

# TZ100 Tension Zipper System

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## Installation Instructions for Inside Mount Application

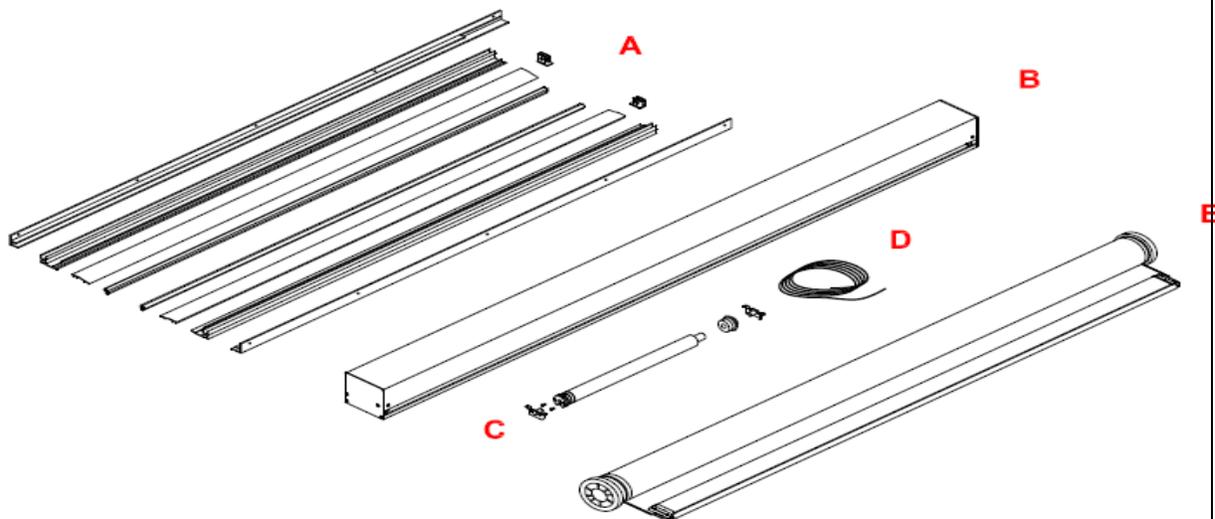


\*Please read these instructions in full prior to starting your installation.

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## 1. TZ100 System



\*Before you begin the install, open all boxes and lay everything out. Confirm everything is there and correct.

### Description

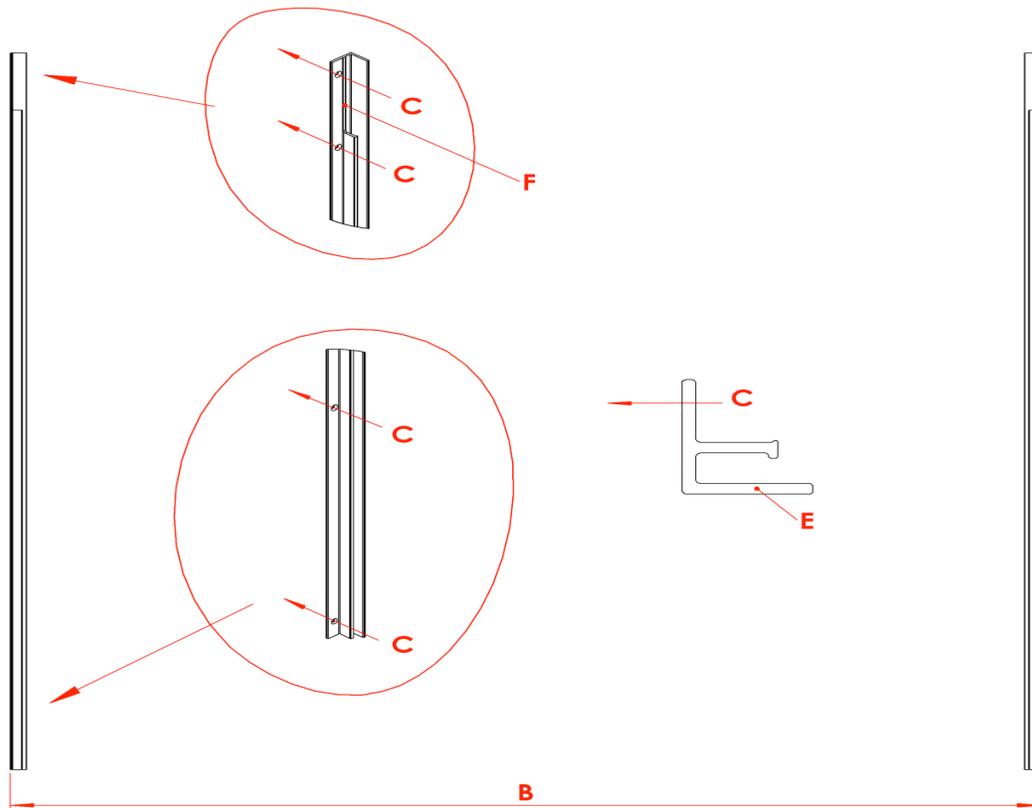
### Qty.

A. Mounting Rails	2
Rear Guides	2
Front Guides	2
Side Lock	2
Return Pulleys	2
B. Head Box Assembly	1
C. Motor Kit (pre-installed in tube)	
Drive	1
Crown	1
Mounting Plate Screws	4
Motor Head Screws	2
Mounting Plate	2
Motor	1
Idle End Assembly	1
D. Tension Cable	1
E. Tube/ Fabric Assembly	1

Installer to supply mounting screws to suit the building conditions where the system is being installed.

