



ENGINEERED TARPING SOLUTIONS

P/N 1123159 Rev. A

OPERATING INSTRUCTIONS

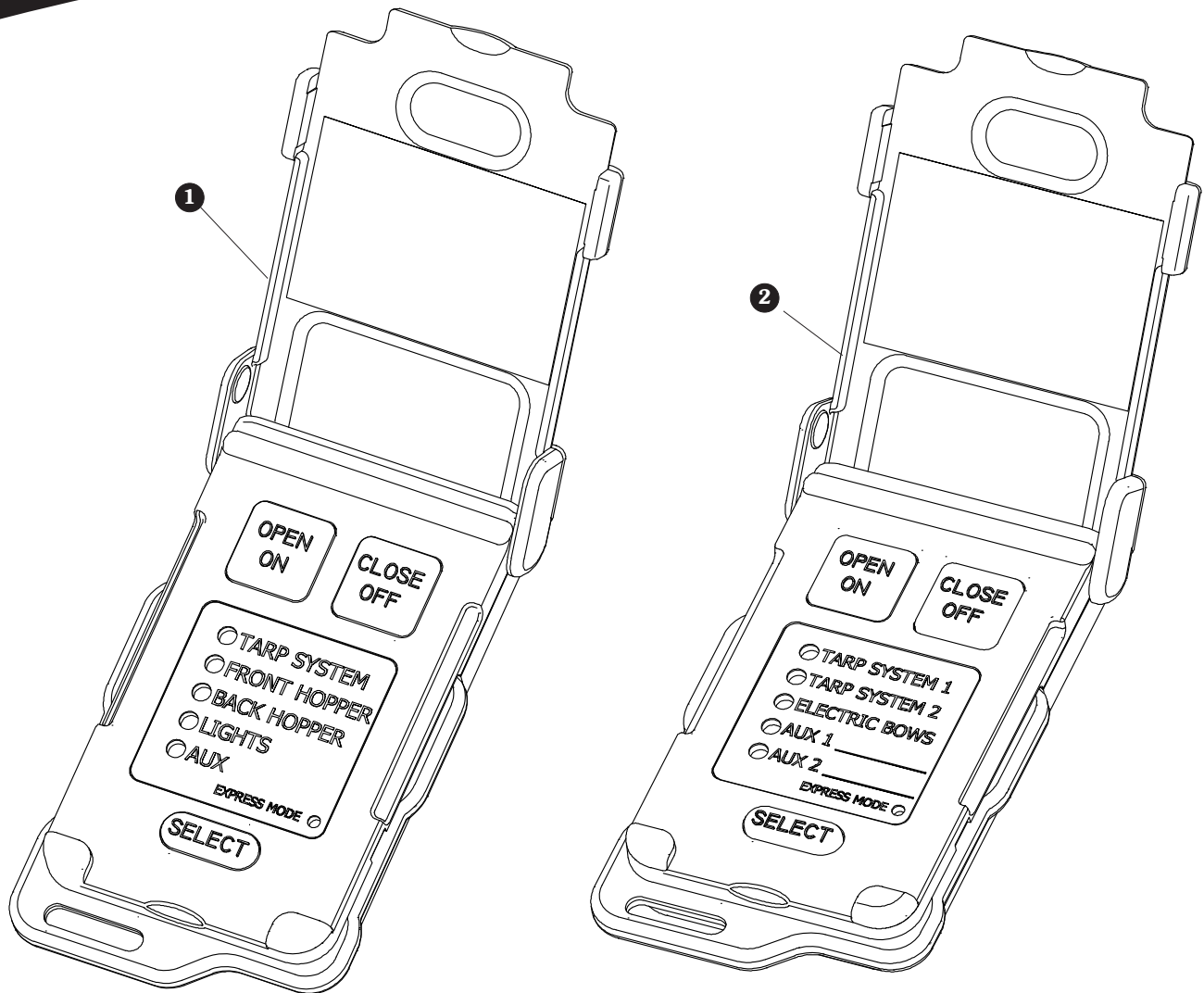


Wireless SMART1+™ Remote Operating Instructions

READ BEFORE INSTALLING

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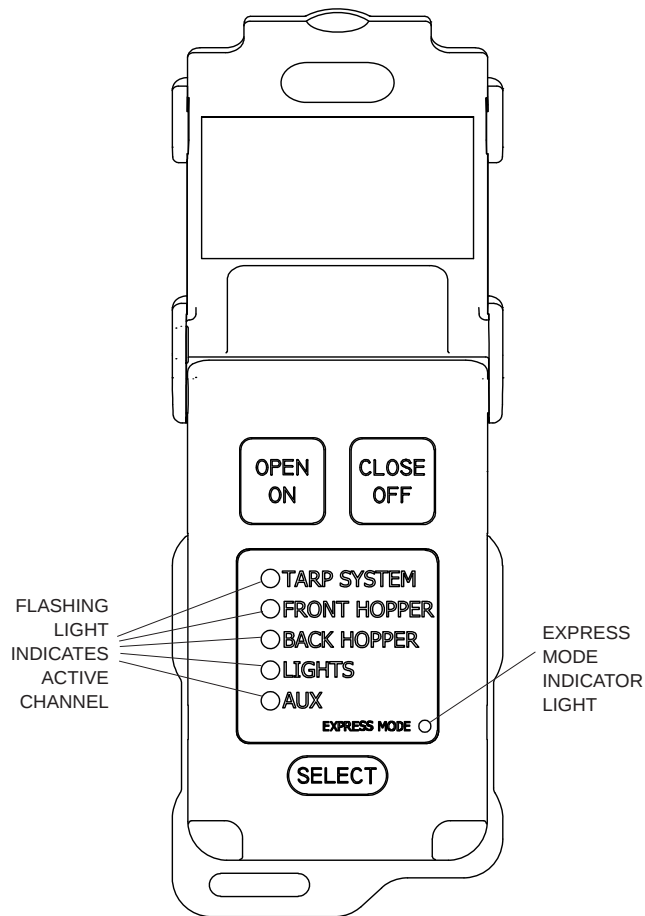
Item	Part #	Description
1.	1123160	SMART1+™ Replacement Transmitter (Agriculture/Grain Trailers)
2.	1123161	SMART1+™ Replacement Transmitter (Construction/Dump Bodies)

**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 a 12-volt truck/automobile battery to provide power to trailer.

POWER UP/DOWN

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



STANDARD OPERATION

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

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

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

Momentary mode: While the remote is in *Momentary Mode*, the *Open* or *Close* button must be held while the system is operating.

The EXPRESS MODE indicator light will not be on when the remote is in *Momentary Mode*.

Express mode: While the remote is in *Express Mode*, the *Open* or *Close* button can be pressed and released. The system will continue to operate until it is fully opened or closed. The system can be stopped at any time by pressing any button on the remote, or closing the remote lid.

The EXPRESS MODE indicator light will be on when the remote is in *Express Mode*.

PAIRING (INTRODUCING) REMOTE(S) TO RECEIVER

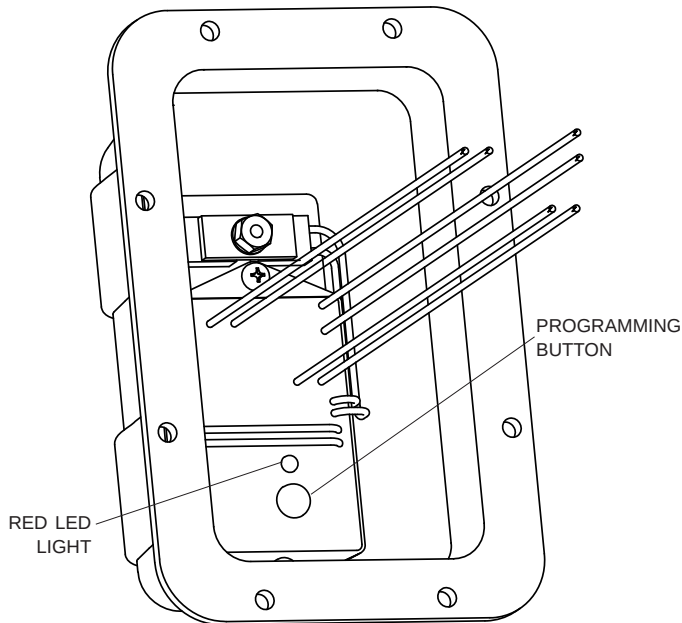
The receiver will accept and respond to signals from up to five remotes. The receiver will not respond to signals from remotes that have not been paired to it.

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

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

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

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



