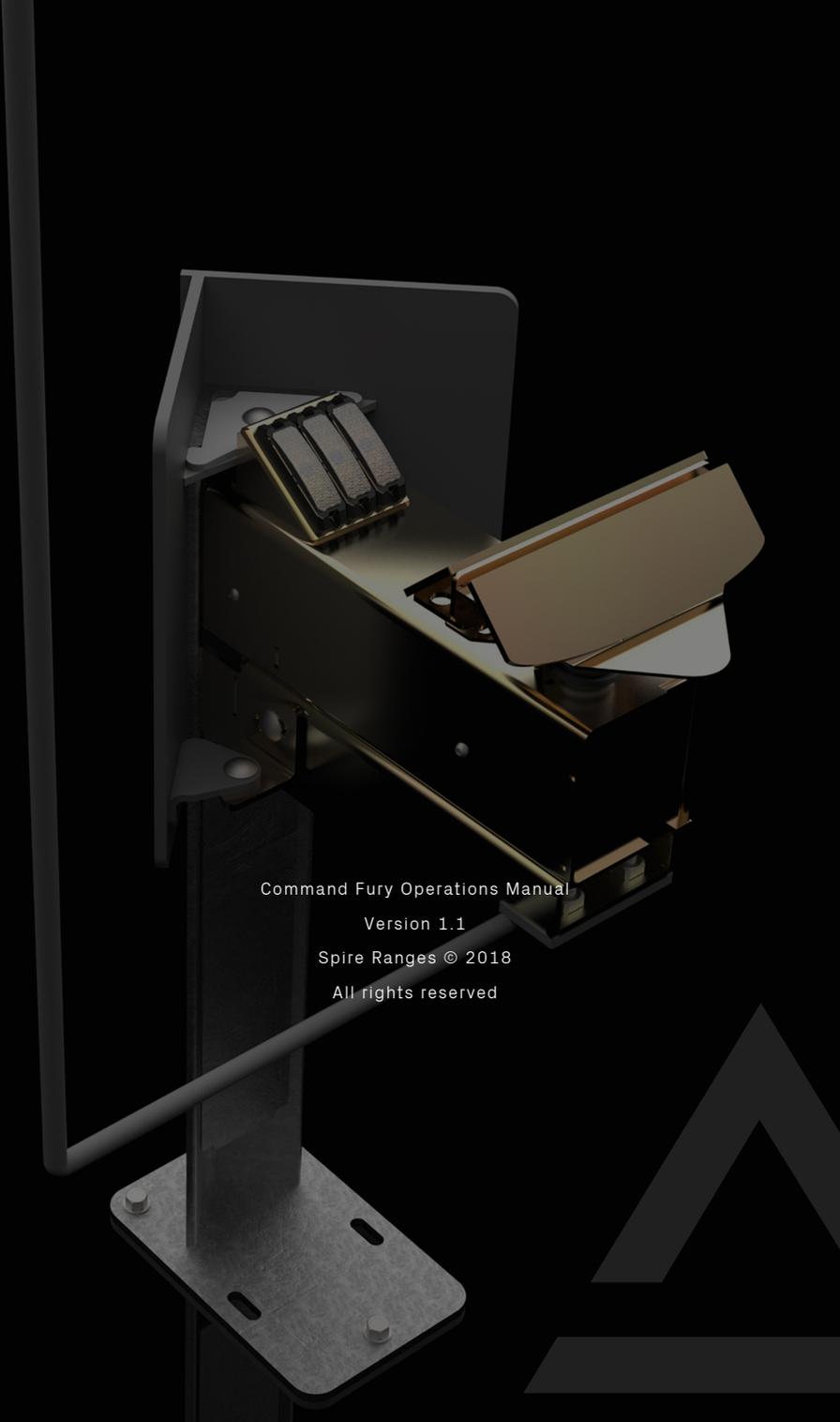




COMMAND **FURY**

OPERATIONS MANUAL



Command Fury Operations Manual

Version 1.1

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1.1 | COMMAND FURY INTRODUCTION

The Command Fury is a stationary, ground-mounted, turning target system that is ideal for any range's customized training programs and courses of fire. Electric-powered actuators quickly and quietly turn targets 90-, 180- and 360-degrees with features including random edging, target tease and friend/foe presentation.

Targets can be controlled individually or synchronously with a Spire master control touch screen and/or wireless remote.

The Fury system is all weather-rated and proven durable, making it an ideal target system for all types of facilities and organizations, including law enforcement, military, government, commercial and indoor/outdoor ranges.

1.2 | MASTER CONTROL CONSOLE OVERVIEW

The Master Control Console allows a rangemaster to manually control drills for an individual position or for all of the positions simultaneously on the range. Additionally, a wireless remote allows for the rangemaster to control the system from the firing line.

1.3 | IMPORTANT SAFETY INFORMATION



Maintenance and use must adhere to the guidelines in this manual. Improper use of any of the equipment can result in poor performance, product damage and even serious physical injury. Properly trained personnel should only operate the equipment within the range. For technical, mechanical and electrical maintenance, it is recommended that a trained professional be consulted. Protective headwear, eyewear and gloves should always be worn when performing any maintenance. Danger risks include, but are not limited to, electric shock, head injuries, limb or body crushing, and eye trauma.

