REMOTE AND KEYPAD CONTROL SYSTEM
OWNERS MANUAL

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WARNINGS/CAUTIONS

- Never travel with the tarp in a partially open position. The trailer should always be covered when traveling.
- Always close the remote lid when not in use to prevent accidental button presses that can cause unwanted operation of the Thunder tarp or EZ FLOW systems. When the flip lid is in the closed position the remote is deactivated.
- Active motion on the Thunder tarp system will not cancel when the remote flip lid is closed or during a loss of wireless connection to the keypad.
- Keep the product away from fire and high heat sources 140°F MAX.
- Do not weld with the system connected to trailer.
- For best performance use lithium AAA batteries, such as Energizer L92.
- Do not expose to harsh solvents or acids such as acetone or acetic acid.
- Do not exceed 75 in-lbs on the ¼”-20 ss mounting bolts.
- Changes or modifications not expressly approved by Thunderstone Mfg., for compliance of the device, could void the user's authority to operate the equipment.

REGULATORY INFORMATION

KEYPAD

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. To comply with the FCC RF exposure compliance requirements, the separation distance between the antenna and a person’s body (including hands, wrists, feet, and ankles) must be at least 20 cm (8 inches).

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d’Industrie Canada applicables aux appareils radio exempts de licence. L’exploitation est autorisée aux deux conditions suivantes: (1) l’appareil ne doit pas produire de brouillage, et (2) l’utilisateur de l’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

Note: 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.

REMOTE

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.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

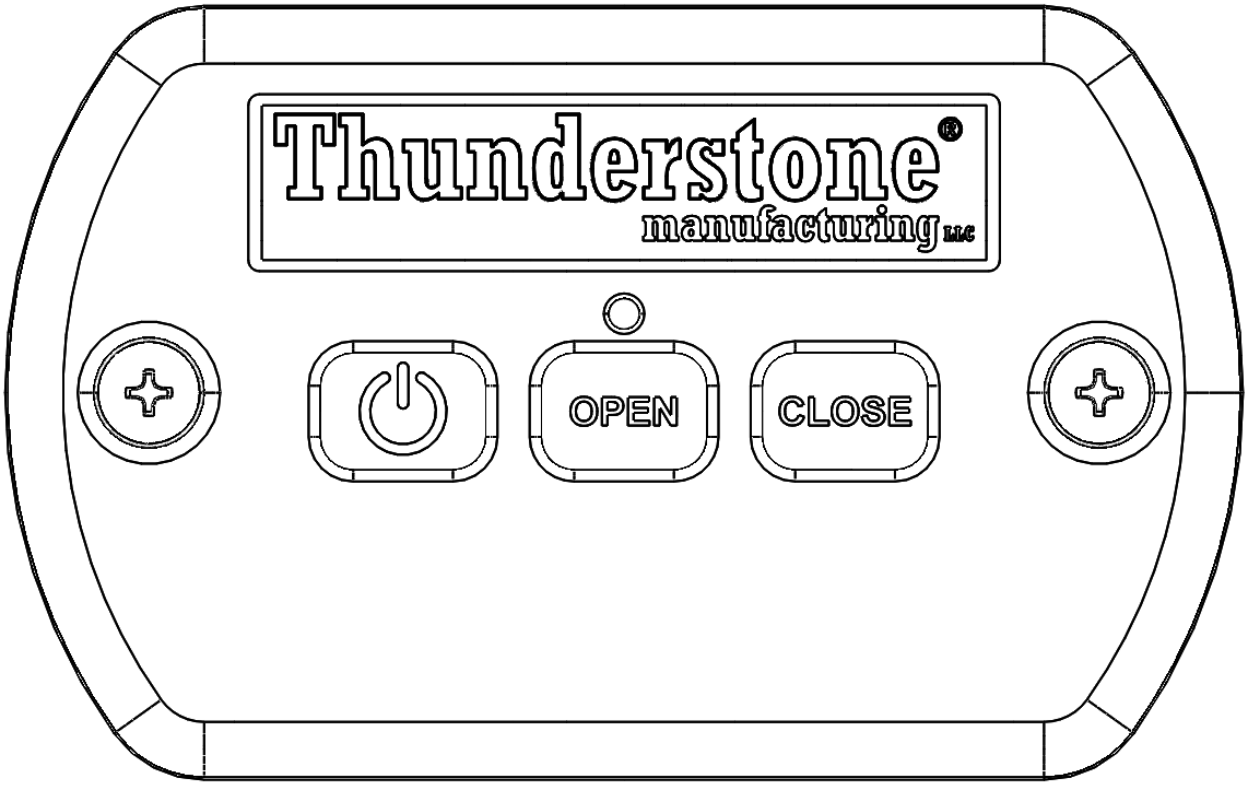
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate 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.

