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1. Work principle



Shooter monitor



collection

processor

The working principle is that when the bullet is fired at th target, due to the compression of the surrounding air by the bullet moving at high speed, a cylindrical shock wave will be formed and spread around. The characteristic value of the shock wave will be measured through the sensors placed under the target, and then encoded by the data acquisition processor and transmitted to the main master server via wired or wireless mode. Finally, the location of the impact point will be displayed on the display, and the target will be reported in real time by voice and image.



Communication

controller

Printer

Data transmission

through WiFi

Score printing

Master sever



2. System application



The armor H-bar pop-up targets are used to provide concealed artillery targets for various types of armored vehicles in trainer shooting and combat shooting:

It can carry various types of trainer shooting and combat shooting camouflage net targets.

By installing a shock wave target device, it is possible to collect the hit data of various calibers of ammunition below 130mm and achieve the automatic target scoring.

It can realize automatic pop-up target by remote controlling, and complete various comprehensive training in trainer shooting or combat shooting.



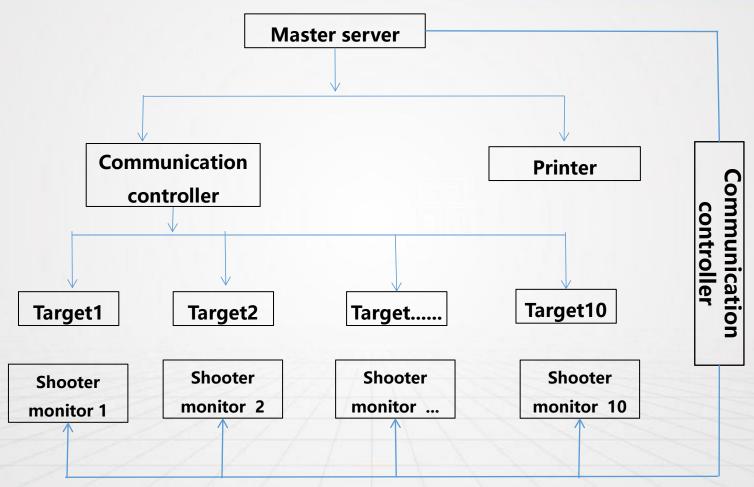
Armor H-bar Pop-up Target





3.System composition







System composition





1.Armor H-bar pop-up target

The impact point positon can be calculated, by analyzing the process of projectile incidence and using the time difference to map the model to the target position based on the spatial geometric relationship between the impact point and the sensor array.



2.Master sever

The master server is equipped with a highly configured notebook computer and server management software, which is convenient for controlling, viewing, statistics, and querying the firing performance of units or individuals.



3. Communication system

A high-power communication system can provide 2.4G wireless services, providing a cleaner wireless environment, and more stable wireless access. It can accurately transmit signals from the target and the master control server to each other within a range of 1-500 meters.





4. System function

Traget

function



Training information managment

It can enter, edit, and delete the information of participants, training courses, and training plans, as well as query and print shooting scores.

Different control way

The target can be set to hit the hidden target through the upper computer software. The shock wave hidden target has multiple control modes such as manual control, automatic control, and automatic cycle control.

Spatial positioning technology

The target plane uses the time difference to map the model to the target position and calculate the impact point position according to the spatial geometric relationship between the impact point and the sensor array by analyzing the process of projectile incidence.

Applicable to multi-caliber weapons

It is applicable to shooting training with multiple caliber weapons from 5.8mm to 130mm. It's used to provide concealed artillery targets for various types of armored vehicles in trainer shooting and combat shooting.



System function



System software controlling function

Communication status monitoring

To test whether the target communication is normal, each type of target can be communicated separately. The communication system will automatically detect all powered on targets for testing. If the communication is abnormal, it indicates that the target communication has failed or has not been powered on, and the communication status of the target can be detected.

02

Remote demand setting

The armor T-bar pop-up target can automatically execute the explicit and implicit actions according to the explicit and implicit target time, implicit target time, and explicit and implicit target times set by the remote control command; It can automatically record the number of hits. When the number of hits is consistent with the required number of hits for the hidden target set by the remote control command, the product can automatically hide the target.

03

Parameter setting function

Under grouping conditions, target type can be selected, and target number can be selected in batch or in disorder for grouping setting.





System function _



System software controlling function



Diversified inverted target control function

The target system is designed based on a logical framework, with tactical hit and target reversal functions, target reversal functions based on display time, control display and target reversal functions based on control mode, and can control target reversal functions for the entire group in a grouped state.



Shooting training Information management function

The centralized control equipment can input, edit, and delete the information of participants, training courses, and training plans, as well as query and print shooting scores.



Training Plan Import editing function

Using the control system before shooting, information such as the units and groups of shooting trainers can be imported into the system, and can be adjusted and edited using the plan editing interface based on the actual support situation of the range equipment.





5. Main technical indicators

No.	ltem	Target		
1	Applicable target plate	A wooden target board and gauze target, no less than 50kg		
2	Applicable weapon	Large caliber weapons such as various artillery and tanks		
3	Applicable bullet diameter	5mm-130mm		
4	Applicable velocity	100m/s~1500m/s		
5	Applicable temperature	-30℃~+65℃		
6	Rotary time	< 5s		
7	Target reporting accuracy	≥98%		
8	Target reporting accuracy tolerance	≤10cm		
9	Wind resistance rating	Level 6		
10	Wireless control distance	1-3000m (Intervisibility)		
11	Rain proof performance	1.7mm/min, 30min		
12	Target reporting response time	≤1s		
13	Battery pack	24V40AH		
14	Number of controllable targets simultaneously	≤10sets		



6. Complete configuration

No.	Part name	Quantity	Unit	Remarks
1	Master sever	1	рс	Including software
2	Communication controller	1	set	
3	Armor H-bar pop-up target	4	рс	
4	Battery pack	4	set	24v12ah
5	HF antenna	4	рс	2.4GHZ
6	Target plate	4	set	
7	Target bar	8	рс	wood
8	Target charger	4	set	
9	Spare parts kits	1	set	
10	Instruction manual	1	рс	
11	Certificate card	1	рс	
12	Packing box	4	рс	Wooden box



7. System interface



Picture of complete machine

Shooter monitor

Master server



Product picture





Operating System



Communicatio n system





8. Application cases_



Field Exercises





Application cases





