



TARPING SYSTEMS & ACCESSORIES

P/N 1123159 Rev. E

OPERATING INSTRUCTIONS

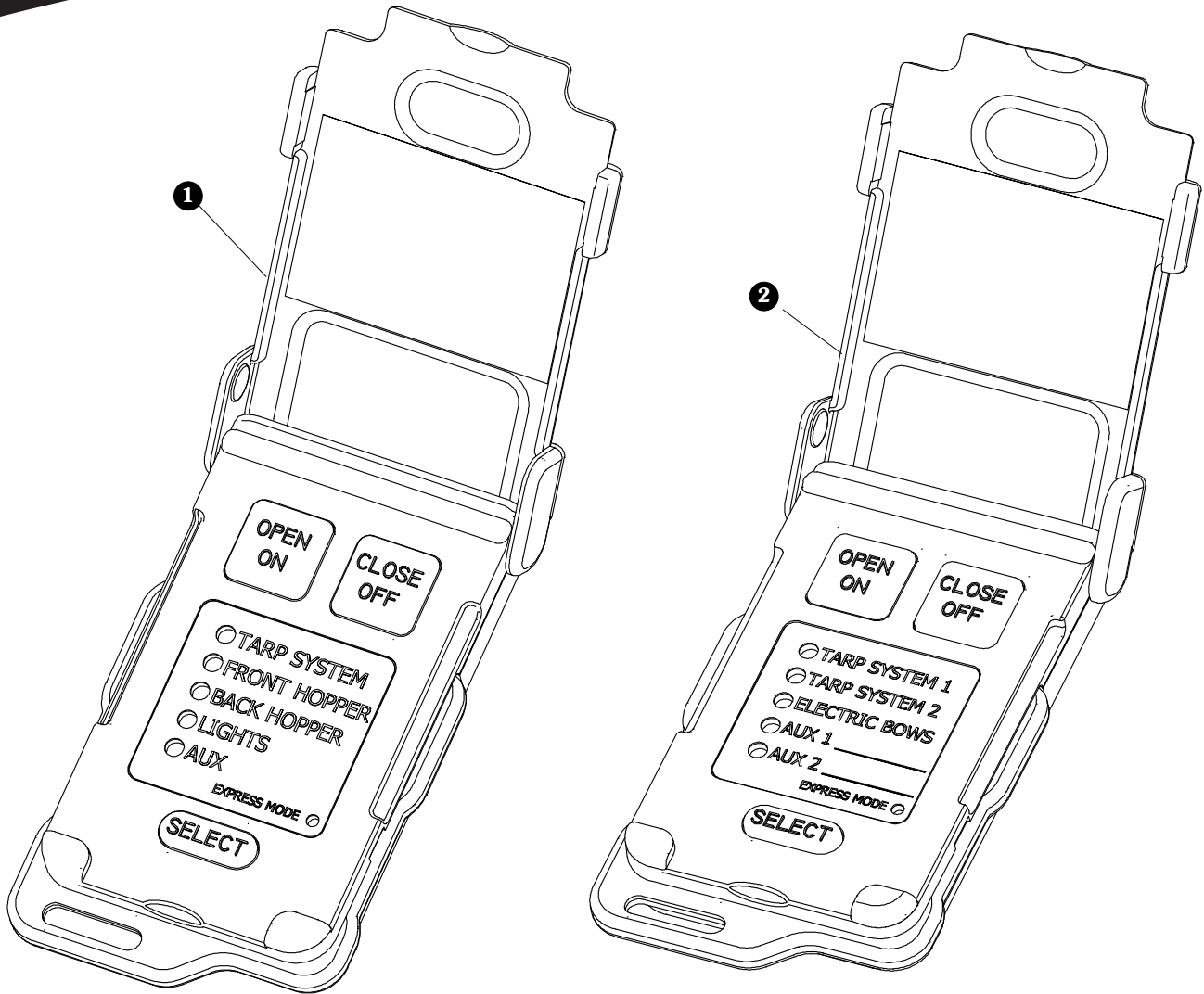


Wireless Remote Operating Instructions

READ BEFORE INSTALLING

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Item	Part #	Description
1.	1123160	SMART1+™ Replacement Transmitter (Agriculture/Grain Trailers)
2.	1123161	SMART1+™ Replacement Transmitter (Construction/Dump Bodies)

