

KRAMBLE INDUSTRIES INC.

Remote Control Tarp Arm Kit S7 Installation and Operating Manual



The Remote Control Tarp Arm Controller is designed to provide the ultimate in convenience and safety to perform tasks remotely. It is a radio frequency (RF) controlled device that allows operation of a tarp from a hand held transmitter operated remotely. The Transmitter, which operates at 2.4 GHz, transmits encoded information to the Receiver, which then decodes the information and performs the desired function. The Transmitter and Receiver are designed to operate within 585' but actual range is dependent on operating environment.

Features

- ☐ Simplicity of design and quality of engineering
- ☐ Power On/Off switch on Receiver
- ☐ LED Indicator light
- ☐ 9V Transmitter Battery
- ☐ Ease of installation/removal when not in use
- ☐ All controls can be by either Manual Switch or Remote Control
- ☐ Multiple Transmitters can operate a single Receiver/Drive
- ☐ Multiple Receiver/Drives can be operated by a single Transmitter
- ☐ Receiver/Drives are "Channel selectable"

Kramble Industries Inc. is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use or performance of the product or other damage with respect to any economic loss, loss of property, loss of revenue or profit, or costs of removal, installation, or reinstallation.

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Specifications

Transmitter:

Power:	9 Volt DC Battery
Frequency:	2.4 GHz
Indicators:	Power/Transmit Blue LED
Case Size:	2.6" x 4.1" x .9"
Weight:	.25lb
Range:	585' + (depending on environment)
Antenna:	2.4 GHz Flexible PCB
Security Code:	Unique in each Transmitter
Functions:	2 to 9 Button (depending on model)

Receiver:

Power in:	12 VDC
Power out:	12 VDC @ 450 amps max
Standby:	40mA
Power Input:	6 ga. 2 conductor wire
Indicators	Multicolour LED Power (Blue) Manual Control (Green) Remote Control (Yellow)
Controls	Main Power On/Off Toggle Switch Manual Open/Close Pushbutton Control
Antenna	2.4 GHz Flexible PCB

Electric Motor Drive:

Electrical	12VDC 1.3HP
Torque	
Speed	
Output Shaft	¾" keyed and drilled
Gearbox Reduction	90:1
Duty Cycle	5%
Overall Size	
Weight	

FCC

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.

Industry Canada

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.

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Electrical Installation

The Tarp Arm Controller is provided with pre-wired connectors and terminals. The polarity **must** be correct as follows: **+12V on the RED STRIPE wire**. A supplied 80A circuit protector is to be installed on the tractor battery to protect against a wiring “short”.

WARNING: Do not attempt to power the console or drive from a battery charger alone as damage may occur. Connect to a properly maintained battery system only.

Drive Cabling

The Tarp Arm Controller is supplied with 6 gauge power.

CAUTION: The 80Amp Circuit Fuse Assembly provided MUST BE connected directly to the +12VDC Terminal of the battery to protect against an electrical short in the wiring.

NOTE: ENSURE CORRECT POLARITY! The RED STRIPE/MARKED wire must be connected to +12 VDC.

Think Safety!