1.4 | WARRANTY OF EQUIPMENT

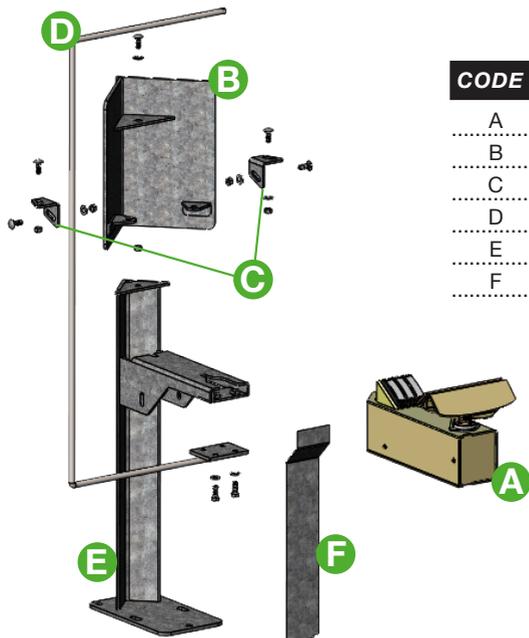


Refer to agreement documents for specific warranty details for your range. Consumables, negligence and improper use of equipment (including firing armor-piercing rounds or calibers not approved for your range's ballistic rating) are excluded from all warranties.

1.5 | FURY SYSTEM COMPONENTS

1.5.1 | Fury Stand Assembly

FIGURE 1.5.1 | *Fury Stand Assembly*



CODE	DESCRIPTION
A	Fury Turner Assembly
B	Ballistic Shield
C	Shield Bracket Assembly
D	Target Hoop
E	Base Stand
F	Electrical Cover

Technical Specifications

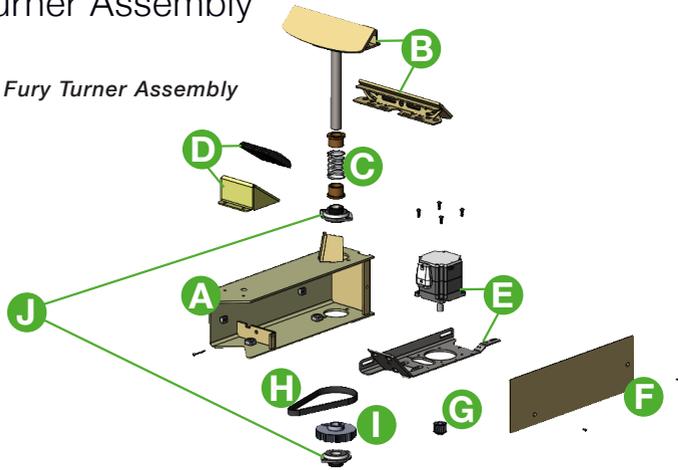
PHYSICAL DIMENSIONS	VALUE
Length × Width × Height	26 × 22½ × 76 in (660.4 × 571.5 × 1930.4 mm)
TEMPERATURE RATINGS	VALUE
Operating	-10–60° C (14–140° F)
Storage	-10–60° C (14–140° F)

“From the precision engineering to the site-specific designed installation, we aim to deliver innovative and practical ranges that prepare professionals for when their life depends on their training.”

– SPIRE TEAM PILLARS

1.5.2 | Fury Turner Assembly

FIGURE 1.5.2 | Fury Turner Assembly



CODE	DESCRIPTION
A	Hogan House Weldment
B	Ballistic Target Clamps & Jaw
C	Spring & Flanged Bushings
D	LED Lights (3) & Bracket Assembly
E	Motor & Mounting Tray

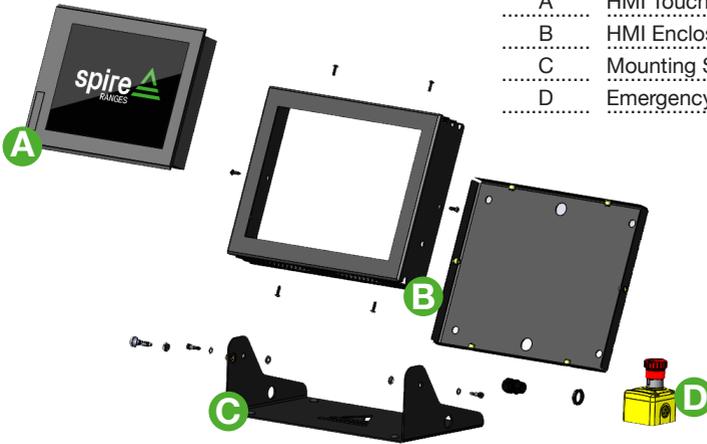
CODE	DESCRIPTION
F	Hogan House Access Cover
G	Drive Pulley
H	Drive Belt
I	Driven Pulley
J	Flange Bearings

Technical Specifications

PHYSICAL DIMENSIONS	VALUE
Length x Width x Height	5 x 22 x 10½ in (127 x 558.8 x 266.7 mm)
POWER	VALUE
Voltage	24 VDC
Unit AMP	2.5 AMP Running Current
Supply AMP	5 AMP Running Current
TEMPERATURE RATINGS	VALUE
Operating	0–60° C (32–140° F)
Storage	–25–75° C (–13–167° F)
CIRCUIT PROTECTION	VALUE
Inside Power Supply Cabinet	5 AMP

1.5.3 | HMI Touch Screen

FIGURE 1.5.3 | HMI Touch Screen



CODE	DESCRIPTION
A	HMI Touch Screen
B	HMI Enclosure Assembly
C	Mounting Stand (Optional)
D	Emergency Stop (Optional)

