The present invention relates to an electrical disabling projectile system for disabling a moving vehicle comprising: a disabling device, where the disabling device includes a power supply means and a launching projectile, where the projectile is capable of transmitting a disabling current; a control panel, where the control panel includes a means to release the projectile and a means to activate the disabling current; and a power supply means to supply power to the control panel and the disabling device. The disabling device includes at least one mounting bracket that enables the placement of the disabling device onto the front of a vehicle.
ELECTRICAL DISABLING PROJECTILE

BACKGROUND OF THE INVENTION

[0001] 1. Field of Invention
[0002] The present invention relates to an electrical disabling projectile that is mounted upon a security vehicle such as a police car for disabling another vehicle within a car chase scenario.
[0003] 2. Description of Related Art
[0004] Many security officers and policemen currently use tasers as a weapon to disable an assailant. The taser resembles a handgun and may be operated in two modes. In one mode the taser dispenses a projectile that strikes an individual and transmits an electrical current to the individual to disrupt the voluntary control of the muscles. The use of the taser therefore subdues the individual and places them in a position where a policeman may apply handcuffs and control the individual for arrest. In another mode of operation, taser electrodes are provided at an application point of the taser where the taser is applied against the individual without the firing of a projectile. The application of the taser’s electrical arch at the end of the gun is known as a drive stun gun. This mode of operation does not completely disable the assailant but provides application of significant localized pain while being applied to the subject. Either mode of the taser operation assists the police in subduing an assailant and controlling a belligerent individual. The taser offers an alternative to the use of harmful force such as a baton or gun.

[0005] Many times police officers need to engage in a car chase in order to apprehend a suspect. Car chases are dangerous in all respects to the police officer, the fleeing suspect and the general public that may be nearby that encounters the car chase. Individuals that attempt to escape from the police may engage the police in a high-speed car chase and therefore endanger innocent civilians that are on the road either in their vehicles or possibly pedestrians. Many car chases end with a vehicle collision and require several police cars to become involved in order to stop the fleeing suspect. Some techniques used by the police to stop the suspects include roadblocks, use of spikes to ram the fleeing suspect’s vehicle into a ditch or other area to stop the vehicle. Car chases also have the potential to cause a significant amount of property damage during the chase. Although car chases make for great drama for a reality TV show, car chases are very dangerous for all participants and others that may be innocent bystanders.

[0006] It would therefore be advantageous to use the taser technology to project an electrical current onto a moving vehicle that is involved in a car chase. Using such a technique could disable the fleeing car and bring it to a stop without endangering thousands of people over a period of prolonged car chase. One example of a mobile electrical device for disabling a moving car is disclosed in U.S. Pat. No. 7,111,559 that discloses a projectile for being launched from the hand operated air gun where the device includes a strike plate with a tip that applies a positive charge to the target. Strike members on the projectile distribute a negative charge to the target and therefore induce a short circuit to disable the electrical control module of the target vehicle upon impact. U.S. Pat. No. 7,327,549 discloses an apparatus for impacting a target that includes electrodes deployed after contact between the apparatus and target. The device delivers a stimulus signal to the target and immobilizes the target.

[0007] Therefore it would be advantageous to have an electrical projectile system mounted on a police vehicle so that a projectile may be transported or launched upon a fleeing suspect’s vehicle to disable it during pursuit thereof. Such a device would be useful in alleviating and eliminating the consequences of a heated car chase.

SUMMARY OF THE INVENTION

[0008] The present invention relates to an electrical disabling projectile system for disabling a moving vehicle comprising: a disabling device, where the disabling device includes a power supply means and a launching projectile, where the projectile is capable of transmitting a disabling current; a control panel, where the control panel includes a means to release the projectile and a means to activate the disabling current; and a power supply means to supply power to the control panel and the disabling device. The disabling device includes at least one mounting bracket that enables the placement of the disabling device onto the front of a vehicle.

BRIEF DESCRIPTION OF DRAWINGS

[0009] FIG. 1 depicts a telescope site for use in accordance with the present invention.
[0010] FIG. 2 depicts a control panel for the electrical control projectile system according to the present invention.
[0011] FIG. 3A depicts a side view of the disabling device according to the present invention.
[0012] FIG. 3B depicts a top view of the disabling device according to the present invention.
[0013] FIG. 3C depicts a front view of the disabling device according to the present invention.