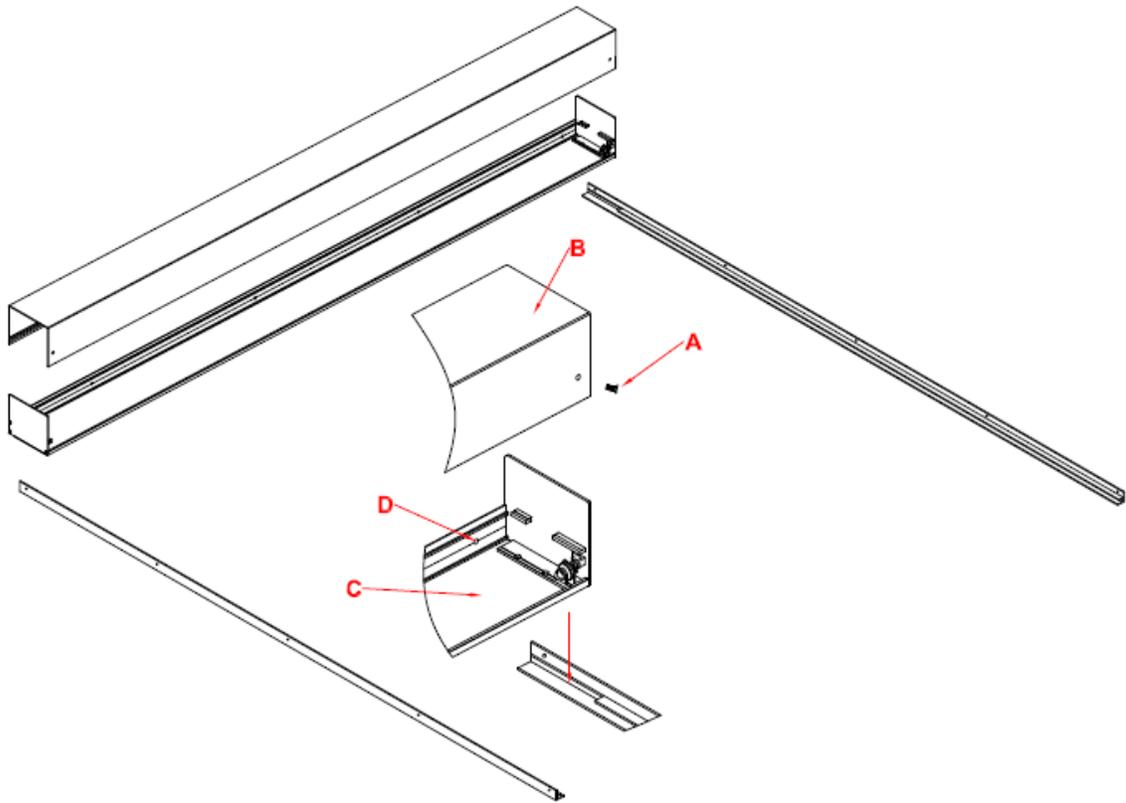
Hardware Kit (2 Locking screws, 2 Mounting plate screws, 1 Mounting plate shim, Set screws for Rear Guide)	1
Limit adjuster (Only W/ Standard 4 wire motor)	1
Installation Manual	1

## 2. Installing Mounting Rails



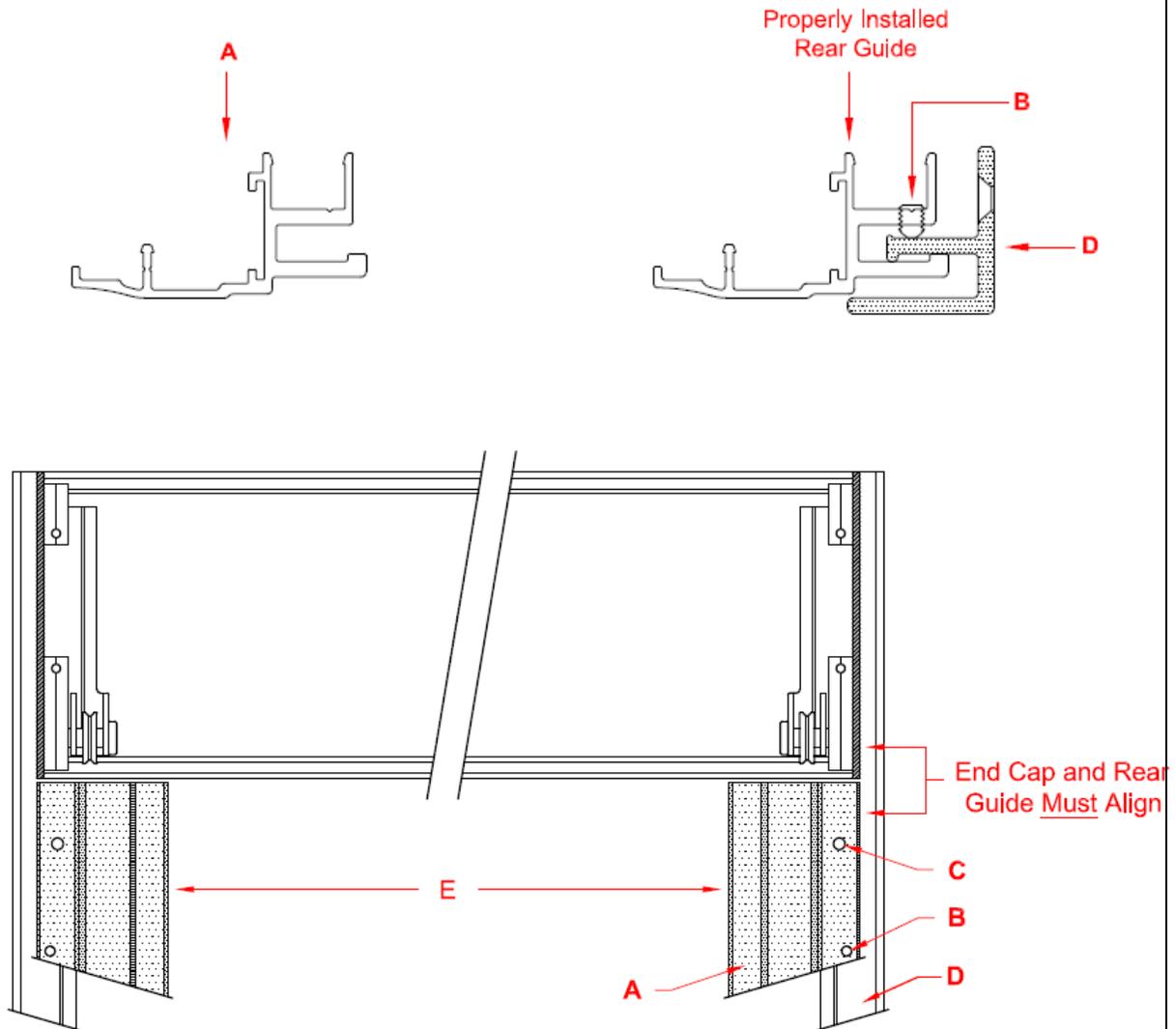
1. Identify left and right hand MOUNTING RAILS (E)
2. Identify the HEAD BOX end of the system to be located at notched end (F).
3. Check the install locations opening in size several different places along the entire length of the system (B). This must be a maximum size of ordered system width +1/4" and a minimum size of ordered system width -3/8". Shimming will be required where the width is greater than the maximum size.
4. Attach MOUNTING RAILS through pre drilled holes (C) using No 8 countersunk screws with a thread type suitable for building conditions.
5. Check the squareness of the installed MOUNTING RAILS (E) by measuring diagonally corner to corner in both directions to confirm they are the same dimension. Adjust if necessary.