Technical Specifications

PHYSICAL DIMENSIONS	VALUE
Length × Width × Height	12½ × 9¾ × 2 in (316 × 246 × 52 mm)
Weight	5.3 lb (2.4 kg)
POWER	VALUE
Power Consumption	24 VDC ± 20%
Voltage	37 Watts Max
TEMPERATURE RATINGS	VALUE
Operating	0–55° C (32–131° F)
Storage	–25–75° C (–13–167° F)

“ Excellence is about execution. For you, that requires a reliable range that facilitates exceptional training. For us, that means getting the job done right—the first time. ”

– SPIRE TEAM PILLARS

2 | PRODUCT OPERATIONS

2.1 | HMI MASTER CONTROL TOUCH SCREEN

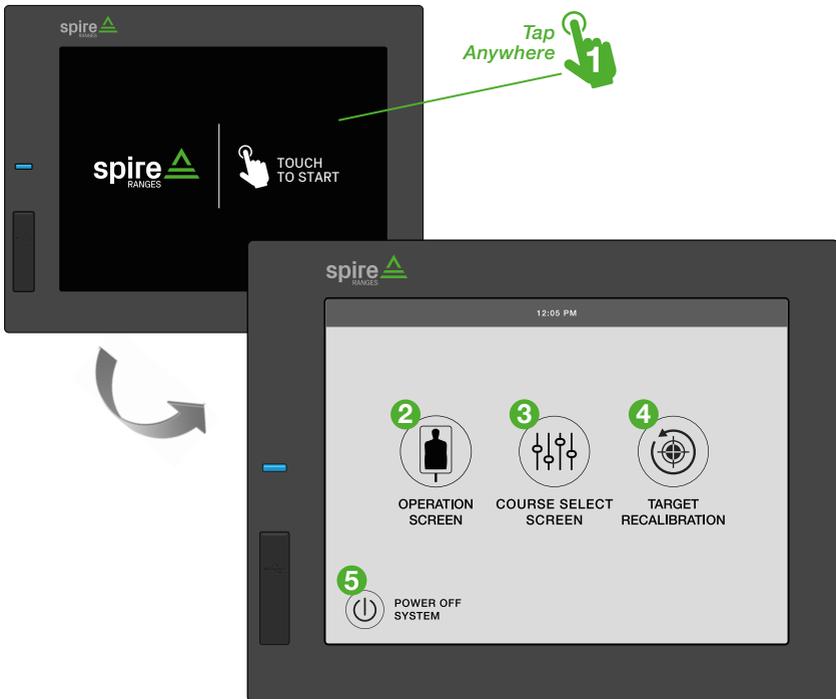
Follow these guidelines to operate the range's course of fire. Reference operation guidelines and figures within each section.

2.1.1 | WELCOME SCREEN (Navigating to Menu)

A Welcome Screen with Spire logo greets you when the HMI is initially powered on. To access the Menu Screen, reference the following steps and Figure 2.1.1 below.

1. Access the Menu Screen from the Welcome Screen by tapping anywhere on the screen. Reference  in Figure 2.1.1 below for the Welcome Screen.
2. From the Menu Screen, you can access the Operation and Course Select screens, perform Target Recalibration to sync targets, and power off the entire system. Reference , ,  and  in Figure 2.1.1 below.

FIGURE 2.1.1 | WELCOME (Accessing Menu Screen)



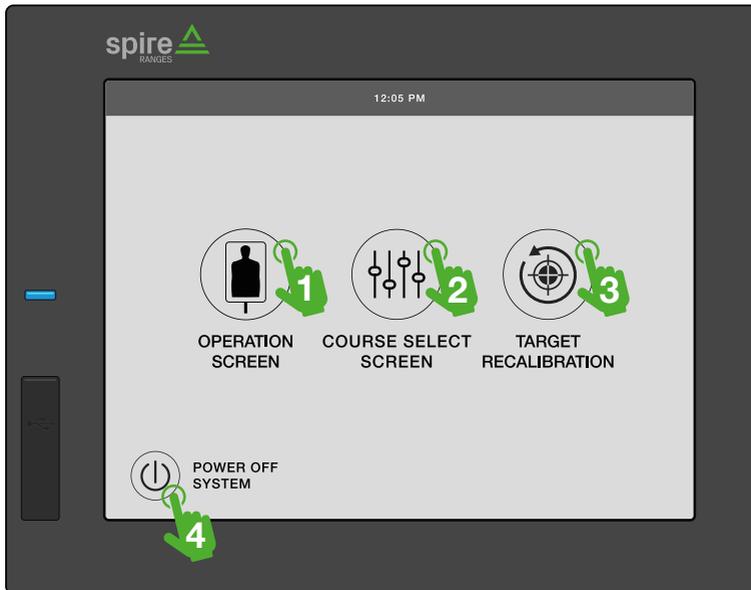
2.1.2 | MENU SCREEN

The Menu Screen allows the rangemaster to select the Operation and Course Select screens, Target Recalibration and to power off the system. The Operation Screen is the operational screen for live fire training. The Course Select Screen serves two purposes: 1) to select the course to run for the live fire training session; and 2) to edit preset courses or to create a custom course of fire.

2.1.2.a | Navigating the Menu Screen

1. Select  *Operation Screen* to navigate to the Operation Screen to run a course of fire. Reference  in Figure 2.1.2 below.
2. Select  *Course Select Screen* to navigate to the Course Select screen to select and/or edit a course of fire. Reference  in Figure 2.1.2 below.
3. If any targets are out of sync, select  *Target Recalibration* to sync all Fury targets on the range. Reference  in Figure 2.1.2 below.
4. To power off the system, select  *Power Off System*. Reference  in Figure 2.1.2 below.