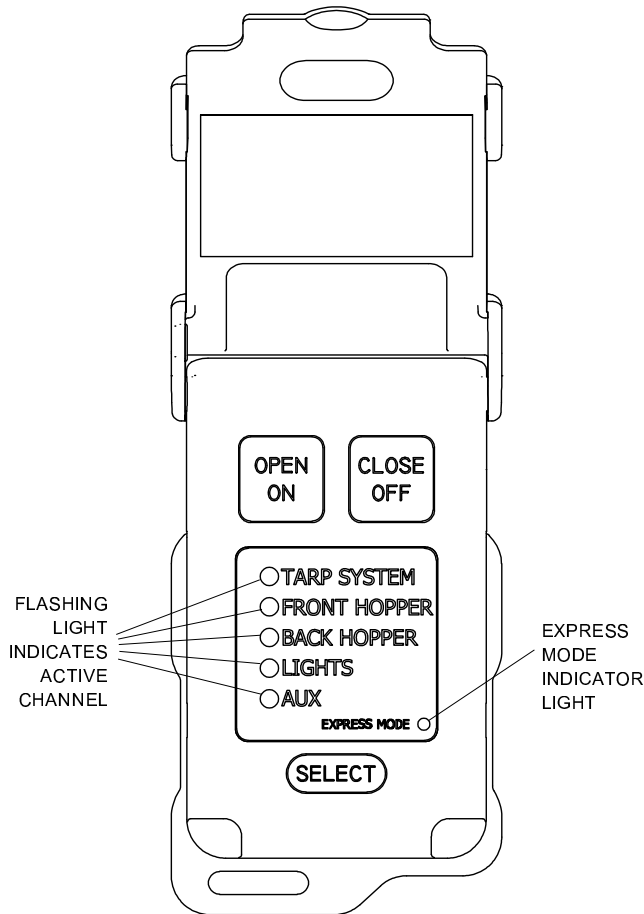


NOTICE

Do not power SMART1+™ or any Shur-Co® wireless system with battery charger alone, as this will likely cause system abnormalities and/or system malfunction. Instead, use 12-volt truck/automobile battery to provide power to trailer.

POWER UP/DOWN

Transmitter (remote) will power up when lid is opened. Remote will power down when lid is closed or left open three minutes after last button is pushed.



STANDARD OPERATION

After power-up, first channel will be immediately active and indicator light will be flashing. *Open/On* and *Close/Off* buttons are operational for indicated active channel. While either *Open* or *Close* button is pressed, indicator light for active channel will flash faster, indicating command is being transmitted on active channel. *Select* button will cycle between enabled channels.

Each channel on remote can be set to operate in either *Momentary Mode* or *Express Mode*.

NOTE: Remote ships from factory with the first channel (**TARP**) configured to **Express Mode**. The other four channels are configured to **Manual Mode**.

NOTE: See *Channel Configuration* section for instructions on how to set operating mode for each channel.

NOTE: Even if remote channel is configured to **EXPRESS MODE**, system will not operate in **EXPRESS MODE** unless encoder wires between motor and control box are connected.

NOTE: Some Shur-Co® products are not compatible with **Express Mode**. If motor does not have encoder wire, system will operate in **MOMENTARY MODE** only.

NOTE: If your system is not compatible with **EXPRESS MODE**, disable **EXPRESS MODE** for that remote channel. This will ensure that control responsiveness from remote is not diminished.

Momentary Mode: While remote channel is in *Momentary Mode*, *Open* or *Close* button must be held down to operate system.

Indicator light labeled *Express Mode* will be off when remote is in *Momentary Mode*.

If remote channel is in *Momentary Mode*, you may still force system to open or close automatically one time by pressing *Open* or *Close*, then simultaneously pressing *Select* button. System will continue to operate until fully open or closed. System can be stopped at any time by pressing any button on remote or closing remote lid.

Indicator light labeled **EXPRESS MODE** will be lit for first five seconds after initiating "One Time" *Express* command.

Express Mode: While remote channel is in *Express Mode*, *Open* or *Close* button can be pressed and released. System will continue to operate until fully open or closed. System can be stopped at any time by pressing any button on remote or closing remote lid.

Indicator light labeled *Express Mode* will be on when remote is in *Express Mode*.

NOTE: 4500 HD Tarp systems operate in *Express Mode* when commanded to operate from buttons on trailer-mounted control box. Closing remote lid or pressing **SELECT** button will not stop system in this case. Pressing **OPEN** or **CLOSE** button on remote will stop system if in range.