DETAILED DESCRIPTION

[0014] The present invention provides an electrical disabling projectile system that is mountable on a police car or a security vehicle that provides a means to project a disabling projectile onto a vehicle fleeing the police. The electrical disabling projectile device according to the present invention projects a projectile onto a vehicle and transmits an electrical charge that disables the electrical current in the target vehicle. The electrical charge causes the vehicle to come to a complete stop and therefore ends the car chase without incident. The electrical disabling projectile system includes a control panel and a targeting telescope to assist the operator in launching the projectile and to transmit the necessary electrical charge to disable the vehicle.

[0015] FIGS. 1 and 2 depict the internal control devices that are placed within the reach and control of the driver of the vehicle equipped with projectile system according to the present invention. These control panels may be operated by the police officer while he is pursuing a car in a car chase. FIG. 1 depicts a telescope site 15 that is provided for use in conjunction with the projectile system of a current invention. The telescope site 15 provides a targeting mechanism so that the driver is aware when it is suitable to fire or disengage the projectile mounted on the front of the police vehicle. Use of the telescope site 15 assists the officer in determining when the fleeing vehicle is within the site of the projectile. FIG. 2 depicts a Control Panel 25. The Control Panel 25 provides the activation buttons and mechanisms to launch the projectile from the disabling device and for the transfer of current through the projectile in order to disable the fleeing vehicle.

[0016] The Control Panel 25 includes on/off switches and buttons that release and engage the electrical current through the projectile, a Release Button 26 is provided above an
Activation Button 24. In one particular embodiment, these control buttons may have colors associated with them where the release or Engaging Button 26 may have a yellow light and the Activation Button 24 may have a green light. A series of Range Lights 28 are provided at the top of the Control Panel 25. The Range Lights 28 enable the operator to have a sense of the range of the projectile. When each of the Range Lights 28 are lit, the projectile is within optimum range to be fired and disengaged from the disabling device. As the lights diminish this indicates the diminishing range and therefore alerts the officer not to attempt to launch the projectile because it may not reach the target car. A Power Line 21 extends from the Control Panel 25 and receives electrical power from the power system of the police or security vehicle.

FIG. 3A depicts a Disabling Device 40. The Disabling Device 40 is mounted on the front bumper or perhaps a hood of the police vehicle and is provided power through a Power Cord 41. The Disabling Device 40 includes a projectile that is launched from the Launching End 45 as more clearly shown in FIG. 3C which depicts a front view of the Disabling Device 40. A pair of Mounting Brackets 42a, 42b are provided to mount the Disabling Device 40 onto the police vehicle.

FIG. 3B shows a top view of the Disabling Device 40 where the Launching End 45 is shown at the front end of the Disabling Device 40. The Body Portion 44 of the Disabling Device 40 extends cylindrically between Mounting Brackets 42a, 42b. The Back End 43 of the disabling device includes the Power Cord Connection 41. In one particular embodiment, the Disabling Device 40 might be up to eight inches in length with a three-inch circumference. A Projectile 46 is launched from the Disabling Device 40 upon activation by the police officer in pursuit.

The Projectile 46 is released through the activation of the Release Button 26 on Control Panel 25. Once the projectile hits the intended target, depressing the Activation Button 24 of the Control Panel 25 shoots the electrical current. After the electrical current is applied, the target vehicle will shut down completely and the police chase ends.

[0020] Installation of a disabling projectile system in accordance with the present invention provides a police officer with a safe mechanism to end a car chase before it’s completely out of control. Use of such a device helps eliminate the occurrence of a police chase and provides police with another tool to apprehend a fleeing suspect. The long-range potential of the firing projectile of the Disabling Device 40 helps make the system effective and suitable for disabling a fleeing suspect in a vehicle.

What is claimed is:
1. An electrical disabling projectile system for disabling a moving vehicle comprising:
   a. a disabling device, where the disabling device includes a power supply means and a launching projectile, where the projectile is capable of transmitting a disabling current;
   b. a control panel, where the control panel includes a means to release the projectile and a means to activate the disabling current; and
   c. a power supply means to supply power to the control panel and the disabling device.
2. The electrical disabling projectile system according to claim 1, where said device includes at least one mounting bracket, said mounting bracket enables the placement of the disabling device onto the front of a vehicle.
3. The electrical disabling projectile system according to claim 1, where the disabling device includes a launching end, said launching end includes an opening for the release of the launching projectile.
4. The electrical disabling projectile system according to claim 1, where the power supply means includes a power cord connection connected to a back end of the disabling device.
5. The electrical disabling projectile system according to claim 1, where the means to release includes a release button and the means to activate includes a activation button.
6. The electrical disabling projectile system according to claim 2, where the device and control panel receive electrical power from the vehicle’s power system.

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