CLAIMS

1. A conducted electrical weapon comprising:

a magazine comprising a plurality of firing tubes;

a plurality of wire-tethered electrodes, wherein each firing tube of the plurality of firing tubes is configured to receive a single, different electrode of the plurality of wire-tethered electrodes; and

a housing comprising:

a control interface;

a signal generator configured to generate a first voltage of a stimulus signal and a second voltage of the stimulus signal;

a selector circuit configured to selectively couple the signal generator to the plurality of wire-tethered electrodes; and

a processing circuit coupled to the control interface, the signal generator and the selector circuit, wherein the processing circuit is configured to perform operations comprising:

receiving a first activation signal of a sequence of activation signals via the control interface;

deploying a single first electrode of the plurality of wire-tethered electrodes toward a remote location in response to the first activation signal of the sequence of activation signals;

receiving a second activation signal of the sequence of activation signals via the control interface;

deploying a second electrode of the plurality of wire-tethered electrodes toward the remote location in response to the second activation signal of the sequence of activation signals;

coupling the first voltage of the stimulus signal to the single first electrode via the selector circuit; and

coupling the second voltage of the stimulus signal to the second electrode via the selector circuit.

2. The conducted electrical weapon of claim 1, wherein the single first electrode is disposed parallel to the second electrode in the magazine prior to being deployed in response to the first activation signal.

3. The conducted electrical weapon of claim 2, wherein the single first electrode is configured to launch from the magazine at a first location, wherein the second electrode is configured to launch from the magazine at a second location, and wherein a spacing between the first location and the second location is less than 1.0 inches.

4. The conducted electrical weapon of claim 1, wherein coupling the first voltage of the stimulus signal comprises coupling the first voltage of the stimulus signal to the single first electrode after the second electrode is deployed.

5. The conducted electrical weapon of claim 1, wherein coupling the first voltage of the stimulus signal comprises coupling the first voltage of the stimulus signal to the single first electrode after both deploying the single first electrode and deploying the second electrode.

6. The conducted electrical weapon of claim 1, wherein deploying the second electrode includes deploying a single second electrode.

7. The conducted electrical weapon of claim 6, wherein the processing circuit is further configured to:

delay deployment of the second electrode for a minimum period of time after the single first electrode is deployed; and

enable the deployment of the second electrode after the minimum period of time has elapsed.

8. The conducted electrode weapon of claim 6, wherein the single first electrode is coupled to the signal generator via a first filament and the second electrode is coupled to the signal generator via a second filament, and wherein a length of the first filament is at least thirty feet and a length of the second filament is at least thirty feet.

9. The conducted electrical weapon of claim 1, wherein the control interface comprises a user control interface configured to be manually actuated by a user of the conducted electrical weapon.

10. The conducted electrode weapon of claim 1, wherein the control interface comprises an automatic control interface configured to automatically generate the sequence of activation signals in accordance with events automatically detected by the automatic control interface.

11. A method performed by a conducted electrical weapon, the method comprising:

receiving, via a control interface of the conducted electrical weapon, a first activation signal of a sequence of activation signals;

deploying a single first electrode of a plurality of wire-tethered electrodes toward a remote location in response to the first activation signal of the sequence of activation signals, wherein the single first electrode is deployed from a first firing tube of a magazine of the conducted electrical weapon;

receiving, via the control interface of the conducted electrical weapon, a second activation signal of the sequence of activation signals;

deploying a second electrode of the plurality of wire-tethered electrodes toward the remote location in response to a second activation signal of the sequence of activation signals; and

generating, via a signal generator of the conducted electrical weapon, a first voltage of a stimulus signal and a second voltage of the stimulus signal;

coupling, via a selector circuit of the conducted electrical weapon, the first voltage of the stimulus signal to the single first electrode; and

coupling, via the selector circuit of the conducted electrical weapon, the second voltage of the stimulus signal to the second electrode to provide the stimulus signal to the remote location.

12. The method of claim 11, wherein deploying the second electrode includes deploying a single second electrode.

13. The method of claim 12, wherein the single first electrode is deployed toward the remote location at a first angle of deployment relative to the remote location and the second electrode is deployed toward the remote location at a second angle of deployment relative to the remote location, and wherein the first angle of deployment is independent of the second angle of deployment.

14. The method of claim 13, wherein the single first electrode is deployed from the conducted electrical weapon at a first launch angle, wherein the second electrode is deployed from the conducted electrical weapon at a second launch angle, and wherein the first launch angle is equal to the second launch angle.

15. The method of claim 14, wherein the single first electrode is deployed from the conducted electrical weapon at a first location on the conducted electrical weapon, and wherein the second electrode is deployed from the conducted electrical weapon at a second location on the conducted electrical weapon, and wherein a spacing between the first location and the second location is less than 1.0 inches.

16. The method of claim 11, wherein the control interface comprises a user control interface configured to be manually actuated by a user of the conducted electrical weapon.

17. The method of claim 13, wherein the second voltage of the stimulus signal is provided to the remote location after the single first electrode is deployed and the second electrode is deployed.

18. The method of claim 13, wherein the first voltage of the stimulus signal is coupled to the single first electrode after both the single first electrode and the single second electrode are deployed.

19. The method of claim 11, wherein the control interface comprises an automatic control interface, and wherein the sequence of activation signals are generated by the automatic control interface in accordance with events automatically detected by the automatic control interface independent of a user of the conducted electrical weapon, and wherein the sequence of activation signals are received by a processing circuit of the conducted electrical weapon from the automatic control interface.

