amplifier for amplifying the signal, the controller for controlling an antenna impedance responsive to a power amplifier output impedance.

38. A communications device comprising:

an antenna having a resonant frequency;

a proximate sensor; and

a controller responsive to the proximate sensor for tuning the antenna to the resonant frequency when a proximate object detected by the proximate sensor detunes the antenna from the resonant frequency.

39. The communications device of claim 38 wherein the proximate object comprises a hand of a communications device user.

40. An apparatus comprising:

an antenna having a resonant frequency and an impedance, the antenna comprising:

a radiating element;

a feed terminal;

a ground terminal; and

a controller for modifying physical characteristics of one or more of the radiating element, the feed terminal and the ground terminal to modify the resonant frequency and the impedance.

41. The apparatus of claim 40 further comprising impedance-determining components connected to at least one of the feed terminal and the ground terminal, the controller for modifying the impedance-determining components to modify the impedance.

42. The apparatus of claim 40 further comprising an element for determining a signal characteristic, wherein the controller is responsive to the element for modifying one or more of the resonant frequency and the impedance responsive to the determined signal characteristic.

43. The apparatus of claim 40 having a first volume smaller than a second volume of an antenna lacking modifiable resonant frequency and impedance.

44. The apparatus of claim 40 further comprising a plurality of switching elements controlled by the controller, wherein the antenna elements are configurable in response to a position of the plurality of switches for modifying one or more of the physical characteristics.

45. A first communications device having a first volume and a second communications device having a second volume greater than the first volume, the first

communications device comprising an antenna having modifiable physical characteristics, the first antenna further comprising:

antenna elements for receiving and transmitting an information signal;

an element for determining a signal quality metric; and

a controller for modifying one or more of the physical characteristics to improve antenna performance, wherein the controller is responsive to the element for modifying one or more of the physical characteristics in response to a determined signal quality metric.

46. A communications device operable over a plurality of frequency bands, the communications device comprising:

an antenna for receiving and transmitting an information signal in the plurality of frequency bands, wherein at a given time the antenna receives and transmits the information signal in one of the plurality of frequency bands; and

a controller for determining in which of the plurality of frequency bands the communications device is operating and for modifying elements of the antenna in response to a determined frequency band.

47. The communications device of claim 46 wherein the controller controls an impedance of the antenna responsive to the determined frequency band.

48. The communications device of claim 46 wherein the controller controls a resonant frequency of the antenna responsive to the determined frequency.

49. The communications device of claim 48 wherein the controller controls at least one of an antenna effective electrical length, an antenna inductance and an antenna capacitance to control the resonant frequency.

50. A method for controlling a communications device comprising a power amplifier and an antenna, the method comprising:

determining an operating parameter of the power amplifier; and

controlling an operating parameter of the antenna responsive to a determined operating parameter of the power amplifier.

51. The method of claim 50 wherein the operating parameter of the power amplifier comprises a power amplifier efficiency, a power amplifier output impedance or a signal power of a signal supplied by the power amplifier to the antenna.

52. The method of claim 50 wherein the operating parameter of the antenna comprises an antenna input impedance or an antenna resonant frequency.

53. A method for controlling antenna parameters, comprising:

determining a desired antenna input impedance; and

controlling antenna elements to achieve the desired antenna input impedance.

54. The method of claim 53 wherein the step of controlling comprises controlling one or more of an antenna inductance, capacitance, feed terminal location and ground terminal location.

55. A method for controlling antenna parameters, comprising:

determining that the antenna has been detuned from a desired antenna resonant frequency; and

controlling antenna elements to achieve the desired antenna resonant frequency.