PAIRING (INTRODUCING) REMOTE(S) TO RECEIVER

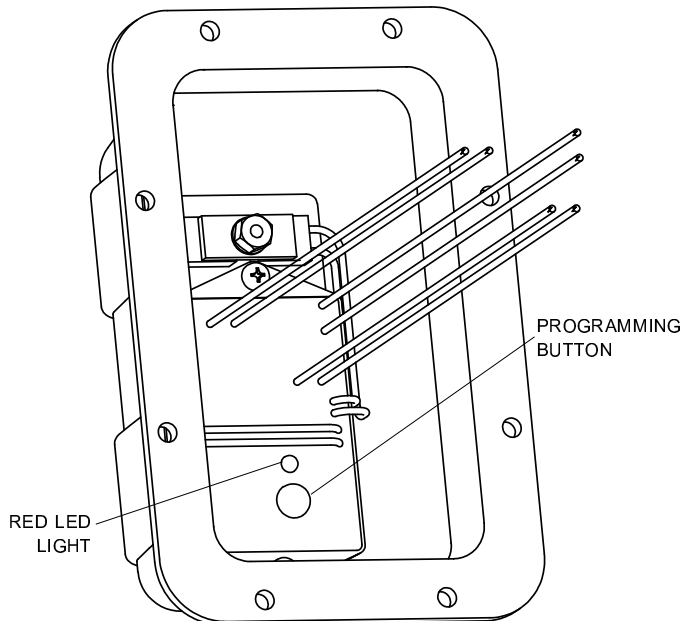
Receiver will accept and respond to signals from up to five remotes. Receiver will not respond to signals from remotes that have not been paired to it.

NOTE: Remotes are typically paired to receivers at factory if remote is shipped with receiver.

Follow instructions below to pair remote(s) to receiver:

1. Remove solenoid cover from receiver assembly, pulling gently on cover to prevent damage to wires connected to cover.

NOTE: Only SMART1+™ remotes will function with SMART1+™ receivers. The original SMARTtransmitter® cannot be used.



2. Check that receiver is connected to 12-volt power supply. Receiver must be connected to power to be programmed. If battery disconnect switch is installed, make sure it is turned on.

NOTE: Read following steps entirely before proceeding. Programming must be completed within 20 seconds. Receiver will exit program mode after 20 seconds, whether or not it has received five Open/On button signals from remote.

3. Receiver can learn to recognize up to five remotes. Gather all of remotes to be introduced to receiver. Open remote lid(s) to activate.
4. Set remote(s) to appropriate channel (*Tarp System, Front Hopper, etc.*).
5. Press and hold programming button on receiver for five seconds. While being pressed, red light will remain solidly lit for five seconds, then will start flashing to indicate button can be released. Release button and light will stop flashing and remain on. Light will remain solidly lit until it receives signal from remote or exits pairing mode, at which time it will start flashing again.

Single SMART1+™ remote:

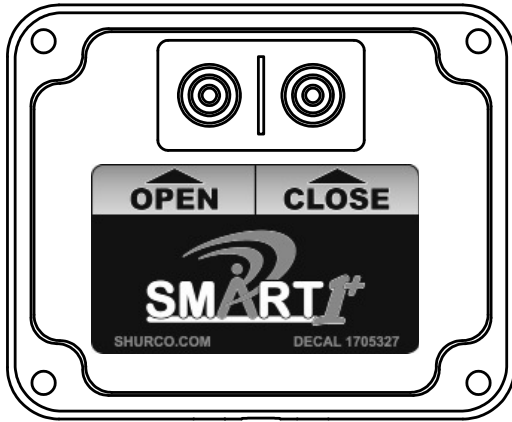
- 6a1. On remote, press *Open/On* button five times. Red light on receiver will flash after each button press. After receiving last signal, light will flash twice, then begin flickering, indicating it has been successfully programmed.
- 6a2. Verify remote and receiver are operating correctly, then refasten solenoid cover.

Multiple SMART1+™ remotes:

- 6b1. Press *Open/On* button on first remote. Red light will flash after receiving signal.
- 6b2. Repeat above step for each remote being used.
- 6b3. Receiver will accept up to five signals. Press *Open/On* button additional times on last remote being programmed to achieve total of five signals. Red light on receiver will flash twice after last (fifth) signal, then begin flickering, indicating it has been successfully programmed (see programming example).
- 6b4. Verify each remote and receiver are operating correctly, then refasten solenoid cover.

PROGRAM SMART1+™ REMOTE TO MINI MODULE

1. Check to be sure Mini Module is connected to 12-volt power supply. Receiver must be connected to power to be programmed. If battery disconnect switch is installed, make sure it is turned on.



