

30. The splitter of claim **8** wherein the former is moveable relative to the transmission line, a movement of the former effecting a change in the power coupled into the secondary windings.

31. The splitter of claim **1** wherein individual ones of the N secondary windings are selectively coupled to electrodes of a plasma source.

32. The splitter of claim **1** wherein selected ones of the windings provided a push pull wiring arrangement, each of the two ends forming the push pull arrangement being operably coupled to neighboring electrodes of a plasma source so as to provide each of the neighboring electrodes out of phase with one another.

33. The splitter of claim **1** comprising an outer casing defining the exterior of the splitter, the splitter further comprising a low power source coupled to the outer casing of the splitter, the low power source operably providing for a capacitive coupling of power to the secondary windings.

34. The splitter of claim **1** wherein the transmission line is coupled at its input to an RF source.

35. A power splitter comprising a transmission line and having at least one secondary winding configured to provide a differential output and being arranged about the transmission line, the transmission line operably providing an azimuthal magnetic field which inductively couples power into the secondary winding and wherein the transmission line is shorted so as to operably generate a standing wave on the transmission line.

36. A plasma source comprising a power splitter as claimed in claim **1**.

37. The plasma source of claim **36** comprising a plurality N of individual plasma electrodes, the power splitter providing for an N splitting of the power from the transmission line for individual ones of the plasma electrodes.

38. The plasma source of claim **37** wherein the individual ones of the plasma electrodes are each coupled to a twisted pair originating from the power splitter.

39. The plasma source of claim **37** wherein the electrodes are provided in a vacuum chamber, the power splitter being arranged to pass through a wall of the vacuum chamber such that a first side of the power splitter is within the vacuum and a second side of the power splitter is outside the vacuum.

40. A power combiner comprising a transmission line and having a plurality of N secondary windings arranged about the transmission line, the secondary windings operably coupling power onto the transmission line so as to combine the power from each of the N secondary windings onto a single transmission line and wherein the transmission line is shorted so as to operably generate a standing wave on the transmission line.

41. The power combiner of claim **40** comprising an impedance matching circuit coupled to the transmission line.

42. The combiner of claim **40** wherein the impedance matching circuit includes a stub tuner.

43. The combiner of claim **42** wherein the stub tuner is a multi-stub tuner.

44. (canceled)

45. The combiner of claim **40** wherein the short operable causes a zero-voltage point and simultaneously a maximum in current point, the current effecting generation of an azimuthal magnetic field.

46. The combiner of claim **45** wherein the secondary windings are located proximal to the short and extend axially along the transmission line from the short.

47. The combiner of claim **46** wherein the secondary windings are provided on a former located in the region of the azimuthal magnetic field.

48. The combiner of claim **47** wherein the secondary windings are provided in a pair arrangement on a former located in the region of the azimuthal magnetic field

49. The combiner of claim **48** wherein individual ones of the pairs are shorted to create a single ended input.

50. The combiner of claim **49** comprising a differential input.

51. The combiner of claim **49** wherein the secondary windings are provided with single ended inputs with one end grounded.

52. The combiner of claim **47** wherein the former has a dimension not greater than $\frac{1}{4}$ the wavelength of the standing wave generated.

53. The combiner of claim **48** wherein properties of the former are selectable to affect the induced power transferred by the secondary windings.

54. The combiner of claim **40** wherein the input windings are tuned to a narrow bandwidth such that different windings are operable at different frequencies without interacting with other input windings thereby providing for the coupling of multiple frequencies into a single transmission line.

55. The combiner of claim **40** wherein the mechanical and/or electrical properties of the secondary windings are selectable to vary to the induced power that is coupled by each of the individual secondary windings.

56. The combiner of claim **55** wherein the physical characteristics of the former are configured to reduce generation of reflections within the splitter.

57. A power splitter combiner arrangement comprising:

a power splitter comprising a transmission line and having a plurality of N secondary windings arranged about the transmission line, the transmission line operably providing an azimuthal magnetic field which inductively couples power into the N secondary windings to provide an N splitting of the power from the transmission line, and wherein the transmission line is shorted so as to operably generate a standing wave on the transmission line; and

a power combiner comprising a transmission line and having a plurality of N secondary windings arranged about the transmission line, the secondary windings operably coupling power onto the transmission line so as to combine the power from each of the N secondary windings onto a single transmission line and wherein the transmission line is shorted so as to operably generate a standing wave on the transmission line.

58. A signal combiner comprising a combiner as claimed in claim **40**.

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