### 3. Installing Head Box



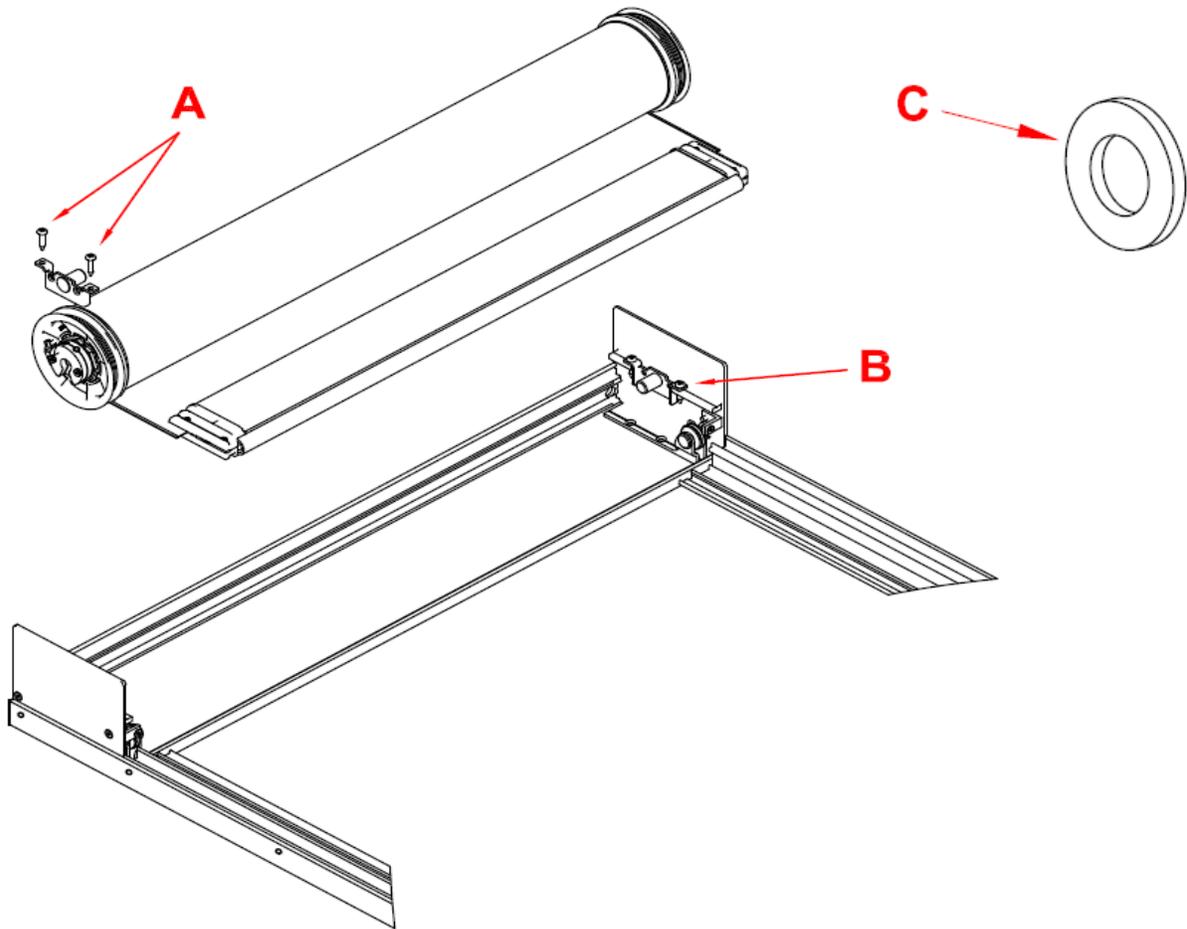
1. Remove HEAD BOX screws (A)
2. Remove HEAD BOX LID (B)
3. Place HEAD BOX assembly (C) up to the notched MOUNTING RAILS. Ensure the HEAD BOX is centered in the MOUNTING RAILS. Mark out desired mounting hole locations along the screw locator (D) inside of the HEAD BOX assembly on the top.
4. Determine where the POWER supply is. Ensure there is a way to hook up the POWER once the HEAD BOX assembly has been installed. There is a hole with a grommet in the top of the HEAD BOX assembly on the side that the motor will go on.
5. Lower the HEAD BOX and drill marked holes to allow for a No 8 screws threads to freely pass through approximately 3/16". When installing the HEAD BOX assembly use No 8 pan head screws. Confirm thread type is suitable for building conditions.
6. Install the HEAD BOX assembly (C) ensuring that it stays tight against the back and bottom of the notch of the MOUNTING RAILS.
7. Check the HEAD BOX is CENTERED in the MOUNTING RAILS. Adjust if necessary.

## 4. Installing Rear Guides



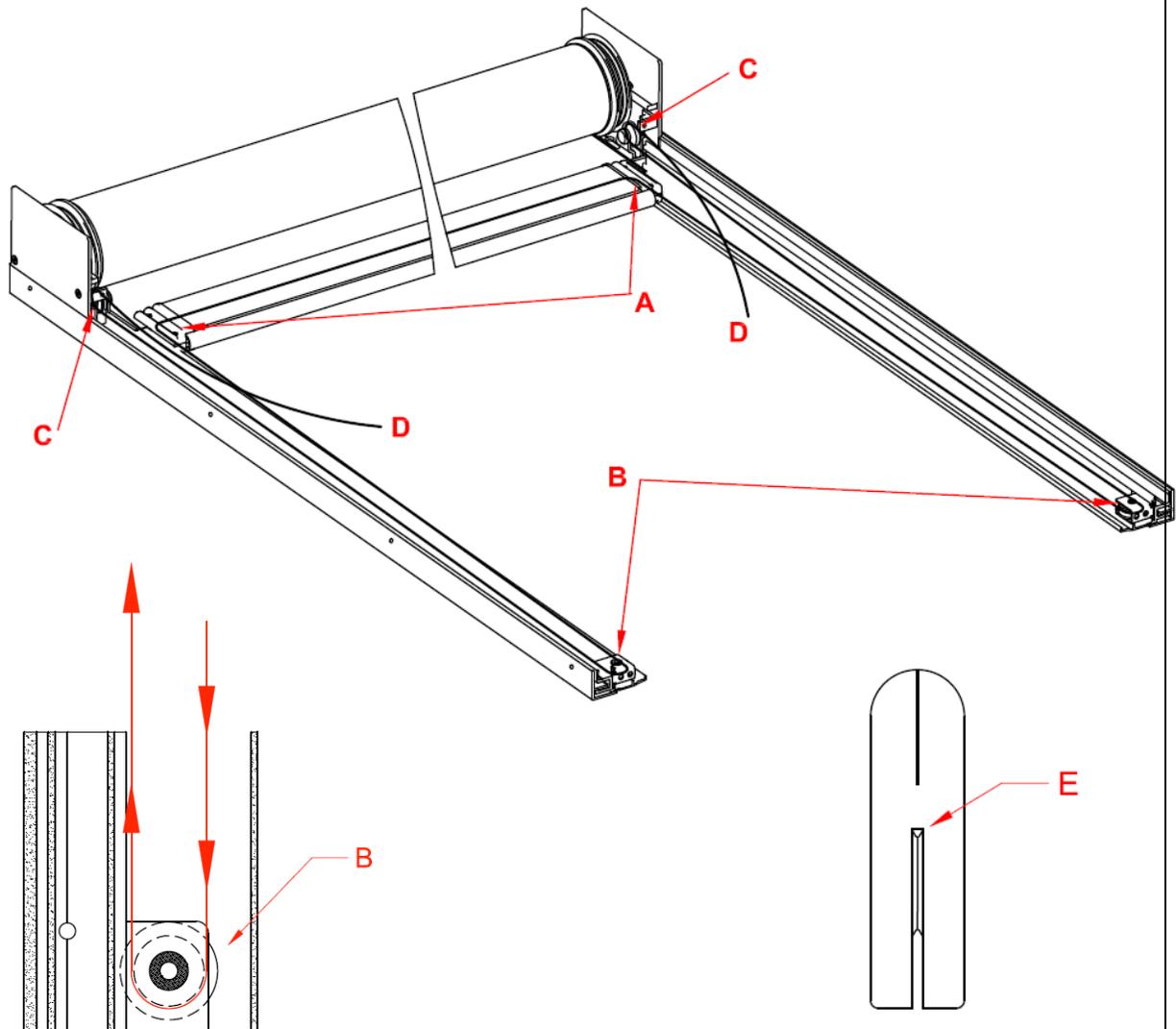
1. Identify the REAR GUIDES (A)
2. Install the SET SCREWS from the hardware bag into the holes in the rear guide (B) making sure not to install one in the top hole (C) which will be used later for a locking screw.
3. Install the REAR GUIDES onto the MOUNTING RAILS (D). Tighten the top and bottom SET SCREWS.
4. Confirm the outside edge of the REAR GUIDE is **Aligned** with the outside edge of the END CAP.
5. Set the REAR GUIDES Parallel and Square. The inside dimensions of the REAR GUIDES (E) must equal the systems ordered width minus 5 1/8" along the entire length of the REAR GUIDES.
6. Double check the END CAP and REAR GUIDES edges **Align** as mentioned in step (4). Tighten ALL SET SCREWS.