FIGURE 2.1.2 | MENU (Accessing Operation and Course Select Screens)



2.1.3 | COURSE SELECT SCREEN

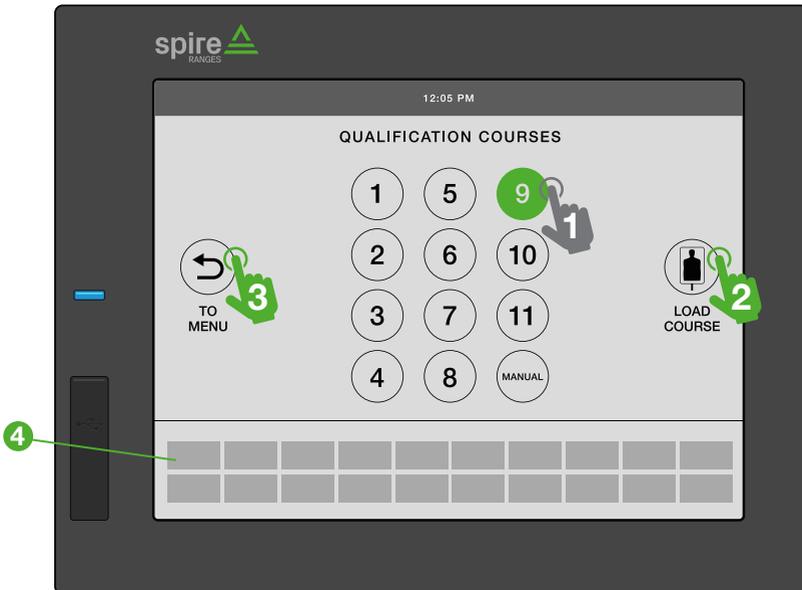
The Course Select Screen serves two purposes: 1) to select the course to run for the live fire training session; and 2) to edit preset courses of fire or to create a custom course of fire. Reference the steps and figures in this section for how to select a course and how to edit or customize a course of fire.

2.1.3.a | Course Select

1. To select a preset course of fire, tap on the desired course's button; the selection will be highlighted as green. To clear your choice, tap the green selected button again. Reference  in Figure 2.1.3.a below.
2. After selecting a course, to move to the Operation Screen, select  *Load Course*. Reference  in Figure 2.1.3.a below.
3. To return to the Menu Screen, tap  *Return*. Reference  in Figure 2.1.3.a below.

Note: Once a course is selected, its sequence is given at the bottom of the screen; up to twenty sequences are possible for any one preset course of fire. Reference  in Figure 2.1.3.a.

FIGURE 2.1.3.a | DRILL SELECT SCREEN

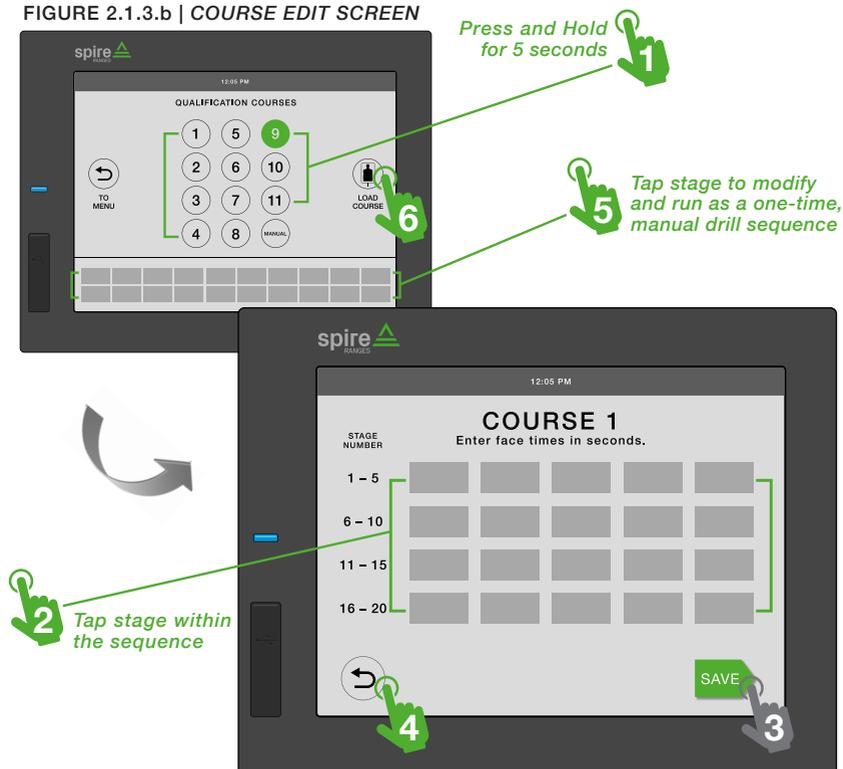


2.1.3.b | Course Edit

1. To edit and/or set a course as a preset, press the desired course's button and hold for 5 seconds to navigate to the Course Edit Screen for the selected preset drill. Reference  in Figure 2.1.3.b below.
2. Tap the stage within the sequence to edit; a popup keypad will appear. Reference  in Figure 2.1.3.b below. To reference the popup numeric input keypad screen, see section 2.1.9 on page 19.
3. Select  Save to save the changes to the new preset and return to the Course Select screen. Reference  in Figure 2.1.3.b below.
4. Select  Return to cancel editing and return without saving to the Course Select Screen. Reference  in Figure 2.1.3.b below.