REVISION HISTORY

- REV1-1/4/2024: Initial release.
- REV2-2/13/2024: Updated regulatory information.
- REV3-10/30/2025: Added mounting bolt max torque caution. Added diagnostic mode procedure for remote. Formatting.

THUNDER TARP KEYPAD



POWER ON/OFF

Press and hold the ⏻ button for 3 seconds to power on or off the Thunder tarp system.

When power is first applied to the trailer the keypad will initialize and default to the powered-on state. It will then remain in the powered-on state with the backlight illuminated and the status light green. From there the user can operate the system or power it off. In the powered-off state the keypad will not illuminate or perform any operation even from the remote.

START ONE-TOUCH OPEN/CLOSE OPERATION

Momentarily press either the **OPEN** or **CLOSE** button to start the desired operation.

When the open or close operation is initiated the status light will blink green and the tarp will travel in the selected direction until it encounters the end stop. The status light will then illuminate red for 3 seconds indicating it has successfully parked and reached the proper torque threshold.

CANCEL ONE-TOUCH OPERATION

Momentarily press any one of the 3 buttons ⏻, **OPEN**, or **CLOSE** to stop an ongoing operation.

The status light will stop blinking green and the tarp will stop immediately.

DIAGNOSTIC MODE

Press and hold all 3 buttons to enter diagnostic mode. ⏻, **OPEN**, and **CLOSE**.

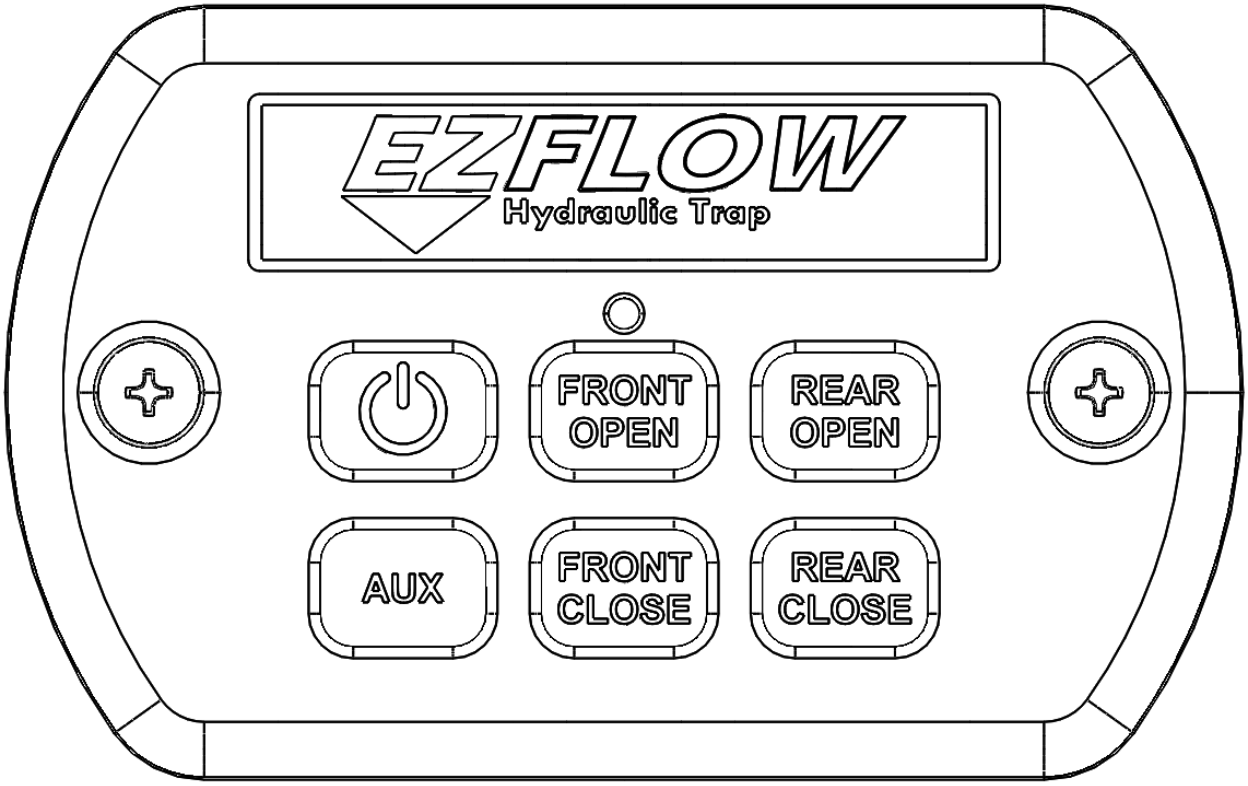
Diagnostic mode will blink out the 3 firmware version numbers, each separated by a pause.