## 5. Installing Shade Assembly



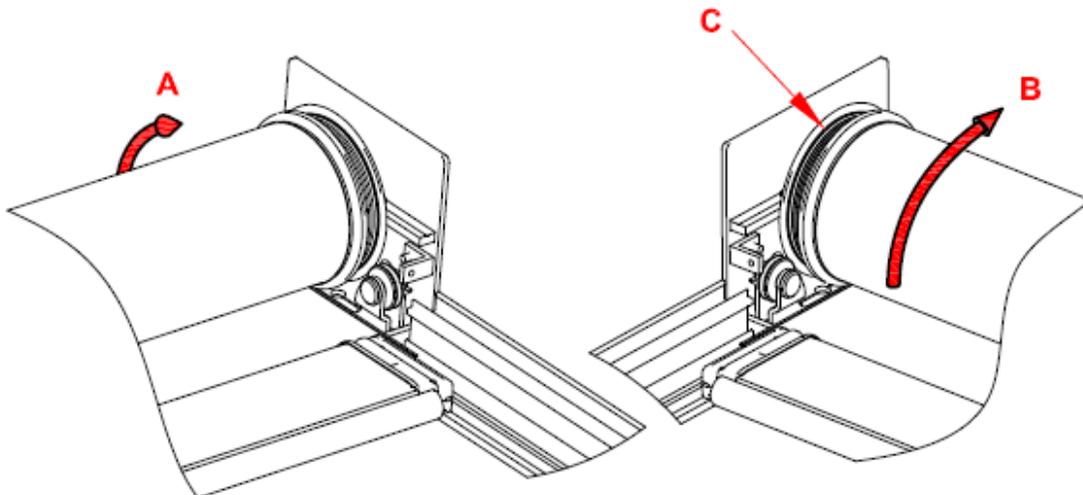
1. Installing the SHADE assembly requires two people.
2. A SHIM (C) is sent in the hardware kit, install the SHIM by sliding it over the shaft of the MOUNTING PLATE (B) on the idle side.
3. With your helper raise the SHADE up to the head box, insert the IDLE END over the shaft of the pre-installed MOUNTING PLATE (B).
4. On the MOTOR end, feed the POWER CABLE through the GROMMET in the HEAD BOX. Then Insert the MOUNTING PLATE which comes pre-installed to the motor head, between the cut outs on the end caps.
5. Confirm the fabric is rolling off the back of the tube, towards the REAR GUIDES (**See diagram above**)
6. Arrange the POWER CABLE inside the HEAD BOX in a way that the POWER CABLE is NOT TOUCHING any moving parts.
7. Install two SCREWS (A) through the MOUNTING PLATE. Firmly tighten.

## 6. Cable Installation (Loose)



1. DO NOT remove the END CAPS (A)
2. With the HEMBAR retracted feed the TENSION CABLE into the HEMBAR at location (E). This can be done from either end. The CABLE will feed through the HEMBAR and is guided to the other side.
3. Pull the CABLE down to the RETURN PULLEY (B), feed the CABLE around the PULLEY following the illustration (B).
4. Pull the CABLE back towards the HEAD BOX and behind the DIVERTING PULLEY (C).
5. Do this to both sides.
6. Continue to pull the CABLE through so that it is approximately equal on each side (D)
7. Check the CABLE to ensure it is not tangled.