 *Manual* offers a mode to run a modified course of fire without saving it as a preset. To modify and run a one-time course, tap and edit one or more steps in a course's sequence; a popup keypad will appear. Once edits have been completed, select  Load Course. Reference  and  in Figure 2.1.3.b.

FIGURE 2.1.3.b | COURSE EDIT SCREEN







FOR WHEN IT
MATTERS
MOST

2.1.4 | OPERATION SCREEN (Target Selection)

The Operation Screen is the main operational screen for live fire training sessions. From this screen, a rangemaster can oversee qualification courses of fire, including preset courses and/or manual sessions.

Note: The Operation Screen's layout is different if a Running Man target is included in the shooting range's design. See Command Treadwell Operations Manual for screen's configuration with a Running Man.

2.1.4.a | Target Selection

Current Target Selection indicates the target selection currently selected, whether  *All*,  *Even*,  *Odd*,  *None*, or  *Manual*. Reference  in Figure 2.1.4.a below.

- To select desired target(s) for a live fire training session, tap  *Select Targets* or  *Current Target Selection* to navigate to the Target Selection Screen. Reference  and  in Figure 2.1.4.a below.

FIGURE 2.1.4.a | OPERATION SCREEN (Target Selection)



2.1.5 | TARGET SELECTION SCREEN

The Target Selection Screen offers one-touch multiple or individual manual target selection. To select common target multiples at once, tap  *All*,  *Odd* or  *Even*. Once a selection is made, the button will change to green to highlight that it's selected. Reference  in Figure 2.1.5 below.

Targets can also be selected manually. Once a manual change has been made to the screen,  *Manual* will change to green to highlight its selection. To select targets manually, reference steps and figure below.

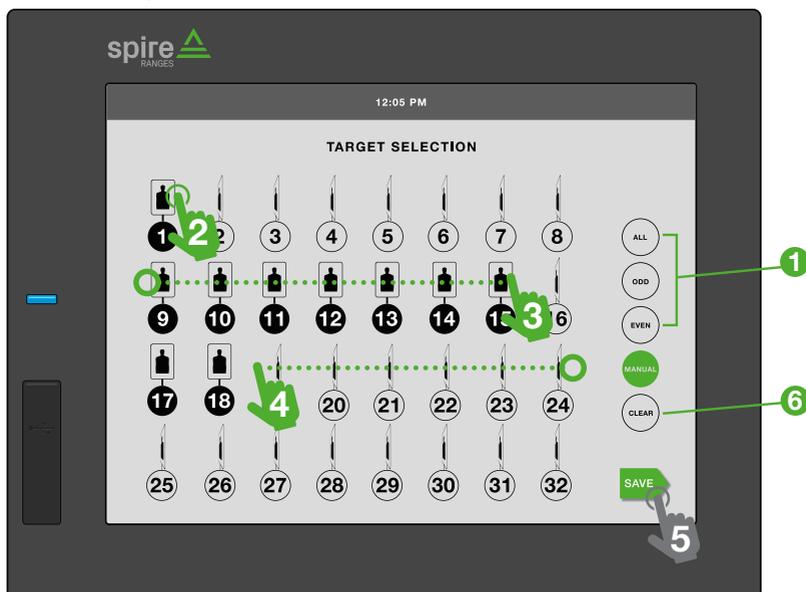
1. Tap individual target numbers to select positions one by one for a live fire training session; to unselect, tap target numbers again. Reference  in Figure 2.1.5 below.
2. Press, hold and swipe to select as many targets in a row that are desired for a live fire training session. The same can be done to unselect. Reference  and  in Figure 2.1.5 below.

 *Face* indicates the target position is selected.

 *Edge* indicates the target position is unselected.

To save and return to the Operation Screen, select  *Save*. To clear all selections, select  *Clear*. Reference  and  in Figure 2.1.5 below.

FIGURE 2.1.5 | SELECTING TARGETS



2.1.6 | OPERATION SCREEN (Running Courses of Fire)

The Operation Screen is the main operational screen for live fire training sessions. From this screen, a rangemaster can oversee qualification courses of fire, including preset courses and/or manual sessions.

Note: The Operation Screen's layout is different if a Running Man target is included in the shooting range's design. See Command Treadwell Operations Manual for screen's configuration with a Running Man.

2.1.6.a | Running Preset Courses of Fire

After selecting a preset course of fire (reference 2.1.3 on page 9 for how to select a preset course of fire), reference the steps below and Figure 2.1.6.a on page 16 for how to run preset courses of fire.

1. After targets have been selected, tap  *Next Stage* to begin the preset course of fire. Reference  in Figure 2.1.6.a on page 16.
2. The time remaining for the current stage within the course will tick down until completion. Reference  in Figure 2.1.6.a on page 16.
3. Once *Next Stage* has been selected,  *End Stage* will appear to allow the rangemaster to manually stop the stage. The previously stopped stage will automatically reload to resume the qualification course.

2.1.6.b | Manual Time Exposure

In the event that a stage needs to be repeated for one or more target positions, referred to as an "Alibi" within some organizations, the rangemaster can run a manual time exposure for the selected position(s).

1. After selecting targets (reference 2.1.4 and 2.1.5 on pages 13–14 for how to select targets), tap  *Seconds*. A popup keypad will appear to enter the desired manual time. Reference  in Figure 2.1.6.b-c on page 16.
2. After entering the desired time, tap  *Exposure Time* to begin manual exposure time; remaining time will tick down. Reference  in Figure 2.1.6.b-c on page 16.