STATUS LIGHT

The status light is located in the middle just above the **OPEN** button. It gives an indication of the current status of the system.

An active connection to the remote is indicated by a periodic yellow blink.

EZ FLOW KEYPAD



POWER ON/OFF

Press and hold the ⏻ button for 3 seconds to power on or off the EZ Flow system.

When power is first applied to the trailer the keypad will initialize and default to the powered-off state. From there the user will have to power on the system to operate. In the powered-on state the backlight is illuminated, and the status light is illuminated blue. In the powered-off state the keypad will not illuminate or perform any operation even from the remote.

START OPEN/CLOSE OPERATION

Press and hold either the **FRONT/REAR OPEN** or **FRONT/REAR CLOSE** button to start the desired operation.

Note: only one operation is permitted at a time.

When the open or close operation is initiated the status light will blink blue and the EZ Flow door will move. When the door is fully opened or closed the user must release the button to stop motion.

AUXILARY OUTPUT OPERATION

The EZ Flow system has 2 optional auxiliary 12V 3A outputs that can be controlled by the single **AUX** button. Each press toggles one auxiliary output on or off at a time. The status light does not illuminate when pressing the **AUX** button.

The **AUX** button controls the outputs in the following pattern:

	AUX 1 (Work light)	**AUX 2**
Startup	Off	Off
1st press	On	Off
2nd press	On	On
3rd press	Off	On
4th press	Off	Off

DIAGNOSTIC MODE

Press and hold the top row of buttons to enter diagnostic mode. ⏻, **FRONT OPEN**, and **REAR OPEN**.

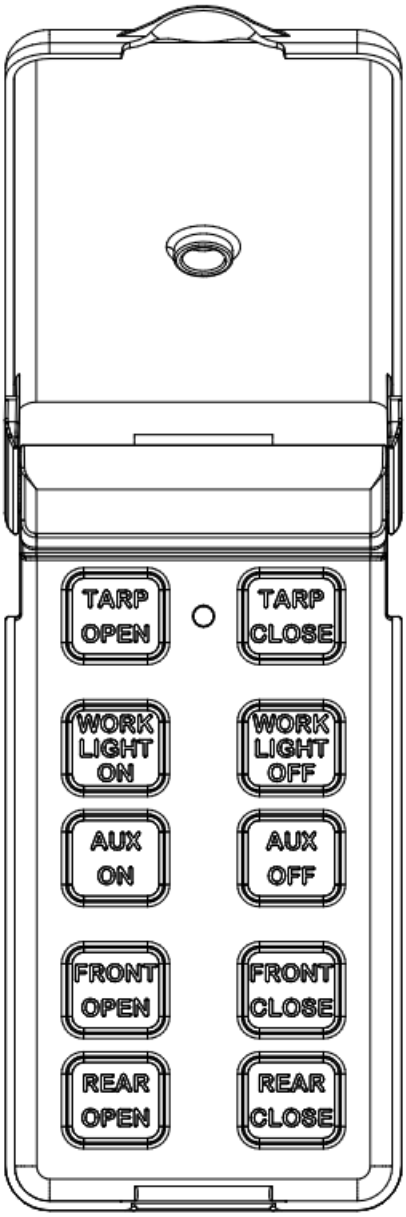
Diagnostic mode will blink out the 3 firmware version numbers, each separated by a pause.

STATUS LIGHT

The status light is located in the middle just above the **FRONT OPEN** button. It gives an indication of the current status of the system.

An active connection to the remote is indicated by a periodic yellow blink.

STANDARD REMOTE



POWER ON/OFF

To power on the remote open the flip lid, and the remote will start up and attempt to connect to paired keypads. Closing the lid will cut power to the remote and turn it off. If the flip lid is left open for 10 minutes the remote will timeout and go into standby mode. The flip lid will have to be closed before the remote will operate again.

BUTTON FUNCTIONS

Each button on the remote performs the same motion operations as offered by the keypad.

- **TARP OPEN –** Starts tarp opening motion, stops tarp motion.
- **TARP CLOSE** – Starts tarp closing motion, stops tarp motion.
- **WORK LIGHT ON** – Turns on auxiliary output 1 or the work light.