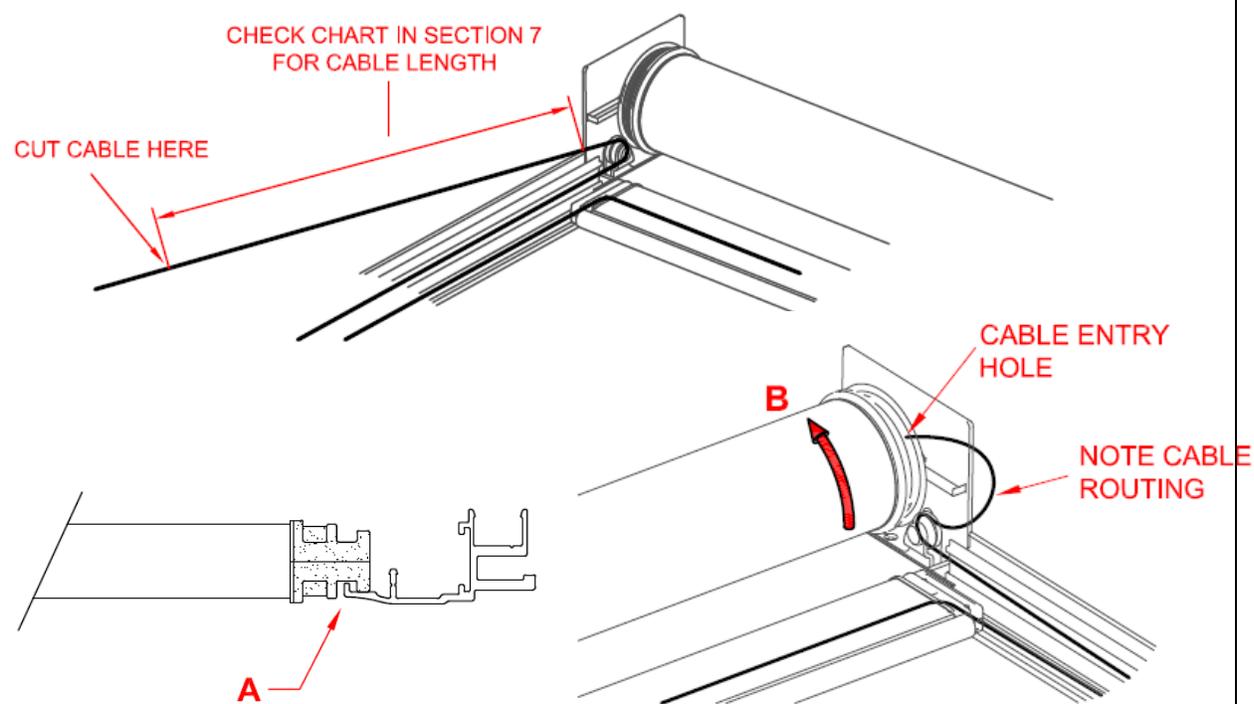
## 7. Spring Tensioning



System	Orientation	Revolutions From Stall	Cable Cut Length
TZ100	ANY	1	18"
TZ100L	Vertical (0° to 30° from Vertical)	1	22"
TZ100L	Horizontal (0° to 60° from Horizontal)	2	22"

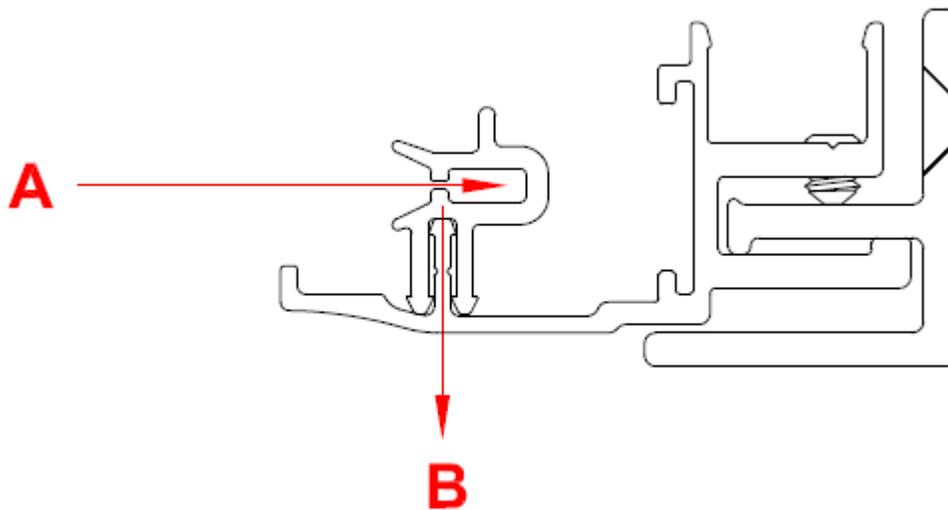
1. Connect the power to the shade. For a standard wired motor you will need a shade tester and with a RTS motor you will need an RTS transmitter.
2. For RTS initiate programming mode. While programming, the shade should not be inactive for longer than 2 minutes or the motor will exit programming mode (the shade will not respond to the remote). Go ahead and check the shades running direction and change if needed but Do Not set any limits at this stage. (section 18, steps 1-3)
3. Wind the MOTOR TUBE with the shade tester/transmitter to retract the fabric in the direction of arrow (A).
4. Guide the HEMBAR carefully into the HEAD BOX so that it binds between the roller shade and head box. Take extra precautions to make sure not to damage the fabric.
5. Continuing with the tester/ transmitter, wind in the direction of arrow (A) until the MOTOR stalls. Confirm it stalled by releasing the button on the transmitter and then pushing it again a few times until the motor no longer moves.
6. If using a Standard 4 wire motor check that the MOTOR has NOT engaged with the limit, wind the limit to increase the number of turns available in the retract direction.
7. Using the chart above, with a shade tester/ transmitter wind the MOTOR back by # of revolutions called out in the chart in the direction of arrow (B). Once you have followed the chart, if the entry HOLE for the CABLE is not in position (C) then continue to wind the MOTOR back in the direction of arrow (B) until the entry HOLE for the CABLE is in position (C) or an easily accessible location. The number of revolutions in direction (B) should not exceed 1 while looking for the hole.

## 8. Connecting the Cable / Tensioning the Fabric



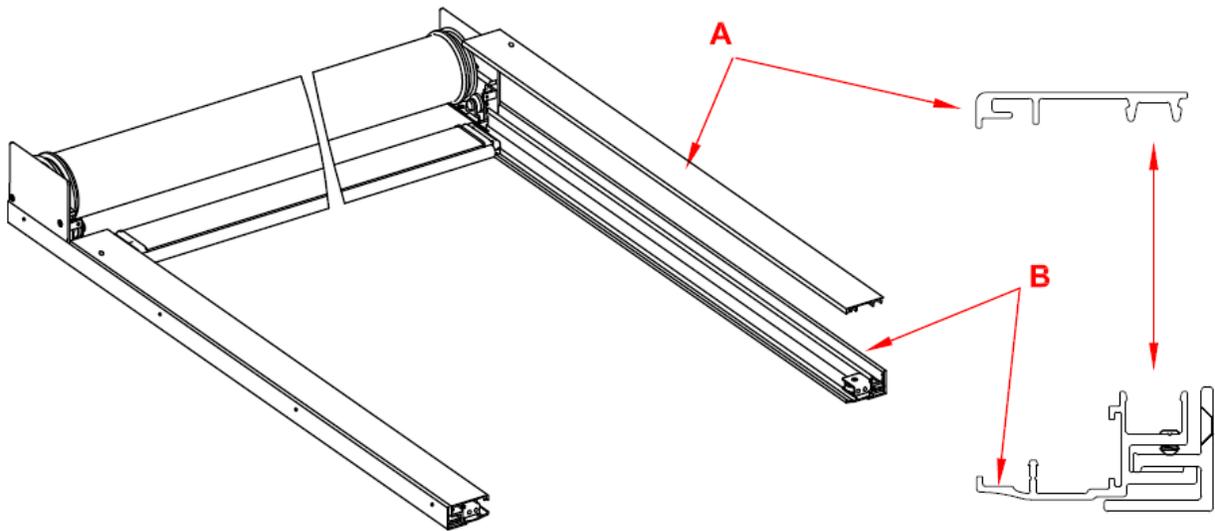
1. The MOTOR TUBE / SPRING are tensioned. It has been wound until it stalled and backed off by the correct # of revolutions following the chart as described in the previous step. This is IMPORTANT.
2. At one end insert the cable into the GRIP LOCK contained within the SPOOL through the CABLE entry hole. The CABLE will push through by approximately 2 inches and then stop.
3. At the other end remove slack in the cable making sure the cable is properly routed around the RETURN PULLEYS and DEFLECTION PULLEYS.
4. Using the chart (section 7) measure and cut the cable starting at the HEAD BOX and measuring up down. (**As shown in the diagram above**). Note the CABLE routing around deflection pulley.
5. Push the cut CABLE end into the HOLE on the SPOOL and into the GRIP LOCK behind, again by about 2" .
6. Using the shade tester/ transmitter run the MOTOR to deploy the FABRIC in the direction of arrow (B). The CABLE will start to wind up onto the SPOOLS. Make sure the CABLE is winding up next to each other starting on the outside winding in without any gaps.
7. As the CABLE is winding up onto the SPOOLS the HEMBAR will deploy. Confirm the HEMBAR runs in the rear guide correctly (A). Adjust if required.