NOTE: Read following steps entirely before proceeding. Programming must be completed within 20 seconds. Receiver will exit program mode after 20 seconds, whether or not it has received five Open/On button signals from remote.

2. Receiver can learn to recognize up to five remotes. Gather all of remotes to be introduced to receiver. Open remote lid(s) to activate.
3. Set remote(s) to appropriate channel (*Tarp System, Front Hopper, etc.*).
4. Press and hold both buttons on receiver for six seconds.

Single SMART1+™ remote:

- 5a1. On remote, press *Open/On* button five times.
- 5a2. Verify remote and receiver are operating correctly.

Multiple SMART1+™ remotes:

- 5b1. Repeat above step for each remote being used.
- 5b2. Receiver will accept up to five signals. Press *Open/On* button additional times on last remote being programmed to achieve total of five signals.
- 5b3. Verify each remote and receiver are operating correctly, then refasten solenoid cover.

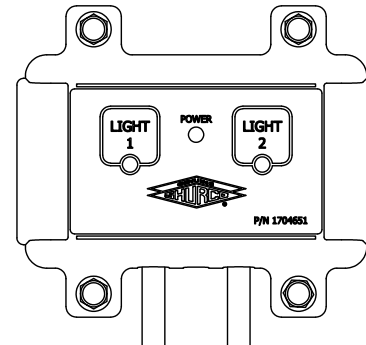
Receiver programming example:

In this example, receiver controls front hopper motor. Task is to program hopper receiver to recognize three remotes.

1. Remove solenoid cover and turn on three remotes.
2. Set all three remotes to *Front Hopper* channel.
3. Press and hold programming button on receiver for five seconds. Red light on receiver will flash to indicate it has entered *Programming Mode*. Release programming button. Light will now turn off.
4. Press *Open/On* button on first remote. Red light on receiver will flash to indicate it has received signal and memory slot #1 has been filled.
5. Press *Open/On* button on second remote. Red light on receiver will flash to indicate it has received signal and memory slot #2 has been filled.
6. Press *Open/On* button on third remote. Red light on receiver will flash to indicate it has received signal and memory slot #3 has been filled.
7. Press *Open/On* button on third remote again. Red light on receiver will flash to indicate it has received signal and memory slot #4 has been filled.
8. Press *Open/On* button on third remote again. Red light will flash twice to indicate it has received signal and memory slot #5 has been filled. It will then begin flickering, which indicates receiver has exited programming mode.
9. Verify front hopper *Open* and *Close* operations are functioning correctly on all three remotes. Refasten solenoid cover to motor assembly.

PROGRAM SMART1+™ REMOTE TO LITEALL™

1. Be sure LiteALL™ control module is connected to 12-volt power supply by checking that green *Power* light on control module is on. If battery disconnect switch is installed, make sure it is turned on.



2. To program *Light 1* output channel, hold *Light 1* button for five seconds until *Power* light turns off. *Light 1* indicator light should be on.
3. Set remote to *Lights* channel indicator light by pressing *Select* button. A different channel on remote may be used, if desired.

Single SMART1+™ remote:

- 4a. Press *Open/On* button five times. After each button press, *Light 1* channel indicator light will flash briefly on LiteALL™ module.

Multiple SMART1+™ remotes:

- 4b. Press *Open/On* button at least one time for each remote. After each transmission, *Light 1* channel indicator light will flash briefly on LiteALL™ module. LiteALL™ will expect five signals, so if you are programming less than five remotes, press *Open/On* button additional times on last remote to take up all five memory slots in LiteALL™ control module.
5. After fifth transmission, *Light 1* channel indicator light will flash twice to indicate remote(s) have been successfully introduced to LiteALL™ control module. *Power* light will then turn back on.
6. You can now operate lights connected to *Lights 1* output channel with your SMART1+™ remote(s).
7. To program *Light 2* output channel, repeat instructions above, using *Light 2* button on LiteALL™ control module. If you want SMART1+™ remote(s) to control both LiteALL™ output channels together with one button press, make sure to select same SMART1+™ channel programmed to *Light 1* in step 3.

CONFIGURING REMOTE CHANNELS

Shur-Co® SMART1+™ remote has five channels for controlling up to five different devices. Channels can be configured as follows:

- Unused channels can be disabled to be skipped when *Select* button is pressed.
- Operating mode of each channel can be set to *Momentary Mode* or *Express Mode*.

