

DX/EX Design Manual (DX/EX)

COSMOX

1. Principle Description

DX/EX are toy water gun models with different exteriors but identical hardware and software designs. The water guns can be used in conjunction with BEACON targets for shooting scoring games.

(1) The Bluetooth module enables data communication with a mobile app, allowing users to configure device settings such as indicator light color, fluorescent lamp on/off status, and target color synchronization, helping players identify their respective target colors.

(2) RGB LEDs indicate various device states, including network connection status, game mode, and fault conditions.

(3) Firing Module: Primarily functions by using a motor to compress a spring, propelling the water bullet forward.

(4) Feeding Module: Utilizes a motor-driven mechanical push mechanism to deliver water bullets to the firing chamber.

(5) Firing Mode: A switch selects the firing mode, while a Hall sensor detects and enables single-shot, triple-shot, or continuous-fire modes.

(6) Fluorescent Lamp: Illuminates the water bullet to create a glowing effect, producing a visible bright trail upon launch. This feature can be turned on or off via the mobile app.

(7) Overcurrent Protection Module: Monitors motor current in real time during firing. If an abnormal overcurrent—such as a stall—is detected, the system automatically disables firing. Firing will only resume after the device is powered off and restarted, once the overcurrent condition has cleared.

(8) OTA firmware updates are supported via the mobile app.

Warning:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.