## 9. Installing Side Lock Guides



1. Deploy the fabric by approximately 1 foot.
2. Slide the plastic side lock guides onto the Zipper (A)
3. Clip the side lock onto the rear guide at position (B)

## 10. Installing Front Guides

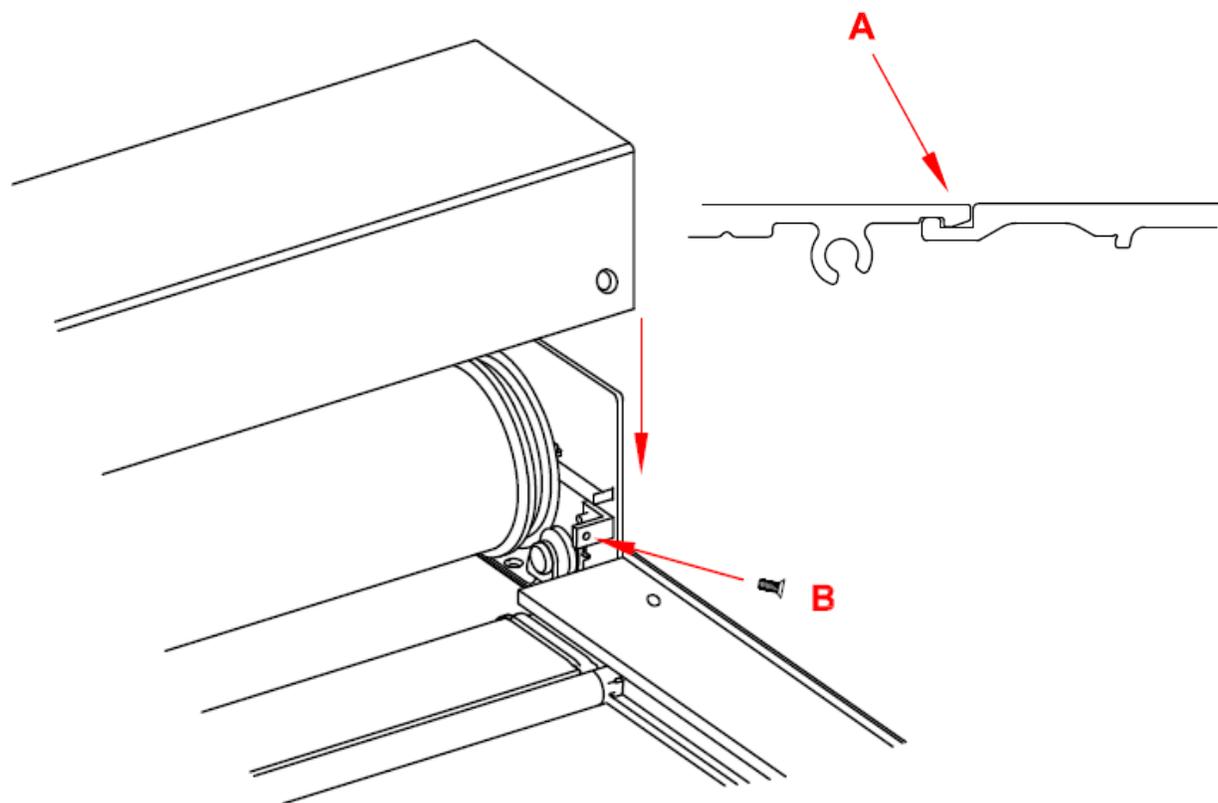


1. Attach the FRONT GUIDE (A) to the REAR GUIDE (B). Confirm the FRONT GUIDE is in the correct orientation with the locking screw hole at the top.
2. Use a non-marking / soft faced mallet. Use a non-marking block if required.
3. Use soft blows to help clip the FRONT GUIDE and the REAR GUIDE together along the length of the guide.
4. Repeat for other side.
5. Screw in the two LOCKING SCREWS (C) at the top of each FRONT GUIDE. Depending on your systems orientation you may have an additional LOCKING SCREW on the bottom of each FRONT GUIDE.

## 11. Setting Limits

- At this point you can set the LIMITS. See section 16 for MANUAL limits or section 18 for RTS limits
- The motor limit positions are to be set accurately. The HEMBAR is not to be jammed into the closing surface without the MOTOR LIMIT position being reached. Failure to set the limits correctly may cause motor failure.

## 12. Installing Head Box Cover



1. Install the HEAD BOX cover.
2. Confirm the clip is engaged where the front and back pieces of the HEAD BOX meet (A).
3. Push the cover into position and install the SCREW (B) at each end of the HEAD BOX

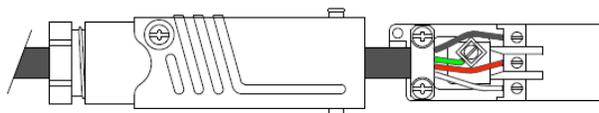
## 13. Final System Check

### Important

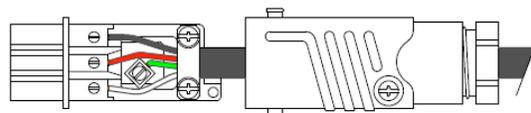
1. Run the system open and close a couple times to make sure everything is running properly.
2. Check the HEBAR limits confirming that the MOTOR stops at each limit and they have been accurately set.
3. Check for any light gaps and fill.
4. Note – If the tension is too great the cable spooling will be noisy
5. The tension will be too great if.....
  - The back turn at stage 7.7 was missed
  - The cable was cut short at stage 8.4
  - The cable has gaps in the first turn at stage 8.6