2.1.6.c | Manual Control without Time

The following controls offer complete manual operation outside of a timed drill:

 *Target Face* turns the target to face;  *Target Edge* turns the target to edge; and  *Target Back* turns the target to back for a friend / foe presentation. Reference  in Figure 2.1.6.b-c on page 16.

FIGURE 2.1.6.a | OPERATION SCREEN (Running Preset Courses of Fire)

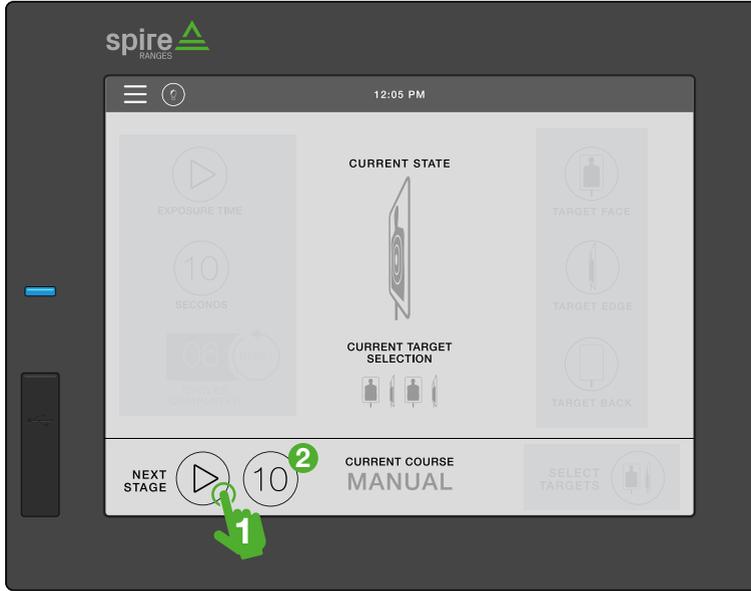


FIGURE 2.1.6.b-c | OPERATION SCREEN (Manual Operation)



2.1.7 | OPERATION SCREEN (Other Controls / Guides)

The Operation Screen is the main operational screen for live fire training sessions. From this screen, a rangemaster can oversee courses of fire. The following include additional controls and guides found on the Operation Screen.

 *Cycles Completed* reflects the number of live fire presentations completed. To clear this number, tap  *Reset*. Reference  in Figure 2.1.7 below.

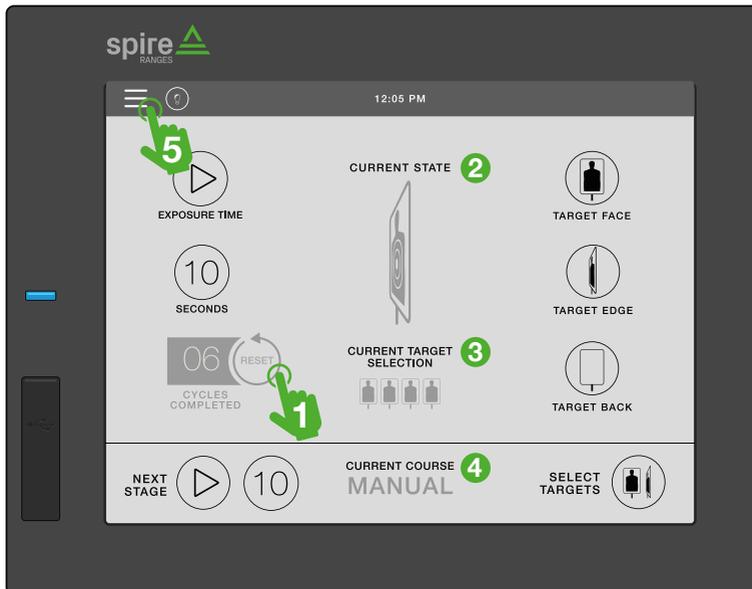
 *Current State* displays whether selected targets are currently Face, Edge or Back. Reference  in Figure 2.1.7 below.

 *Current Target Selection* represents which targets are selected, whether All, Odd, Even or None. Reference  in Figure 2.1.7 below. To change target selection, tap *Current Target Selection* or *Select Targets* to navigate to the Target Selection Screen; reference section 2.1.4 and 2.1.5 on pages 13–14.

Current Course indicates which course of fire is currently selected. Reference  in Figure 2.1.7 below. To select a different course, tap *Current Course*, which will take you to the Course Select Screen; reference 2.1.3 on page 9.

Select  to navigate to the Menu Screen. Reference  in Figure 2.1.7 below. Reference section 2.1.2 on page 8 for navigation of the Menu Screen.

FIGURE 2.1.7 | OPERATION SCREEN (Other Controls / Guides)



2.1.8 | TARGET ILLUMINATION CONTROL

Target illumination enhances training with lighting scenarios that help trainees sharpen focus under duress. If target illumination is implemented within the range, a lightbulb indicator is located at the top left of the keypad.

2.1.8.a | Turning On & Selecting Target Lighting

1. Navigate to the Target Lighting Screen on by tapping the lightbulb button at the top. Reference **1** in Figure 2.1.8 below.
2. A popup control will appear in the center of the keypad. Select the desired target lighting; green indicates the lighting control selected. Reference **2** in Figure 2.1.8 below.
3. To exit the Target Lighting Screen, tap **Exit**. Certain lighting scenarios will continue to run even after exiting. To completely turn off lighting scenarios, tap again the selection highlighted in green within the Target Lighting Screen. Reference **3** in Figure 2.1.8 below.



