Claims

1. An apparatus for conveying an electrical signal, comprising:

a first member;

a second member, hinged to the first member; and

at least one bridge component arranged to provide an electromagnetic coupling between the first and second members, whereby a portion of the bridge member spans a gap between the first and second members;

wherein the bridge component is configured to be able to move relative to at least one of the first member or second member while maintaining the electromagnetic coupling between the first and second members, such that the length of said portion of the bridge component that spans the gap between the first and second members is variable so as to allow the first and second members to move between a folded state and an unfolded state.

2. The apparatus of Claim 1, wherein the at least one bridge component is arranged to slide relative to at least one of the first member or second member.

3. The apparatus of Claim 1 or 2, wherein the at least one bridge component is arranged to be moveable relative to both the first member and second member while remaining attached thereto.

4. The apparatus of any preceding claim, further comprising at least one guide assembly provided on at least one of the first member or second member within which the at least one bridge component is arranged to slide, wherein the guide assembly is arranged to limit the range of movement of the at least one bridge component, preferably wherein the guide assembly comprises means for limiting the range of movement of the at least one bridge component, and wherein the at least one guide assembly comprises a cover arranged to retain the at least one bridge component within the guide assembly.

5. The apparatus of any preceding claim, wherein the at least one bridge component is sufficiently flexible to allow it to be moved between a folded state, preferably where an angle between the first and second member is less than about 15 degrees, and an unfolded state, preferably where the angle between the first member and second member is between about 90 degrees and about 180 degrees.

6. The apparatus of any preceding claim, wherein the at least one bridge component is arranged to bias apart the first and second hinged members from a folded state to an unfolded state, for example wherein the at least one bridge component is resiliently deformable such that it is placed under strain when the first and second members are folded together.

7. The apparatus of any preceding claim, further comprising a further bridge component arranged to provide an electromagnetic coupling between the first and second members, wherein said at least one (first) bridge component is arranged on a first surface of each of the first and second hinged members, and the further (second) bridge component is arranged on a second surface of each of the first and second hinged members.

8. The apparatus of Claim 7, wherein the further (second) bridge component is configured to be able to move relative to at least one of the first member or second member while maintaining the electromagnetic coupling between the first and second members, such that the length of a portion of said further (second) bridge component that spans the gap between the first and second members is variable so as to allow the first and second members to move between a folded state and an unfolded state

9. The apparatus of Claim 8, wherein the further (second) bridge component arranged on said second surface is configured to move relative to said at least one of the first member or second member in an opposing direction to said (first) bridge component arranged on said first surface, for example such that as the length of said portion of said (first) bridge component increases, the length of said portion of said further (second) bridge component decreases, wherein the further (second) bridge component is arranged to act as a ground plane, preferably wherein the further (second) bridge component is wider than said (first) bridge component.

10. The apparatus of any preceding claim, wherein at least one of said (first) bridge component or the further (second) bridge component comprises at least one electrically conductive trace.

11. The apparatus of Claim 9 or 10, wherein at least one of the ground plane or the electrically conductive trace has a length that is approximately equal to a fraction of the wavelength corresponding to a desired operating frequency of an electrical signal to be conveyed by the bridge component, wherein the fraction is a multiple of about one eighth; optionally wherein the fraction is about one eighth; optionally wherein the fraction is about one quarter, or optionally

wherein the fraction is about one half.

12. The apparatus of any preceding claim, further comprising means for inhibiting passive intermodulation in the electrical signal.

13. The apparatus of any preceding claim, wherein said at least one bridge component comprises a dielectric medium.

14. The apparatus of any preceding claim, wherein at least one of the first member or second member comprises low-density foam, for example polymethacrylimide foam or a quartz honeycomb.

15. The apparatus of any preceding claim, further comprising a low-friction film provided between the at least one bridge component and at least one of the first member or second member, for example a film comprising fluorinated ethylenepropylene.

16. The apparatus of any preceding claim, wherein at least one of the first member or second member comprises a transmission line medium, preferably a planar transmission line medium, such as a stripline transmission line or a microstrip transmission line.

17. The apparatus of any preceding claim, wherein the electrical signal is a radio frequency (RF) signal.

18. A deployable radio frequency (RF) transmission line, comprising:

at least two members, hinged together for deployment between a folded state and an unfolded state; and

at least one bridge component disposed at each inter-member junction to provide RF coupling for the transfer of RF energy between the at least two hinged members,

wherein said at least one bridge component is configured to be able to move relative to at least one of said at least two hinged members while maintaining the RF coupling between said at least two hinged members.