## 14. Hirschmann Plug Wiring Diagram

To Motor



To Power Source

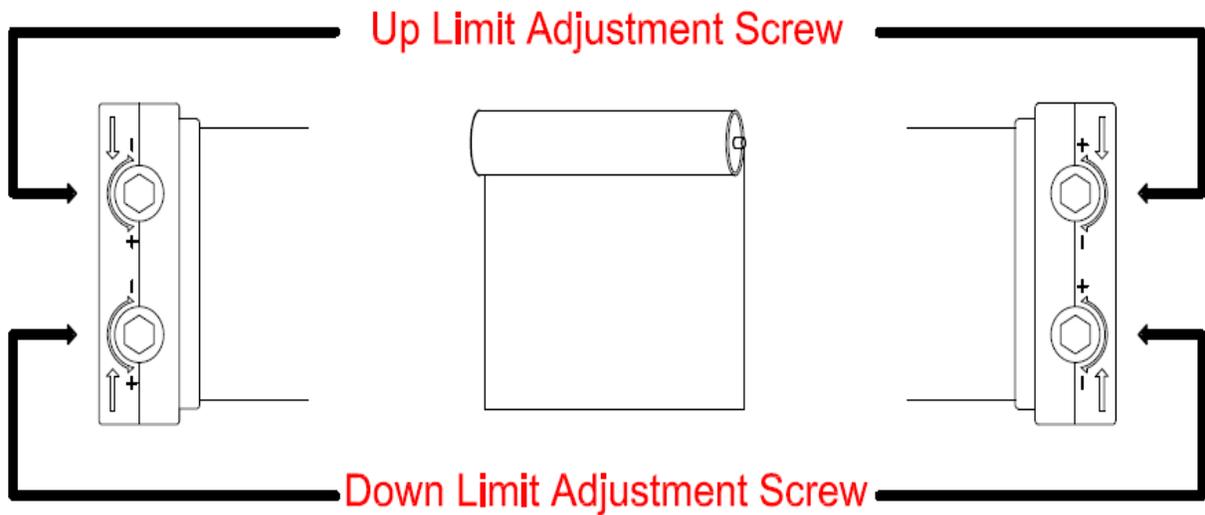
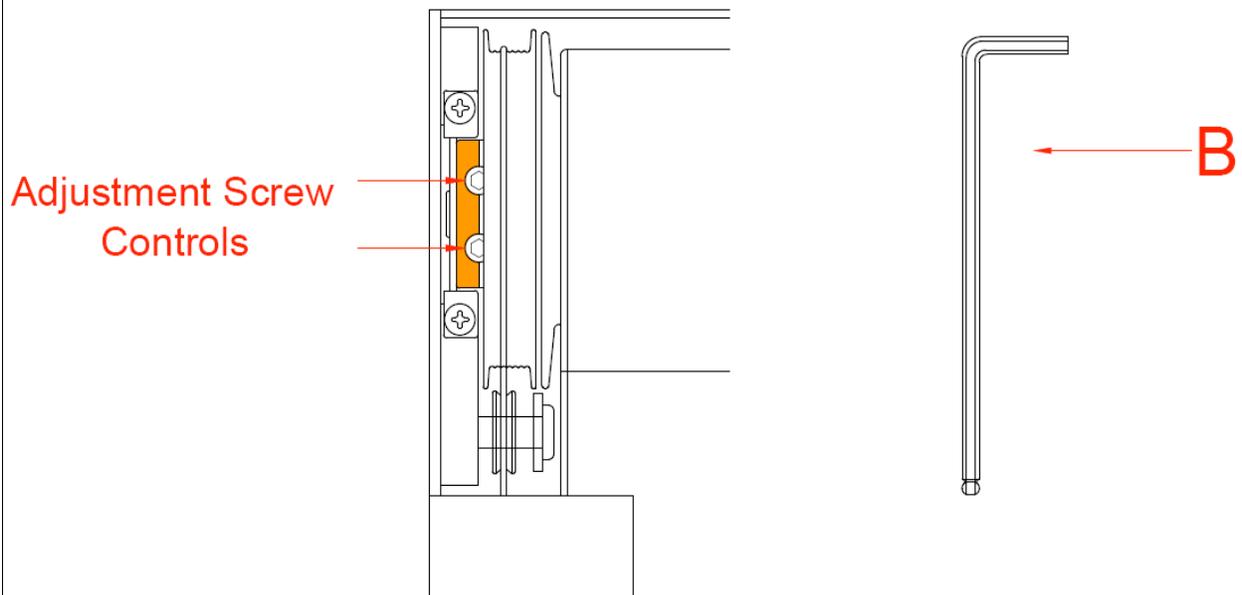


Pin 1	White
Pin 2	Red
Pin 3	Black
Square Post	Ground

### General Notes

1. For a 4 wire standard motor, wire the plug following the chart above.
2. RED and BLACK wires are both HOT and may need to be swapped to allow MOTOR to travel in the correct direction.
3. For a 3 wire RTS motor, wire the plug following the chart above except leave Pin 2 blank.
4. All wiring to be completed by a certified electrician.
5. Maximum wire size 16 AWG.
6. Shade motors are not to be wired in parallel.