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

NOTE: Read the following steps in their entirety before proceeding. Programing must be completed within 20 seconds. The receiver will exit program mode after 20 seconds, whether or not it has received five Open/On button signals from the remote.

3. The receiver can learn to recognize up to five remotes. Gather all of the remotes to be introduced to the receiver. Open the remote lid(s) to activate.
4. Set the remote(s) to the appropriate channel (*Tarp System, Front Hopper, etc.*).
5. Press and hold the blue programming button on the receiver for five seconds. The red light will start flashing to indicate that it is in programming mode. Release the programming button. The red light will now turn off.

Single SMART1+™ remote:

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

Multiple SMART1+™ remotes:

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

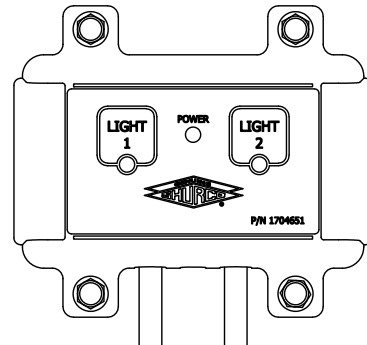
Receiver programming example:

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

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

PROGRAM SMART1+™ REMOTE TO LITEALL™

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



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

Single SMART1+™ remote:

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

Multiple SMART1+™ remotes:

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

CONFIGURING REMOTE CHANNELS

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

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

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

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

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

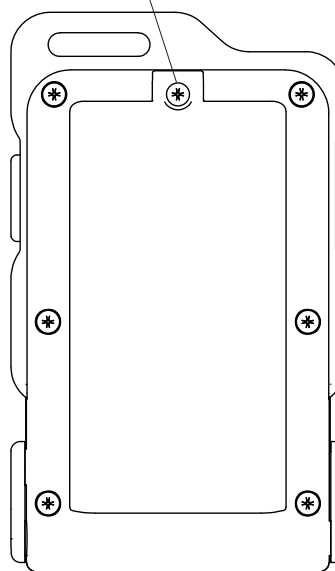
NOTE: If there is not at least one enabled channel after programming, the remote will not save the changes and will revert back to the previously saved channel settings.

