1. An Electrically Driven Launching Device, characterized by comprising a hollow spiral tube (1), a propeller (2), a handrail (3), an electromagnet (4), a motor (5), a tension spring (6), a motor driver (7), a power supply (8), a voltage converter (9), a microcomputer (10), a track (11), a pressure receiving plate (12), a pressurizing rod (13), a display (14), a camera (15), a wind speed sensor (16), a radar device (17), an instrument adjustment base (18), a relay (19), a launch handle (20), an Internet of Things module (21), a multi-layer metal box (22), a power display module (23), a thermal insulation interlayer (24), and an ammunition clip (25).
2. According to the system described in claim 1, characterized by placing radiated items, such as steel balls, through the hollow spiral tube (1) and the ammunition clip (25).
3. According to the system described in claim 1, characterized by pushing or pulling the target to a designated position through the propeller (2).
4. According to the system described in claim 1, characterized by enabling a person to stably pick up the device through the handrail (3).
5. According to the system described in claim 1, characterized by using the electromagnet (4) to adsorb the pressure receiving plate (12).
6. According to the system described in claim 1, characterized by driving the track (11) to move through the motor (5).
7. According to the system described in claim 1, characterized by creating a large amount of elastic potential energy through the stretching of the tension spring (6).
8. According to the system described in claim 1, characterized by controlling the positive and negative rotation and rotation speed of the motor (5) through the motor driver (7).
9. According to the system described in claim 1, characterized by providing energy to all components in the equipment through the power supply (8).
10. According to the system described in claim 1, characterized by reducing the power supply voltage through the voltage converter (9) and distributing an appropriate voltage to different components.
11. According to the system described in claim 1, characterized by being able to control the motor driver (7), the relay (19), the display (14), the camera (15), the wind speed sensor (16), the radar device (17), and the instrument adjustment base (18) through the microcomputer (10). Furthermore, the microcomputer (10) has a serial communication function and an artificial intelligence system for special processing of data.
12. According to the system described in claim 1, characterized by hooking the pressure receiving plate (12) with the pointed objects on the track (11), and when the track moves, it can pull it backward.
13. According to the system described in claim 1, characterized by the pressure receiving plate (12) stretching the tension spring (6) to a specific position or being pulled back to its original position by the tension spring (6).
14. According to the system described in claim 1, characterized by increasing the impact force on the target object through the pressurizing rod (13).
15. According to the system described in claim 1, characterized by receiving the video stream data sent by the microcomputer (10) through the display (14).
16. According to the system described in claim 1, characterized by collecting the image data in front through the camera (15) and transmitting it to the microcomputer (10), which can perform more accurate target recognition.
17. According to the system described in claim 1, characterized by collecting the data of the current environmental wind speed and direction through the wind speed sensor (16) and transmitting it to the microcomputer (10).
18. According to the system described in claim 1, characterized by collecting the biological characteristic signal data in front through the radar device (17) and transmitting it to the microcomputer (10), and being able to identify the target behind the cover.
19. According to the system described in claim 1, characterized by being able to control the rotation and elevation angle of the launch port through the instrument adjustment base (18).
20. According to the system described in claim 1, characterized by being able to control the switches of various electronic components through the relay (19).
21. According to the system described in claim 1, characterized by controlling the suction force of the electromagnet (4) by the button on the launch handle (20) through the microcomputer (10).
22. According to the system described in claim 1, characterized by being able to remotely communicate with other devices through the Internet of Things module (21), and the Internet of Things module (21) can communicate with the microcomputer (10) through a serial port.
23. According to the system described in claim 1, characterized by the multi-layer metal box (22) being divided into an upper and lower layer, and a left and right inner and outer layer. The inner layer is equipped with a thermal insulation interlayer (25) and is fully sealed for protection against electromagnetic attacks and waterproofing. The main components are installed in the thermal insulation interlayer (25), and only the serial line of the microcomputer (10), the charging line of the power supply (8), and the connection line of the power supply (8) are introduced to the outer layer. The outer layer includes the power display module (23) and the Internet of Things module (21).
24. According to the system described in claim 1, characterized by displaying the remaining power of the power supply through the power display module (23).
25. According to the system described in claim 1, characterized by being able to resist the interference caused by cold or heat to the equipment and increase the service life of the equipment through the thermal insulation interlayer (24).
26. According to claims 5, 7, 12, and 13, characterized by the track (11) driving the pressure receiving plate (12) to move backward, the pressure receiving plate (12) stretching the tension spring (6), and after the pressure receiving plate (12) reaches a certain position, it is adsorbed by the electromagnet (4), achieving the purpose of loading.
27. According to claims 3, 5, 6, and 12, characterized by pushing the motor (5) upward through the propeller (2) to enable the track (11) to hook the pressure receiving plate (12). When the pressure receiving plate (12) is adsorbed by the electromagnet (4), the propeller (2) pulls the motor (5) downward, causing the track (11) to release the pressure receiving plate (12).
28. According to claims 2, 7, 13, 14, and 21, characterized by setting the suction force of the electromagnet (4) to 0 to release the pressure receiving plate (12), the pressure receiving plate (12) is pulled back to its original position by the tension spring (6), and the pressurizing rod (13) on the pressure receiving plate (12) will strike the object placed in the hollow spiral tube (1). The kinetic energy generated by a large amount of elastic potential energy will cause the object to fly out, achieving the purpose of shooting.
29. According to claims 11, 15, 16, 17, and 18, characterized by the microcomputer (10) receiving the data sent by the camera (15), the wind speed sensor (16), and the radar device (17), and then performing special processing on the data through the artificial intelligence system of the microcomputer (10) to obtain the hit rate and video stream data for synthesis and sending it to the display (14). The microcomputer (10) can also extract biological characteristic information from the data collected by the radar device (17) and the camera (15) through deep learning. The microcomputer (10) then configures and operates the biological characteristic information by communicating with a mobile phone or other devices, such as automatically striking similar targets, sharing data over a network, persistently reporting data for automatic alarm in the next identification, recognizing target behaviors, such as automatically striking in case of riots, and predicting target movement trajectories.
30. According to claims 11, 15, and 19, characterized by being able to share the data of the display (14) through the communication between the microcomputer (10) and a mobile phone or other devices, and then sending instructions, such as shooting, from the mobile phone or other devices to the microcomputer (10) to control the instrument adjustment base (18) to perform corresponding actions.
31. According to claims 11, 23, 22, and 24, characterized by connecting the serial line of the microcomputer (10) in the inner layer of the multi-layer metal box (22) with the Internet of Things module (21), enabling remote control of the microcomputer (10) using other devices to achieve the purpose of simultaneous control of multiple devices. By connecting the Internet of Things module (21) with the power display module (23), it can be used to monitor the remaining power of the power supply.