1. Hold *Select* button down for 10 seconds and remote will enter *Channel Configuration Mode*. LED of first channel will be lit solid on remote. This indicates first channel is ready to be configured.
2. Set operating mode of channel. If *Express Mode* indicator light is lit solid, then channel will operate in *Express Mode*. If *Express Mode* indicator light is not on, channel will operate in *Momentary Mode*. Press *Select* button to toggle operating mode to desired setting.
3. Enable or disable channel. If channel will be used and paired with receiver, press *Open/On* button. If channel will not be used, channel can be disabled by pressing *Close/Off* button. Indicator light will automatically jump to next channel.

NOTE: Remote will NOT activate any motor or lighting system while remote is in *Channel Configuration Mode*.

4. Repeat steps 2 and 3 for remaining four channels.
5. After configuring last channel, channel status for all five channels will be displayed for three seconds. Channel indicator lights of enabled channels will be lit solid and channel indicator lights of disabled channels will be off. Remote will then automatically return to *Operational Mode*.

NOTE: If there is not at least one enabled channel after programming, remote will not save changes and will revert back to previously saved channel settings.

TIP: To cancel changes and exit *Channel Configuration Mode*, close remote cover.

LOW BATTERY INDICATION

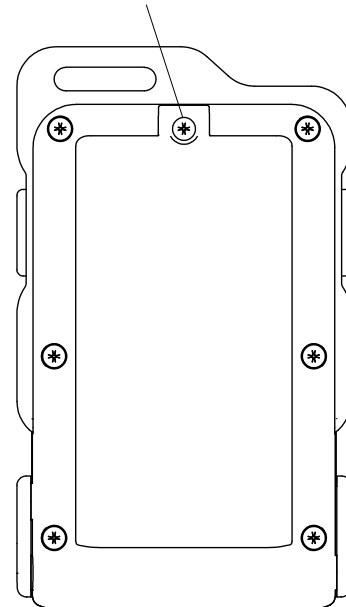
If battery level is getting low, all lights on remote will flash for three seconds when lid is opened and operation is attempted. Remote will then operate normally.

If battery level drops lower, remote will automatically turn off after flashing indication and batteries must be replaced.

REPLACING BATTERIES

The SMART1+™ remote uses two AAA batteries. To access batteries, unfasten center screw shown below and gently lift cover tab.

TO ACCESS BATTERY,
UNFASTEN SCREW ON
BACK OF REMOTE WITH
PHILLIPS SCREWDRIVER



NOTE: Replacement batteries (P/N 1705163) may be purchased from Shur-Co®.

Our **Advanced Troubleshooting Guide** is available on our website: <http://www.shurco.com>, or call our Help Line: **1-866-748-7435**.

PROBLEM:	TRY THIS:
<p>SMART1+™ remote is not working. No LED lights on remote are on.</p>	<ol style="list-style-type: none"> 1. Close lid and open it again. 2. Make sure batteries are placed correctly. 3. Replace both AAA batteries in remote. 4. Remote may be damaged. Call Shur-Co's Help Line.
<p>All lights flash for three seconds, remote turns off.</p>	<ol style="list-style-type: none"> 1. Batteries are too low and must be replaced.
<p>SMART1+™ remote is not working. I can operate system with buttons on trailer mounted receiver box, but not with remote. Remote channel light (next to <i>Tarp System</i>, for example) is blinking, and when I press <i>Open/On</i> button, light blinks faster.</p>	<ol style="list-style-type: none"> 1. Make sure remote is set to right channel. If you cannot set remote to desired channel (<i>Tarp System</i>, for example) by pressing <i>Select</i> button, channel must be enabled. See Channel Enable/Disable section and enable channel. 2. Reprogram remote to receiver and try again. See Remote to Receiver Programming section. 3. Make sure you are within a few feet of receiver and try again. <ol style="list-style-type: none"> 3a. If system works at close range but not at greater distances, replace AAA batteries in remote and try again. 3b. Make sure there are no metal objects between remote and receiver, as this will reduce operating range. 4. Call Shur-Co's Help Line.
<p>System will not operate with the remote or with the buttons on the trailer-mounted receiver. When the <i>Open</i> or <i>Close</i> button is pressed, I don't hear a loud click from the receiver box.</p>	<ol style="list-style-type: none"> 1. Make sure master disconnect switch on trailer (if equipped) is turned to <i>On</i> position. 2. Circuit breaker may have tripped. Wait 15 seconds and try again. 3. Check for loose or corroded connections between battery and solenoid in receiver box. 4. Check for low system voltage. Measure voltage between positive and negative posts on solenoid in receiver box on trailer. Positive solenoid post is marked "+" and negative post is marked "-" at base of posts. With truck off, voltage should measure between 12.5 and 12.7 volts. Make sure voltage reading is not negative, which indicates power wires are hooked up backwards. 5. Press programming button for about one second. Programming button is located on receiver module screwed to inside of gray receiver cover of receiver on trailer. If red light does not turn on while you are holding button, module is not getting adequate voltage or receiver may be damaged. Call Shur-Co's Help Line.