- **WORK LIGHT OFF** – Turns off auxiliary output 1 or the work light.
- **AUX ON** – Turns on auxiliary output 2.
- **AUX OFF** – Turns off auxiliary output 2.
- **FRONT OPEN** – Opens front EZ Flow door while held.
- **FRONT CLOSE** – Closes front EZ Flow door while held.
- **REAR OPEN** – Opens rear EZ Flow door while held.
- **REAR CLOSE** – Closes rear EZ Flow door while held.

DIAGNOSTIC MODE

Press and hold **TARP OPEN**, **TARP CLOSE**, and **WORK LIGHT ON** to enter diagnostic mode.

Diagnostic mode will blink out the 3 firmware version numbers, each separated by a pause.

STATUS LIGHT

The status light is located at the top of the remote above the buttons. It gives an indication of the current status of the remote and the paired systems.

- No keypads paired is indicated by solid white.
- No active connection to a paired keypad is indicated by white blink.
- An active connection to the Thunder tarp keypad is indicated by a periodic green blink.
- An active connection to the EZ Flow keypad is indicated by a periodic blue blink.
- A red status light while pressing a button indicates there is no active connection to the keypad e.g., not in range, not powered up, unpaired, etc.
- The status light will mirror any fault codes present on the Thunder tarp or EZ Flow keypad. The red fault code will be preceded by a green blink for the Thunder tarp and a blue for the EZ Flow.

BATTERY REPLACMENT

A steady blinking red status light on the remote indicates a low battery. If the remote does not turn on when the flip lid is opened or the status light is blinking red, the battery may need to be replaced.

Remove the 6 Phillips screws found on the back side of the remote and remove the back cover. Take care not to damage the circuit board and replace the 2 AAA batteries.

Note: For best cold/hot weather performance use lithium non-rechargeable batteries such as Energizer lithium L92 batteries.

Note: during cold conditions the low battery indication may occur erroneously.

PAIRING PROCEDURE

The pairing procedure links a remote to a keypad. The keypad can be paired with up to 5 remotes and the remote can be paired with 1 Thunder tarp keypad and/or 1 EZ Flow keypad. The pairing procedure will pair 1 keypad at a time. Do not enable pairing mode on both keypads at the same time.

1. Place the keypad in pairing mode by pressing and holding the pairing mode button combination for 3 seconds. After which the status light will begin blinking orange. If the status light is solid orange, then all pairing slots are full and the keypad will need to be cleared before another remote can be paired.
    a. For Thunder tarp keypad: ⏻ and **OPEN**

   b. For EZ Flow keypad: ⏻ and **FRONT OPEN**
2. Place the remote in pairing mode by pressing and holding both **TARP OPEN** and **TARP CLOSE** buttons for 3 seconds. The status light will begin blinking orange. If the status light is solid orange, then all pairing slots are full and the remote will need to be cleared before another keypad can be paired.
3. Once pairing is successful the status light on both the keypad and the remote will blink green for 3 seconds.
4. To cancel pairing mode, press any button or wait 10 seconds.

CLEAR KEYPAD PAIRING PROCEDURE

A keypad can store up to 5 remotes, the user can remove all the previously paired remotes from the keypad with the following procedure.

1. Place the keypad in pairing mode by pressing and holding the pairing mode button combination for 3 seconds. After which the status light will blink orange or stay solid orange if full.
   a. For Thunder tarp keypad: ⏻ and **OPEN**
   b. For EZ Flow keypad: ⏻ and **FRONT OPEN**
2. While in pairing mode press and hold the pairing clear button combination for 3 seconds. Upon success the keypad status light will blink magenta twice and exit pairing mode.
   a. For Thunder tarp keypad: ⏻ and **CLOSE**
   b. For EZ Flow keypad: ⏻ and **REAR OPEN**

CLEAR REMOTE PAIRING PROCEDURE

A remote can store up to 2 keypads, the user can remove all the previously paired keypads with the following procedure.

1. Place the remote in pairing mode by pressing and holding both **TARP OPEN** and **TARP CLOSE** buttons for 3 seconds. After which the status light will blink orange or stay solid orange if full.
2. While in pairing mode press and hold both **WORK LIGHT ON** and **WORK LIGHT OFF** buttons for 3 seconds. Upon success the remote status light will blink magenta twice and exit pairing mode.

Note: when no keypads are paired the remote status light will continuously blink white while idle.

FAULT CODES

THUNDER TARP AND EZ FLOW SYSTEM FAULT CODES	
Status Light	**Description**
Red blinking 8-code	Keypad to power board communication failure
Red blinking 7-code	Motor internal short
Red blinking 6-code	Motor wiring error
Red blinking 5-code	Voltage too low
Red blinking 4-code	Voltage too high
Red blinking 3-code	Temperature too high
Red blinking 2-code	Motor current too high for too long
Red Blinking (Remote only)	Battery low