

ANTENNA FOR RADIO TRANSMITTER AND RECEIVER**TECHNICAL FIELD**

The present invention relates to an antenna for a radio transmitter and receiver, and particularly to an improved antenna for a radio transmitter and receiver which is capable of more efficiently transmitting and receiving radios by providing the same in a radio transmitter and receiver such as a Personal Communication Service (PCS) system.

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BACKGROUND ART

Generally, a radio transmitter and receiver is used for performing a radio transmission and receiving operation.

Namely, a high frequency signal outputted from a modulator is transmitted to an antenna of the radio transmitter and is transmitted to a remote radio transmitter and receiver, or the thulsy transmitted signal is received through another antenna.

In order to improve a radio transmitting and receiving characteristic of the radio transmitter and receiver, the impedances of the antenna and the radio transmitter and receiver must be accurately matched in accordance with a frequency to be transmitted and received, and a radio loss must be necessarily reduced.

Figure 1 is a perspective view illustrating a lower portion of a conventional antenna.

As shown therein, there is provided an antenna 1 which is rotatably fixed to one end of a support portion 2, with the antenna 1 and the support portion 2 being separable.

Figure 2 is a perspective view illustrating a lower portion of another

As shown therein, an antenna 5 is threadably engaged to a support portion 3 by using an engaging member 4, with the antenna 5 and the support portion 2 being separable.

However, in the conventional antenna, since the support portions 2 and 3 for supporting the antennas 1 and 5 are not integral, it is very difficult to fabricate. In addition, in order to fix the antennas 1 and 5 to the support portions 2 and 3, a hole or a screw portion must be additionally formed in the support portions 2 and 3, for thus fixing the antennas 1 and 5 thereto, so that the constructions thereof become complicated, whereby the fabrication cost is increased.

DISCLOSURE OF THE INVENTION

Accordingly, it is an object of the present invention to provide an antenna for a radio transmitter and receiver which overcomes the aforementioned problems encountered in the conventional radio transmitter and receiver.

It is another object of the present invention to provide an antenna for a radio transmitter and receiver which is capable of more efficiently transmitting and receiving radios by providing the same in a radio transmitter and receiver such as a Personal Communication Service (PCS) system.

To achieve the above objects, there is provided an antenna for a radio transmitter and receiver which includes an integral type support portion 11 having a circular hole portion 10 formed in one end thereof, and a connection member 15 having a circular insertion portion 13 and an elongated hole 4, whereby the insertion portion 13 of the connection member 15 is elastically and separably inserted into the hole portion of the support portion 11.

To achieve the above objects, there is provided an antenna for a radio

transmitter and receiver which includes a connection member 15 is rotatable by 360° in a hole portion 10.

Additional advantages, objects and other features of the invention will be set forth in part in the description which follows and in part will become
5 apparent to those having ordinary skill in the art upon examination of the following or may be learned from practice of the invention. The objects and advantages of the invention may be realized and attained as particularly pointed out in the appended claims.

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BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become more fully understood from the detailed description given hereinbelow and the accompanying drawings which are given by way of illustration only, and thus are not limitative of the present invention, and wherein:

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Figures 1 and 2 are perspective views illustrating a conventional antenna; and

Figure 3 is a perspective view illustrating an antenna for a radio transmitter and receiver according to the present invention.

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MODES FOR CARRYING OUT THE INVENTION

Figure 3 is a perspective view illustrating an antenna for a radio transmitter and receiver according to the present invention.

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As shown therein, a support portion 11 having a circular hole portion 10 formed in one end thereof is integrally formed. A connection member 15 having a circular insertion portion 13 and an elongated hole 14 is formed in a lower end of an antenna 12, for thus elastically inserting the insertion portion 13 of the connection member 15 into the hole portion 10. In the drawings,

reference numeral 16 denotes a spring.

The insertion portion 13 of the connection member 15 has a cut-away portion for easier insertion into the hole portion 10.

Since the support portion 11 of the antenna 12 is integrally formed, the
5 insertion portion 13 of the connection member 15 is elastically inserted into the hole portion 10 formed in one end of the support portion 11, so that both ends of the insertion portion 13 become widened by the elastic force from the hole portion 10, for thus easily inserting the insertion portion 13 into the hole portion 10. After the insertion portion 13 of the connection member 15 is inserted into
10 the hole portion 10, the insertion portion 13 is returned to its original shape by the recovering force itself, for thus preventing the connection member 15 from being escaped from the hole portion 10.

In addition, in a state that the connection member 15 is inserted into the hole portion 10, the connection member 15 is rotatable at 360°, for thus easily
15 adjusting the position of the antenna 12 by a user.

As described above, in the antenna for a radio transmitter and receiver according to the present invention, it is possible to easily fabricate the antenna and reduce the fabrication cost. In addition, it is possible to rotate the antenna 12 by 360°, for thus easily adjusting the position of the antenna 12.

20 Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as recited in the accompanying claims.

**CLAIMS**

1. An antenna for a radio transmitter and receiver, comprising:
an integral type support portion 11 having a circular hole portion 10
formed in one end thereof; and

5 a connection member 15 having a circular insertion portion 13 and an
elongated hole 4, whereby the insertion portion 13 of the connection member
15 is elastically and separably inserted into the hole portion of the support
portion 11.

10 2. The antenna of claim 1, wherein said connection member 15 is
rotatable by 360° in the hole portion 10.

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