PROBLEM:	TRY THIS:
<p>System will not operate with remote or with buttons on trailer-mounted receiver.</p> <p>When <i>Open</i> or <i>Close</i> button is pressed, solenoid in receiver box will click loudly (or “chatter”), but motor does not turn.</p>	<ol style="list-style-type: none"> 1. Bypass circuit breaker in battery box and try again. If problem goes away, breaker was fatigued or corroded and should be replaced. 2. Ensure battery connections are tight and free of corrosion. Inspect all wires between batteries for corrosion. Verify battery voltage is between 12.5 and 12.7 volts with truck off. Be sure to measure voltage on battery to which system is connected. 3. Inspect dual-pole power connection at front of trailer. Replace if corrosion is present. Disassemble connector to inspect set screws inside and make sure they are tight, free of corrosion, and that none of wire strands are short-circuiting. Apply dielectric grease (not black grease) to metal contacts. 4. Inspect wiring between dual-pole connector at front of trailer and solenoid in receiver box. Replace corroded wires. Check wire for cuts in insulation. Copper wire will corrode quickly if insulation is cut. 5. Disconnect motor from back two posts (marked <i>In</i> and <i>Out</i>) on solenoid. Press and hold <i>Open</i> or <i>Close</i> button to engage solenoid. If solenoid does not measure at least 12.5 or -12.5 volts between back two posts while engaged, solenoid is damaged. Call Shur-Co's Help Line. 6. If solenoid voltage measures at least 12.5 or -12.5 volts between back two posts (marked <i>In</i> and <i>Out</i>) when motor wire is disconnected, motor may be damaged or there may be a short circuit in motor wire between motor and solenoid. This assumes system has been checked for corrosion and other issues listed above. Call Shur-Co's Help Line.
<p>System will not run in <i>Express Mode</i></p>	<ol style="list-style-type: none"> 1. Check all encoder wires between motor and receiver for cuts. Make sure connectors are connected tightly. Make sure the black encoder wire is always connected to another black encoder wire at connectors. On 4500 HD tarping systems, make sure sealed weatherpack connectors are snap-locked together. There is one weatherpack connector near the motor and one in the kingpin area. 2. Call Shur-Co's Help Line.

NOTE: To quickly determine if problem lies with wiring between battery and solenoid, disconnect power from truck and hook jumper cables from vehicle directly to solenoid. Hook positive battery cable to solenoid positive post (marked +). Hook negative battery cable to solenoid negative post (marked -). If system runs normally, problem is with wiring supplying power to solenoid.

Our **Advanced Troubleshooting Guide** is available on our website: <http://www.shurco.com>, or call our Help Line: **1-866-748-7435**.

RADIO & TELEVISION INTERFERENCE

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

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

- Reorient or relocate receiving antenna.
- Increase separation between equipment and receiver.
- Connect equipment into outlet on different circuit.
- Consult dealer or experienced radio/TV technician for help.

Son fonctionnement est soumis aux deux conditions suivantes:
(1) cet appareil ne peut pas provoquer d'interférences, et (2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer le fonctionnement du dispositif.

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- **Genuine Replacement Parts**
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- **SMARTrailer™ Accessories for Agriculture Products**
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 - SMART1 +™ Remote
 - 4500 Series HD Electric
 - Electric Shur-Lok®
 - AutoTrap™ Hopper Opener
 - ProTrap® Hopper Opener
 - Electric Gate & Hoist
 - LiteALL™ Work Lights
 - Cable-Lok™ Electric Upgrade
 - Electric Turning Point™ Bow
 - Solar Power Pack
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 - Shur-Trak II™
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 - Turning Point™ Bow
 - IronSide™ Side-Dump System
 - Arm-Matic™
 - DuraPull™
 - Econo-Pull™
 - Turbo Tarp2™
 - 2000 Series
 - 5000 Series
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 - Sidewinder™
 - Sidewinder™ 350
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 - HyTower™ DL
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