Do no install or operate where damage to persons or property may occur

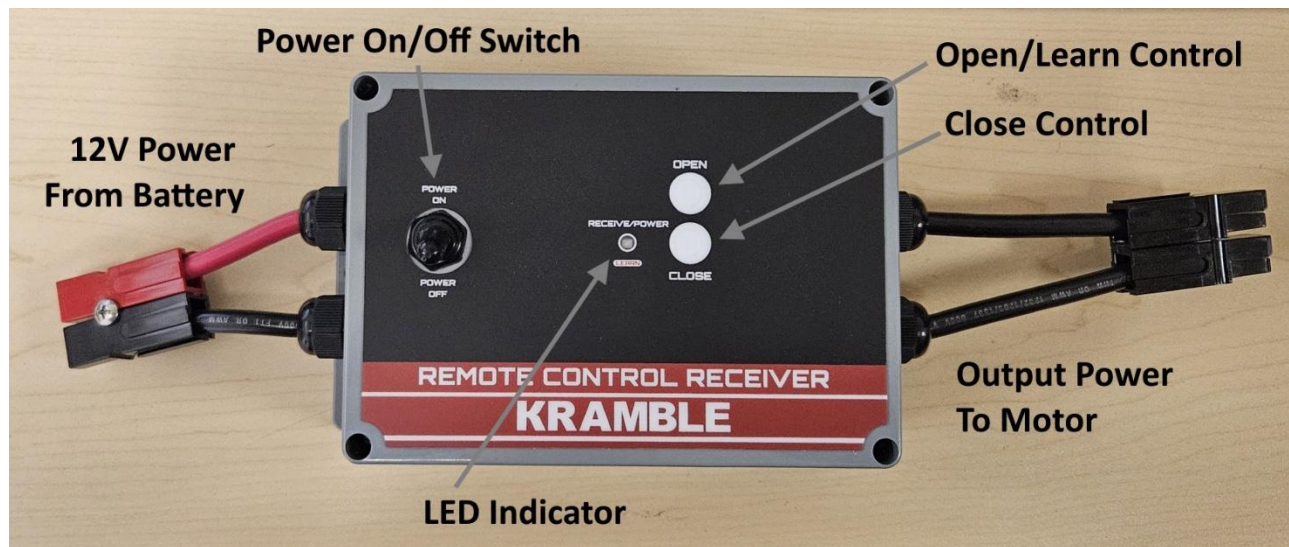
General Operation

Receiver

The Receiver is equipped with a Power On/Off toggle switch on the outside of the case. When the switch is ON, the LED indicator will be Blue indicating normal operation.

The Tarp Arm Controller can be operated using the Transmitter, or alternatively, by operating the OPEN/CLOSE momentary pushbutton switches on the Receiver. When the Tarp Arm Controller is operated manually, the LED will show Green indicating output power to the motor. When input is received from the Transmitter, the LED will show Yellow.

Figure 1 Receiver Console



Direction Reversal

If the motor operates in the wrong direction (e.g. the Tarp opens when pressing the Close button), the direction can be corrected by following these instructions:

1. Turn the receiver power OFF.
2. Press and hold the Close manual control button on the receiver.
3. Turn the receiver power ON.
4. The indicator LED will flash yellow rapidly for a two seconds, then more slowly for two seconds, indicating that the direction has been reversed. The Close button can be released after the LED begins blinking yellow.

Diagnostic Indicators

There are two ways that the Receiver may use to indicate to the operator that a problem has been encountered:

1. **HIGH TEMPERATURE:** If the temperature of the motor controller becomes too high, the indicator LED will flash Red rapidly (approximately three times per second) to indicate this condition. The high temperature indication will remain and the drive will not operate until the motor controller has cooled. Check to ensure the tarp moves freely or otherwise determine the source of the excess load that the drive is working to overcome.
2. **CURRENT OVERLOAD PROTECTION:** If a "current overload" status occurs, the Tarp Arm Controller drives are protected by a 100 Amp auto-resetting thermal breaker (fuse) installed at the tractor battery which disconnects the cabling and drives. This fuse trips with an audible "click" and the receiver will not operate until the fuse cools and resets (generally about 15 seconds). The receiver may need to be manually turned on after the fuse resets.

The Receiver is matched to a Transmitter by "learning" the transmitter's unique security code so that the receiver will accept commands from that transmitter. The security code is provided to prevent unwanted operation of the Receiver by other devices. When the transmitter and receiver are matched and the transmitter "talks" to the Receiver, the yellow "RECEIVE" light will come on. A newly-purchased system already has its transmitter matched to the receiver. It is also possible to erase all stored security codes if desired.

To match a transmitter to a receiver:

1. Turn the receiver power switch OFF.
2. Hold the OPEN button on the receiver and turn the receiver power ON, then release the OPEN button when the LED indicator lights up Yellow. The Yellow LED indicates that the receiver is waiting for a signal from the transmitter to be learned.
3. With the transmitter's slide switch set to Standby, press the up button on the transmitter for the channel you wish use to control the receiver. The receiver will read the transmitter's security code and the desired channel and store them in memory. The indicator LED will flash Yellow slowly to indicate that the transmitter has been successfully learned, and the receiver will then enter normal operating mode.

Up to eight transmitters can be learned by a receiver, and each transmitter may use a different channel to control the receiver. If eight transmitters have already been learned by a receiver and it is instructed to learn another transmitter, the oldest-learned transmitter will be overwritten and forgotten.

To erase all stored security codes, turn the receiver power ON while holding the OPEN button, and continue holding the button until the indicator LED begins to rapidly flash Yellow. Release the button, and the indicator LED will flash Yellow more slowly for three seconds, then will turn Blue to indicate that the erase operation has succeeded. If the LEARN button is pressed while the Receive/LEARN light is slowly flashing, the erase operation is aborted and the receiver retains the stored transmitter security codes.

The Receiver power should be turned OFF when not in use to prevent undesired operation.

