

**A DUPLEX ANTENNA CIRCUIT ASSEMBLY
SELECTIVELY OPERATIONAL IN A TRANSMIT OR A
RECEIVE MODE**

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ABSTRACT OF THE DISCLOSURE

A duplex antenna circuit assembly (1) selectively operational in a transmit or a receive mode. The assembly (1) has a
10 transmitter amplifier (2) with an output coupled to an input of a transmitter impedance matching circuit (3) and there is a dual purpose transmitter tuning circuit (4) having an input coupled to an output of the transmitter impedance matching circuit (3).

The assembly (1) also has a receiver amplifier (8) with an
15 input coupled to an output of a receiver impedance matching circuit (9) and there is a dual purpose receiver tuning circuit (10) having an output coupled to an input of the receiver impedance matching circuit (9).

There is also an antenna (5) having a first terminal output
20 (6) coupled to the output of the transmitter tuning circuit (4) and a second terminal (7) coupled to an input of the receiver tuning circuit (10). When the assembly (1) is in transmit mode the transmitter tuning circuit (4) is operating substantially at resonance with the antenna (5), whilst the receiver tuning circuit
25 (10) provides a low impedance coupling of the second terminal (7) to ground. Alternatively, when the assembly (1) is in receive mode, the receiver tuning circuit (10) is operating substantially at resonance with the antenna (5) whilst the transmitter tuning circuit (4) provides a low impedance coupling of the first
30 terminal (6) to ground.

Figure 1 accompanies this abstract.