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

REPLACING BATTERIES

The SMART1+™ remote uses two AAA batteries. To access the batteries, unfasten the center screw shown below and push cover in direction shown.

TO ACCESS BATTERY
UNFASTEN SCREW ON
BACK OF REMOTE WITH
PHILLIPS SCREW DRIVER



TO OPEN
COVER PUSH
IN DIRECTION
SHOWN

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:
The SMART1+™ remote is not working. None of the LED lights on the remote are on.	1. Close the lid and open it again. 2. Make sure the batteries are placed correctly. 3. Replace both AAA batteries in the remote. 4. The remote may be damaged. Call Shur-Co's Help Line.
The SMART1+™ remote is not working. I can operate the system with the buttons on the trailer mounted receiver box, but not with the remote. The remote channel light (next to <i>Tarp System</i>, for example) is blinking, and when I press the <i>Open/On</i> button, the light blinks faster.	1. Make sure the remote is set to the right channel. If you cannot set the remote to the desired channel (<i>Tarp System</i>, for example) by pressing the Select button, the channel must be enabled. See the Channel Enable/Disable section and enable the channel. 2. Reprogram the remote to the receiver and try again. See the Remote to Receiver Programming section. 3. Make sure you are within a few feet of the receiver and try again. 3a. If the system works at close range but not at greater distances, replace the AAA batteries in the remote and try again. 3b. Make sure there are not metal objects placed between the remote and receiver. Metal objects placed between the remote and receiver will reduce operating range. 4. Call Shur-Co's Help Line.
The system will not operate with the remote or with the buttons on the trailer mounted receiver. When the Open or Close button is pressed, I don't hear a loud click from the receiver box.	1. Make sure the master disconnect switch on trailer (if equipped) is turned to the "ON" position. 2. The circuit breaker may have tripped. Wait 15 seconds and try again. 3. Check for loose or corroded connections between the battery and the solenoid in the receiver box. 4. Check for low system voltage. Measure the voltage between the positive and negative posts on the solenoid in the receiver box on the trailer. The positive solenoid post is marked "+" and the negative post is marked "-" at the base of the posts. With the truck off, the voltage should measure between 12.5 and 12.7 volts. Make sure the voltage reading is not negative, which indicates the power wires are hooked up backwards. 5. Press the programming button for about one second. The programming button is located on the receiver module screwed to the inside of the grey receiver cover of the receiver on the trailer. If the red light does not turn on while you are holding the button, the module is not getting adequate voltage or the receiver may be damaged. Call Shur-Co's Help Line.

PROBLEM:	TRY THIS:
The system will not operate with the remote or with the buttons on the trailer-mounted receiver. When the Open or Close button is pressed, the solenoid in the receiver box will click loudly (or "chatter") but the motor does not turn.	1. Bypass the circuit breaker in the battery box and try again. If the problem goes away, the breaker was fatigued or corroded and should be replaced. 2. Ensure battery connections are tight and free of corrosion. Inspect all wires between the batteries for corrosion. Verify battery voltage is between 12.5 and 12.7 volts with truck off. Be sure to measure the voltage on the battery that the system is connected to. 3. Inspect dual-pole power connection at front of trailer. Replace if corrosion is present. Disassemble the connector to inspect the set screws inside and make sure they are tight, free of corrosion, and none of the 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 through. 5. Disconnect the motor from the back two posts (marked IN and OUT) on the solenoid. Press and hold the Open or Close button to engage the solenoid. If the solenoid does not measure at least 12.5 or -12.5 volts between the back two posts while it is engaged, the solenoid is damaged. Call Shur-Co's Help Line. 6. If the solenoid voltage measures at least 12.5 or -12.5 volts between the back two posts (marked IN and OUT) when the motor wire is disconnected, the motor may be damaged or there may be a short circuit in the motor wire between the motor and solenoid. This assumes the system has been checked for corrosion and other issues listed above. Call Shur-Co's Help Line.

NOTE: To quickly determine if the problem lies with the wiring between the battery and the solenoid, disconnect power from the truck and then hook jumper cables from a vehicle directly to the solenoid. Hook the positive battery cable to the solenoid positive post (marked +). Hook the negative battery cable to the solenoid negative post (marked -). If the system runs normally, the problem is with the wiring that supplies power to the 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 the party responsible for compliance could void the user's authority to operate the equipment.

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.

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.

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including likely to cause operation of the device.

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