Transmitter

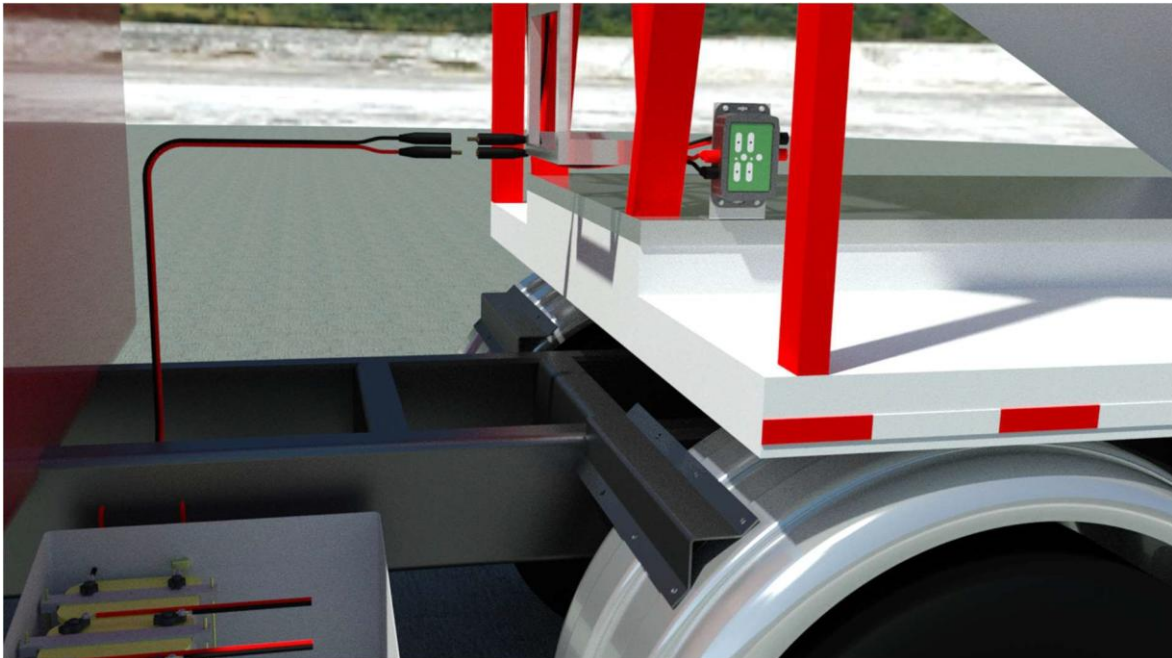
The Transmitter is powered by a 9V battery which, when installed, should light the Blue "power" light when the OFF/STANDBY switch is in the STANDBY position and a function switch is pressed. If the battery does not exceed 7 volts the Power light will not light, indicating battery replacement is required.

Figure 2 Transmitter



Each transmitter contains a unique identifying security code that is transmitted to the receiver during RF operation. Up to eight Transmitters can communicate with the same Receiver as long as the receiver has learned the transmitters' security codes.

The OFF/STANDBY switch (if equipped) must be in the STANDBY position before the Transmitter can be used to prevent unintentional operation of the Receiver. To control the Receiver, slide the OFF/STANDBY switch to STANDBY, then press the desired channel function buttons. Slide the switch to OFF when no control is desired.

Figure 3 Motor Couplings (21 Spline & Cross Bolt)**Figure 4 Telescopic Tarp Arm Control Box Mounting**

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Limited Warranty

Customer satisfaction is a fundamental policy at Kramble Industries Inc. All customers can rely upon and expect to receive prompt, efficient and courteous service on all Kramble Industries Inc. manufactured equipment from each and every employee of the organization.

Kramble Industries Inc. with its office at 20-3924 Brodsky Avenue, Saskatoon, SK warrants:

To the Original Purchaser/User, each product manufactured by Kramble Industries Inc. to be free from defective material and workmanship, under normal use and service, for a period of 12 months subject to conditions outlined below. The obligation under this warranty is limited to repair, or replacement with a similar genuine company part, for any part of the product of the company's manufacture that is found to be defective.

Warranty period begins the day of purchase. During the first (1st) through the twelfth (12th) month, Kramble will furnish without charge, F.O.B. its plant, a similar genuine part to replace any part of a product of the company's manufacture which proves to be defective, in normal use and service, during this time. Labor to install or repair such parts will be absorbed by Kramble Industries Inc. If this work is to be done other than Kramble personnel, prior approval must be given by Kramble Industries Inc. as to rate and time.

This warranty shall bind the company only as follows:

The warranty shall be limited to the repair or replacement of defective parts, all other damage, loss, cost or obligation and claim whatsoever, statutory or otherwise, are hereby waived by the original purchaser\user, and again, the warranty hereby given covers only those labor charges specifically authorized by the company in advance.

- The warranty shall not apply to any failure, or damage incurred through neglect, lack of maintenance, misuse, abuse, accident, improper installation, re-designing of assemblies, ignorance, or through any other cause beyond the control of the company.
- The warranty does not cover products of other manufacturers beyond such warranty as may be made by such manufacturer.
- The warranty shall not apply to normal maintenance services, or to deterioration of appearance of items due to normal use and exposure.
- The warranty shall not apply when the original purchaser/user has allowed repair and/or service work to be conducted on the product without authorization from the company.

IMPORTANT NOTE:

Before any warranty work is done, contact Kramble Industries Inc. for authorization. Failure to do so may result in denial of warranty.

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