



# RFO System (Remote Firing Option)

Patent Pending

## Product Summary

The RFO is a drop-in kit that adds remote control capability to the weapon in a motorized turret.

## Features/Benefits

- Allows option of manned or remote weapon operation.
- Allows threat engagement with greater accuracy and maximum protection.
- Remote control via RFO user interface.
- View the threat environment on hi-res video display.
- Major Improvement in crew survivability and system effectiveness.

## Description

The **RFO** System is a kit that drops into the pintle of an existing motorized turret, and it provides remote control of both the weapon and the turret. The RFO consists of low-cost, commercial-off-the-shelf components. These “plug-and-play” components include a remote fire solenoid, low light camera, user interface with color display, joystick and trigger. The RFO weapon system is simple to operate with minimal training, and provides a major tactical advantage by allowing the gunner to deliver suppressive firepower from a protected position.

The RFO System utilizes an intuitive user interface that incorporates a built-in high-definition display. Joystick and trigger controls are straight forward, allowing for quick training and qualification.

Depending on threat/situation, the RFO provides the gunner with the option of manual turret operation, or remote operation. Manual operation provides superior situational awareness, while remote operation provides dramatically improved protection by operating from within the hull of the vehicle. Remote mode also provides improved accuracy and much greater targeting distance due to the RFO's excellent optics and display.

RFO is a modular upgrade to existing ITDS turrets and other platforms. It does not interfere with current armor configurations. Existing fleets can be incrementally upgraded at the Field Depot Level or Theater Storage Area (TSA) in less than one day. The RFO improves lethality while maximizing vehicle mission time.

When in remote mode, the RFO:

- Locks the gun in alignment with the camera
- Enables the firing solenoid
- Activates camera, and user interface for control of the weapon
- The gunner then uses the user interface to locate and engage the target.



Turret with RFO System



RFO User interface



RFO enables remote operation of the turret while protected inside the vehicle.

## About Us

Control Solutions LLC has designed and manufactured field-hardened systems to meet the challenges of the military for over 20 years. Control Solutions LLC, your rapid-response provider of motion control solutions.



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RFO Specifications																																													
<b>System</b>																																													
Shock		MIL-STD-810G, 516.6																																											
Vibration		MIL-STD-810G, 514.6 procedure 1																																											
Input Voltage		24VDC; 15 A Max (Traverse and elevation operation)																																											
Weight		45kg																																											
Temperature		Operating: -20° to +60°C Storage: -40°C to 85°C																																											
Humidity		5% - 95% non-condensing MIL-810G, 507.5																																											
Sealing		IP66																																											
Salt Spray		MIL-STD-509.6																																											
Data Interface		CAN J1939																																											
Video Input		Capable of supporting 2 Independent NTSC video inputs																																											
Weapon Elevation Limits		M2, -10° - +45°																																											
<b>User Interface</b>																																													
Display		5.0 inch VD sunlight readable																																											
EMI/EMC		MIL-STD 461; MIL-STD 464																																											
Accessories		<ul style="list-style-type: none"> <li>• Molle Holster</li> <li>• Care Kit</li> <li>• Hard Case</li> </ul>																																											
<b>Camera</b>																																													
Video Format		NTSC																																											
Resolution		1080P																																											
Zoom		32X Optical Zoom; 4X digital Zoom (128X Total Zoom)																																											
Low-Light Capable		Dusk to Dawn <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="2">Man</th> <th colspan="2">Vehicle</th> </tr> <tr> <th>1</th> <th>32</th> <th>1</th> <th>32</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Detect</td> <td>Day</td> <td>318</td> <td>3563</td> <td>665</td> <td>4813</td> </tr> <tr> <td>Night</td> <td>226</td> <td>1338</td> <td>483</td> <td>1872</td> </tr> <tr> <td rowspan="2">Recognize</td> <td>Day</td> <td>127</td> <td>2184</td> <td>279</td> <td>3370</td> </tr> <tr> <td>Night</td> <td>86</td> <td>820</td> <td>193</td> <td>1366</td> </tr> <tr> <td rowspan="2">Identify</td> <td>Day</td> <td>85</td> <td>1641</td> <td>187</td> <td>2720</td> </tr> <tr> <td>Night</td> <td>56</td> <td>595</td> <td>126</td> <td>1066</td> </tr> </tbody> </table> <p>Identification at full optical zoom &gt;2500m for vehicle size target (Day)</p> <ul style="list-style-type: none"> <li>• Man sized target = 1.75 sq. meters</li> <li>• Vehicle sized target = 4 sq. meters</li> <li>• All calculations in meters</li> <li>• Zoom Level 1 = no optical or digital zoom</li> <li>• Zoom Level 32 = 32x optical zoom, no digital zoom</li> <li>• Night = Nighttime conditions, full moon</li> </ul>			Man		Vehicle		1	32	1	32	Detect	Day	318	3563	665	4813	Night	226	1338	483	1872	Recognize	Day	127	2184	279	3370	Night	86	820	193	1366	Identify	Day	85	1641	187	2720	Night	56	595	126	1066
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<b>Weapon</b>																																													
Currently Supports		M2 .50 cal (12.7mm)																																											
Future Support		M240 (7.62mm) M134 (7.62mm) M230LF (30mm) Mk19 (40mm GL)																																											

All specifications subject to change without notification.



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