CLAIMS

~~[Claim 1] (amended)~~

1. An antenna apparatus including:

a first antenna element;

a second antenna element; and

a branch circuit to which the first antenna element and the second antenna element are coupled via respectively separate transmission lines;

wherein

a delay process is conducted on one of the transmission lines by modifying the lengths of the transmission line coupling the first antenna element to the branch circuit and the transmission line coupling the second antenna element to the branch circuit, thereby adjusting the input impedance and/or phase of the first and second antenna elements such that wider band characteristics than the antenna characteristics of the first and second antenna elements individually are configured,

when the distance between a site where the absolute value is maximized over a current distribution of the first antenna element and a site where the absolute value is maximized over a current distribution of the second antenna element is taken to be the antenna-to-antenna distance, and when the length of a delay line produced due to a difference in the lengths of the two transmission lines is taken to be

the delay line distance,

the absolute value of the difference between the antenna-to-antenna distance and the delay line distance is made equal to an integer multiple, equal to or greater than 0, of the wavelength of a frequency at which transmitting or receiving is conducted in the antenna apparatus, and

the sum of the antenna-to-antenna distance and the delay line distance is made equal to an integer multiple, equal to or greater than 1, of the wavelength of a near-center frequency at which transmitting or receiving is conducted in the antenna apparatus.

~~[Claim 2] (deleted)~~

~~[Claim 3]~~

2. The antenna apparatus according to Claim 1, wherein

the branch circuit is configured as a hybrid circuit in which the input impedance and/or phase at two ports coupled to the respective antenna elements are set to a given state.

~~[Claim 4]~~

3. The antenna apparatus according to Claim 1, wherein

the branch circuit is configured as a hybrid circuit provided with two ports as ports coupled to a communication circuit, and

received signals obtained at the two ports coupled to the communication circuit have diversity characteristics.

~~[Claim 5]~~

4. The antenna apparatus according to Claim 1, wherein

the branch circuit is configured as a hybrid circuit in which the input impedance and/or phase at two ports coupled to the respective antenna elements are set to a given state, and also provided with two ports as ports coupled to a communication circuit, and

received signals obtained at the two ports coupled to the communication circuit have diversity characteristics.

~~[Claim 6]~~

5. The antenna apparatus according to Claim ~~5~~4, wherein

the hybrid circuit imparts an approximately 90° phase differential to a first frequency.

~~[Claim 7]~~

6. The antenna apparatus according to Claim ~~5~~4, wherein

the hybrid circuit imparts an approximately 180° phase differential to a first frequency.

~~[Claim 8]~~

7. The antenna apparatus according to Claim ~~5~~4, wherein

the hybrid circuit imparts an approximately 90° phase differential to a first frequency, and additionally imparts an approximately 90° phase differential to a second frequency.

~~[Claim 9]~~

8. The antenna apparatus according to Claim ~~5~~4, wherein

the hybrid circuit imparts an approximately 180° phase

differential to a first frequency, and additionally imparts an approximately 180° phase differential to a second frequency.

~~[Claim 10]~~

9. The antenna apparatus according to Claim ~~5~~4, wherein

the impedances of the first and second antenna elements have the same frequency characteristics.

~~[Claim 11]~~

10. The antenna apparatus according to Claim 1, wherein

the impedances of the first and second antenna elements have different frequency characteristics.

~~[Claim 12] (amended)~~

11. A communication apparatus including an antenna apparatus, wherein

the antenna apparatus includes

a first antenna element,

a second antenna element, and

a branch circuit to which the first antenna element and the second antenna element are coupled via respectively separate transmission lines, and wherein

a delay process is conducted on one of the transmission lines by modifying the lengths of the transmission line coupling the first antenna element to the branch circuit and the transmission line coupling the second antenna element to the branch circuit, thereby adjusting the input impedance

and/or phase of the first and second antenna elements such that wider band characteristics than the antenna characteristics of the first and second antenna elements individually are configured,

when the distance between a site where the absolute value is maximized over a current distribution of the first antenna element and a site where the absolute value of maximized over a current distribution of the second antenna element is taken to be the antenna-to-antenna distance, and when the length of a delay line produced due to a difference in the lengths of the two transmission lines is taken to be the delay line distance,

the absolute value of the difference between the antenna-to-antenna distance and the delay line distance is made equal to an integer multiple, equal to or greater than 0, of the wavelength of a frequency at which transmitting or receiving is conducted in the antenna apparatus, and

the sum of the antenna-to-antenna distance and the delay line distance is made equal to an integer multiple, equal to or greater than 1, of the wavelength of a near-center frequency at which transmitting or receiving is conducted in the antenna apparatus.

~~[Claim 13] (deleted)~~