20. The method of claim 11, further comprising decoupling, via at least one of the signal generator or the selector circuit, the single first electrode from the first voltage during a first period of time between a first time at which the single first electrode is deployed and a second time at which the second electrode is deployed.

21. A method, comprising:

initiating, by a processing circuit of a conducted electrical weapon, a first launch of one or more first electrodes responsive to a first activation signal of a plurality of activation signals;

initiating, by the processing circuit of the conducted electrical weapon, a second launch of one or more second electrodes responsive to a second activation signal of the plurality of activation signals; and

providing, by a signal generator of the conducted electrical weapon, a current between at least one first electrode of the one or more first electrodes and at least one second electrode of

the one or more second electrodes, wherein a first number of the one or more first electrodes is less than a minimum number of electrodes required by the conducted electrical weapon for remote delivery of the current.

22. The method of claim 21, wherein the minimum number is determined in accordance with a second number of different voltages generated by the signal generator for the remote delivery of the current and a third number of the different voltages to which each electrode of the one or more first electrodes and the one or more second electrodes is respectively configured to be coupled at a same time.

23. The method of claim 22, wherein the second number is two and the third number is one.

24. The method of claim 21, wherein the first number is one.

25. The method of claim 21, wherein the minimum number is equal or greater than two.

26. The method of claim 21, further comprising:

receiving, by the processing circuit, the first activation signal via a user control interface of the conducted electrical weapon.

27. The method of claim 21, further comprising:

receiving, by the processing circuit, the second activation signal via an automatic control interface of the conducted electrical weapon, wherein the automatic control interface automatically generates the second activation signal in accordance with an external event detected by the automatic control interface independent of a user of the conducted electrical weapon.

28. The method of claim 27, wherein the external event comprises a change in time, a change in spatial position of the conducted electrical weapon, and/or a change in distance between the conducted electrical weapon and the remote location.

29. The method of claim 28, wherein a second number of the one or more second electrodes is one.

30. The method of claim 21, further comprising:

receiving, by the processing circuit, the first activation signal via a wireless communication circuit of the conducted electrical weapon, wherein the first activation signal is received from a remote-control device in wireless communication with the processing circuit of the conducted electrical weapon.

31. The method of claim 21, wherein each electrode of the one or more first electrodes and each electrode of the one or more second electrodes is respectively coupled to the conducted electrical weapon via a different conductive filament.

32. The method of claim 21, wherein a second number of the one or more second electrodes is less than the minimum number.

33. A conducted electrical weapon, comprising:

a signal generator configured to generate a first voltage and a second voltage for remote delivery of a stimulus current;

a plurality of electrodes comprising one or more first electrodes and one or more second electrodes; and

a processing circuit configured to launch the plurality of electrodes and electrically couple the plurality of electrodes to the signal generator, wherein the processing circuit is configured to:

provide one or more first ignition signals to initiate a first launch of the one or more first electrodes responsive to a first activation signal of a plurality of activation signals;

provide one or more second ignition signals to initiate a second launch of the one or more second electrodes responsive to a second activation signal of the plurality of activation signals; and

remotely deliver the stimulus current between at least one first electrode of the one or more first electrodes and at least one second electrode of the one or more second electrodes, wherein the first launch provides less than a minimum number of electrodes required by the conducted electrical weapon for the remote delivery of the stimulus current.

34. The conducted electrical weapon of claim 33, wherein one or more first electrodes comprise only one electrode and the minimum number is determined to be two in accordance with the only one electrode being further configured to conduct one voltage at a time of either the first voltage or the second voltage.

35. The conducted electrical weapon of claim 33, further comprising at least one of a user control interface or an automatic control interface, wherein the second activation signal is received via the at least one of the user control interface or the automatic control interface, and wherein the one or more second electrodes comprise a single second electrode.

36. The conducted electrical weapon of claim 33, wherein each electrode of plurality of electrodes is configured to provide a respective, single, electrically conductive path for the stimulus current.

37. The conducted electrical weapon of claim 33, wherein the processing circuit is further configured to initially couple the first voltage and the second voltage to the plurality of electrodes after the first launch and the second launch.

38. A handle of a conducted electrical weapon, comprising:

a control interface;

a signal generator configured to generate a first voltage and a second voltage for remote delivery of a stimulus signal;

a processing circuit configured to launch a plurality of provided electrodes and electrically couple the plurality of provided electrodes to the signal generator, wherein the processing circuit is configured to:

provide one or more first ignition signals to initiate a first launch of one or more first provided electrodes of the provided plurality of electrodes responsive to an activation signal received via the control interface;

provide one or more second ignition signals to initiate a second launch of one or more provided second electrodes of the provided plurality of electrodes responsive to another activation signal received via the control interface; and

couple the first voltage and the second voltage across at least one first provided electrode of the one or more first provided electrodes and at least one second provided electrode of the one or more second provided electrodes, wherein, in accordance with the one or more first ignition signals, the first launch provides less than a minimum number of electrodes required by the conducted electrical weapon for the remote delivery of the stimulus signal.

39. The handle of claim 38, wherein the minimum number is two.

40. The handle of claim 38, wherein the one or more first ignition signals comprise a single ignition signal and the processing circuit is configured to provide the single ignition signal to a single provided electrode of the plurality of provided electrodes.