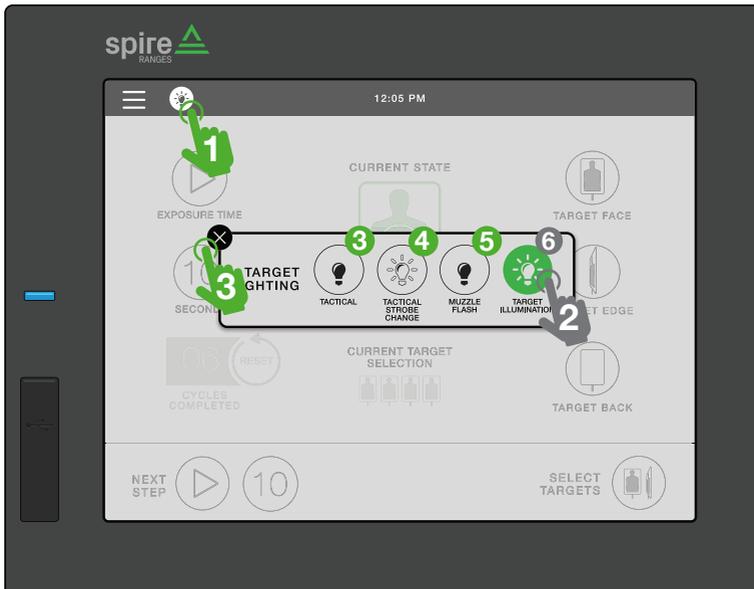
indicates lighting is on.



indicates lighting is off.

Tactical offers red and blue lights that illuminate the target. *Tactical Strobe Change* alters the lighting pattern of the red and blue tactical lights. *Muzzle Flash* simulates a one-time muzzle flash. *Target Illumination* lights up targets continuously. Reference **3**, **4**, **5** and **6** in Figure 2.1.8 below.

FIGURE 2.1.8 | TARGET ILLUMINATION CONTROL



2.1.9 | NUMERIC KEYPAD INPUT SCREEN

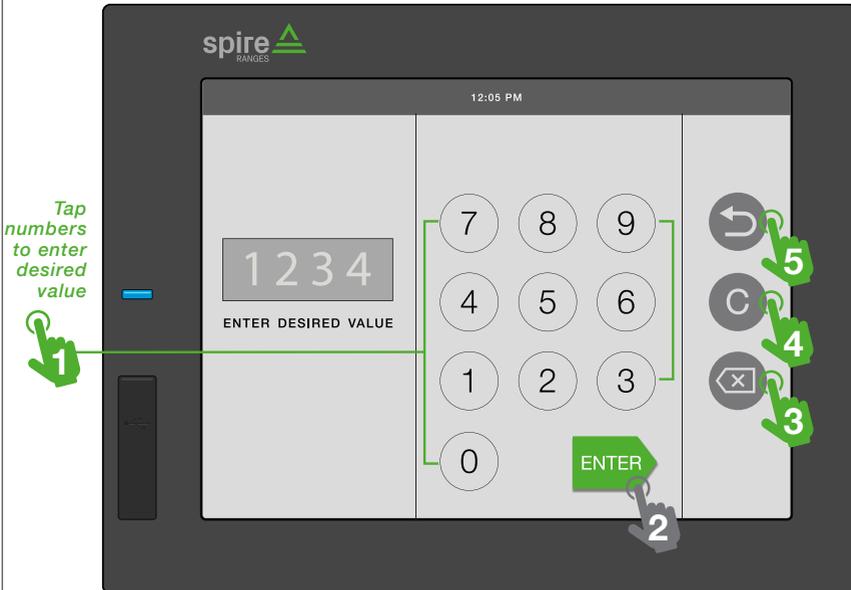
The popup numeric input screen is used on several screens, from performing a manual time exposure to entering the values for a preset course of fire.

2.1.9.a | Entering Desired Value

1. Enter the desired value by tapping the numbers from the numeric input keypad. Reference  in Figure 2.1.9 below.
2. Once the desired value has been entered, tap  *Enter* to save and return to the previous screen. Reference  in Figure 2.1.9 below.
3. If a value was entered incorrectly, tap  *Delete* to delete the most recent value entered or  *Clear* to clear the entire value entered. Reference  and  in Figure 2.1.9 below.

To cancel entering a value at any time and return to the previous screen, select  *Return*. Reference  in Figure 2.1.9 below.

FIGURE 2.1.9 | NUMERIC INPUT SCREEN



2.2 | WIRELESS KEY FOB REMOTE

A wireless key fob can be implemented to allow the rangemaster to run courses of fire from the vantage point of the firing line. Reference the figure below for how to move through a course of fire or to manually control targets with a wireless key fob remote.

FIGURE 2.2 | KEY FOB (Running Courses of Fire)



“ At Spire, we love what we do, and we take pride in our work knowing that our customers are the everyday heroes that make our communities safer. ”

– SPIRE TEAM PILLARS

3 | TROUBLESHOOTING

Given below are possible causes and solutions for system problems. Within the Possible Causes and Solutions sections, you will find sequential steps that can help troubleshoot a problem. If a problem persists after following these troubleshooting guidelines, please immediately contact the Spire technical team for additional support.

3.1 | HMI TOUCH SCREEN

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
3.1.1 Dark Blank Touch Screen	(1) Screen is in sleep mode.	Touch the screen to bring HMI out of sleep mode.
	(2) No power supplied to HMI.	(1) Check for power supply connection. (2) If power supply is connected properly, check circuit breaker to see if breaker tripped. (3) If problem persists, contact Spire for technical support: 800-761-1231.
3.1.2 Nonresponsive Screen Function	(1) HMI screen error.	(1) Navigate to the Menu Screen (refer to section 2.1.2 on page 8). (2) Select <i>Power Off</i> to reset HMI Touch Screen. (3) If problem is still not resolved, check power supply to PLC. If PLC has power, cycle power to PLC. (4) If there is no indicator light for power to the PLC, check circuit breaker to see if it is tripped.
	(2) HMI / PLC fault.	Contact Spire for technical support: 800-761-1231.
3.1.3 Nonresponsive HMI Touch Screen	(1) HMI error.	(1) Cycle power to HMI. (2) Cycle power to the PLC.
	(2) HMI / PLC fault.	Contact Spire for technical support: 800-761-1231.

3.2 | FURY TARGET UNITS

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
3.2.1 Misaligned Target(s)	(1) Alignment error.	(1) Navigate to the Menu Screen on the HMI Touch Screen (refer to section 2.1.2 on page 8); (2) select <i>Target Recalibration</i> , and then (3) reselect targets.
	(2) Proximity sensor error.	(1) Remove the inside access panel of the motor housing (refer to F on page 5). (2) Check the proximity sensor's positioning; (3) readjust for perpendicular alignment of the target.
	(3) Proximity sensor / turning motor fault.	Contact Spire for technical support: 800-761-1231.
3.2.2 Nonresponsive Targets (Not Moving)	(1) Turning motor position error.	(1) Navigate to the Menu Screen on the HMI Touch Screen (refer to section 2.1.2 on page 8); (2) select <i>Target Recalibration</i> , and then (3) reselect targets. (4) If problem persists, cycle power to Fury target units in power supply cabinet at the firing line.
	(2) Obstruction in drive system.	(1) Power off targets. (2) Turn target manually by hand to see if it turns. (3) If it doesn't turn, remove the side access panel of the turning motor housing (refer to F on page 5) to check for obstruction; (4) remove obstruction if one is present.
	(3) Driver belt error.	(1) If target turns manually the full 360°, remove side access panel to check drive belt. (2) Replace drive belt if necessary.
	(4) Turning motor fault.	Contact Spire for technical support: 800-761-1231.

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
3.2.3 Nonresponsive Targets (Continually Spinning)	(1) Proximity sensor range error.	(1) Power off targets. (2) remove side access panel to check height on proximity sensor to key on the pulley of the turning target. (3) make sure distance is within 1/32 nd to 1/16 th of an inch. If the distance is outside of these parameters, use a tool to adjust proper distance of proximity sensor to turning target key.
 (2) Motor failure.	Note: When turning the target manually, a light indicator will go on each time the turning target key passes the proximity sensor if the proximity sensor is within the proper distance specified. Contact Spire for technical support: 800-761-1231.

3.3 | TARGET LIGHTING

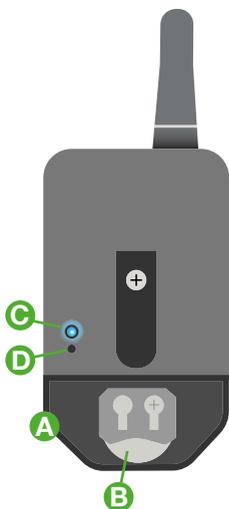
PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
3.3.1 Lighting Not Working	(1) Lighting not selected.	(1) Select lighting and turn desired lighting on; refer to section 2.1.8 on page 18.
 (2) Lighting damaged.	(1) Inspect light(s) for damage. (2) Replace lighting units as necessary.
 (3) Connection error.	(1) Remove side access panel (refer to F on page 5); (2) inspect M8-style connection on housing plate for corrosion. (3) If corroded, remove wiring and clean connection.
 (4) Lighting failure. Contact Spire for technical support: 800-761-1231.

3.4 | KEY FOB

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
3.4.1 Key Fob Not Working	(1) PLC power supply connection error.	(1) Check that power supply is on in the PLC cabinet. (2) If not, connect power supply.
	(2) Dead battery in key fob.	(1) When the system is on, check that the PLC is receiving communication from the key fob by pushing any of the 8 buttons and then verifying that the indicator light on the PLC shows that the transmission is received. (2) If no input is received and power is supplied to the base unit battery, the key fob's battery needs to be replaced, and the key fob needs to be relearned to the system.
		<p>Note: Instructions given below in section 3.4.1.a for replacing battery and re-learning communication from the key fob to the PLC.</p>

3.4.1.a | Replacing Key Fob Battery

FIGURE 3.4.1 | KEY FOB
(Replacing Battery)



1. Ensure power to the receiver / base unit.
2. On the backside of the 8-button key fob, remove the cover on the bottom of the remote. Reference **A** in figure 3.4.1.
3. Replace battery. Observe the battery polarity when replacing. Reference **B** in figure 3.4.1.
4. Using a paperclip, depress the small black button inside and release. (If working properly, a blue light in the key fob will blink.) Reference **C** in 3.4.1.
5. Turn the key fob over and push each button individually to send button's address to the receiver / base unit.
6. WAIT until the blue light on the key fob stops blinking to proceed. Reference **D** in 3.4.1.
7. On the receiver / base unit, remove cover, and then push the learn address button next to the LED; the red LED will begin to flash. There is only one button inside the receiver / base unit.
8. While receiver / base unit is in learn mode, again push each button on the key fob to save that button's unique address.
9. Push the button in the receiver / base unit to end the programming mode and the red LED will stop flashing. The key fob should now be ready for use.



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