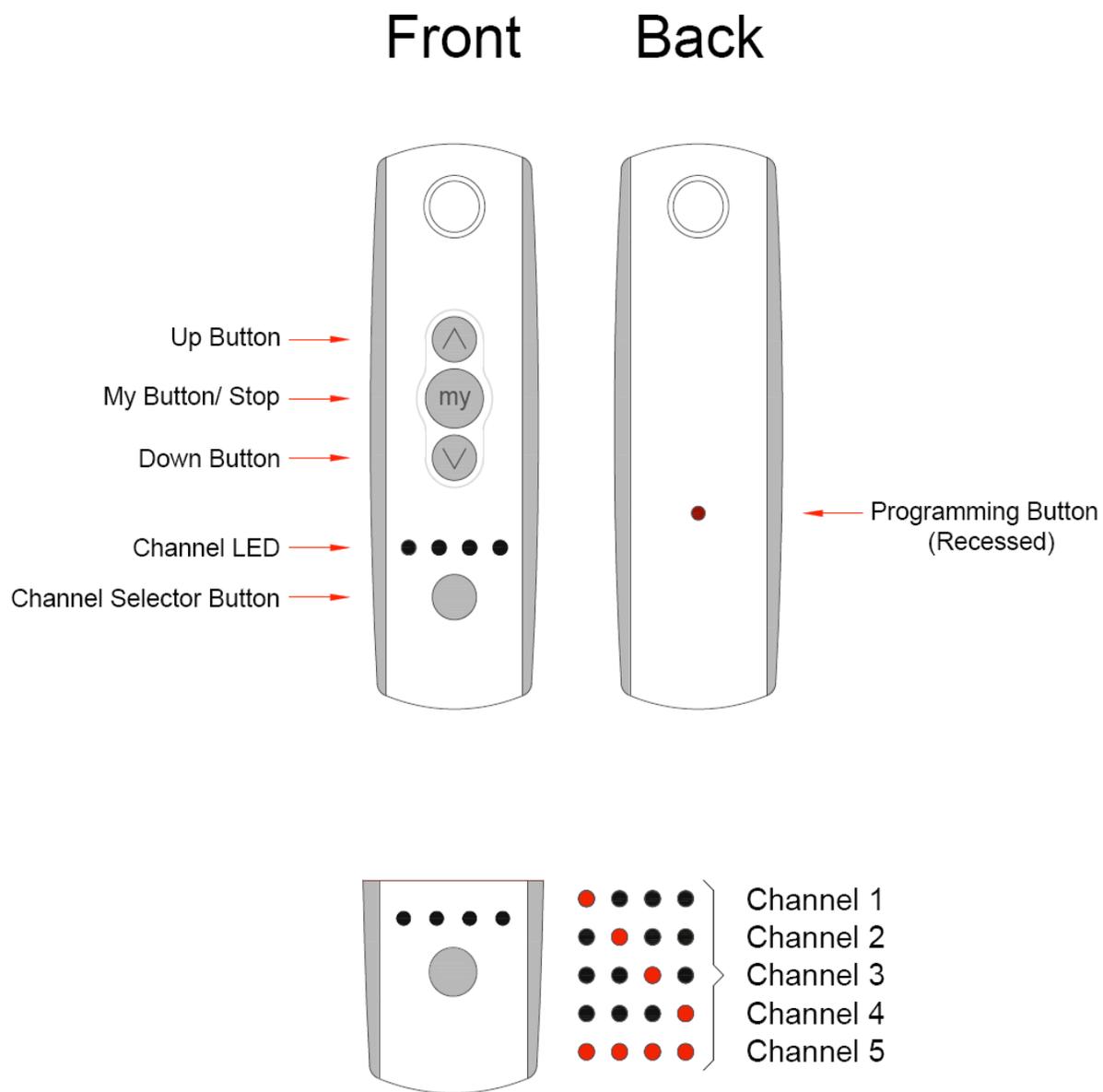
## 15. Manual Motor Diagram



## 16. Manual Motor Limits Setting Instructions

1. To set the limits first remove the HEAD BOX LID and locate the motor head, either on the left or right side of the shade.
2. You will set the limits using either the wall switch that controls the shade or your shade tester.
3. Locate the adjustment screw controls ([section 15](#))
- 4. Setting UPPER LIMIT –**
  - a) Using your shade tester or wall switch locate the upper limit by running the shade towards the upper limit. Stop the shade if the limit has not stopped the shade on its own within 12" from the top. If it did stop then you have now found the current upper limit, now skip to step (C). If it didn't stop, run the shade towards the lower limit approximately 20".
  - b) Now using the provided limit setting tool (B) follow the diagram above and turn the up limit adjustment screw clockwise 5-10 full rotations and repeat step (A). Keep repeating these steps until the upper limit has been found.
  - c) Now that you have found the upper limit it's time to set it. If the top limit isn't where you want it, raise it by rotating the up limit adjustment screw Clockwise one rotation. Now run the shade down approximately a foot and then run the shade back up. The upper limit should now be closer to the top. Always run the shade down and then back up after changing the adjustment screw to let the new limit set accurately.
  - d) Once you get close to your desired upper limit, start doing smaller adjustments to the adjustment screw until you are at your desired upper limit.
- 5. Setting LOWER LIMIT –**
  - a) Using your shade tester or wall switch locate the lower limit by running the shade towards the lower limit. Stop the shade if the limit has not stopped the shade on its own within 12" from the bottom. If it did stop then you have now found the current lower limit, now skip to step (C). If it didn't stop, run the shade towards the upper limit approximately 20".
  - b) Now using the provided limit setting tool follow the diagram above and turn the down limit adjustment screw counter clockwise 5-10 full rotations and repeat step (A). Keep repeating these steps until the lower limit has been found.
  - c) Now that you have found the lower limit it's time to set it. If the lower limit isn't where you want it, lower it by rotating the down limit adjustment screw counter clockwise one rotation. Now run the shade up approximately a foot and then run the shade back down. The lower limit should now be closer to the bottom. Always run the shade up and then back down after changing the adjustment screw to let the new limit set accurately.
  - d) Once you get close to your desired lower limit, start doing smaller adjustments to the adjustment screw until you are at your desired lower limit.

## 17. RTS Remote Overview



## 18. RTS Motor Programming Limits

### Important Notes

- Only power up ONE motor at a time.
- Have the transmitter within 10 feet of the motor during the programming process.
- Motors let you know it received the command by jogging. A jog is a brief up and down motion.
- While programming, the motor should NOT be inactive for longer than 2 minutes or the motor will exit PROGRAMMING MODE.
- In case of problems with setting of limits during PROGRAMMING MODE, turn the power off to the motor for 5 seconds and then back on to reset the motor. Start back at step 1.

### Setting Initial Motor limits

1. Select the CHANNEL that you want the current shade to operate on.
  - On the transmitter, press the CHANNEL SELECTOR button as many times as needed to get desired channel.
2. INITIATE PROGRAMMING
  - On the transmitter, press and hold both the UP arrow and DOWN arrow simultaneously until the shade jogs.
3. CHECK THE DIRECTION
  - Press and hold UP or DOWN arrow. When pressing DOWN the shade should go down or out. If the shade does not correspond with the Up or Down arrow you must REVERSE the direction.
  - To REVERSE direction, simply press and hold the MY button until the shade jogs. The direction should be corrected. Confirm by pushing the UP or DOWN button and the shade should correspond to the arrow pushed.
4. SETTING UPPER LIMIT
  - Bring the shade to the desired UPPER limit using the UP arrow.
  - Press and hold both the MY button and DOWN arrow simultaneously until the shade starts to move, then release. If the shade stops when the buttons are released, take it back to the UPPER limit and repeat.
  - Stop the motor when desired LOWER limit is reached. You can adjust by pressing the UP or DOWN arrows after stopping the motor.
5. SETTING LOWER LIMIT
  - Press and hold both the MY button and UP arrow simultaneously until the shade starts to move, then release. The shade will stop at the UPPER limit that was previously set.
6. CONFIRM LIMIT SETTINGS
  - Press and HOLD the MY button until the shade jogs to confirm the limit settings.
7. PROGRAMMING COMPLETED
  - Press and hold the PROGRAMMING BUTTON on the back of the transmitter until the shade jogs. The shade is now done being programmed and limits have been set.

## 19. Adjusting RTS Motor Limits and Intermediate Stop / Misc. Programming

### Change the LOWER LIMIT

1. Press the DOWN arrow to send the shade to its current LOWER Limit.
2. Press and HOLD both UP and DOWN arrows simultaneously until the shade jogs. Adjust to a new LOWER limit position.
3. Press and hold the MY button until the shade jogs, to confirm new limit.

### Change the UPPER LIMIT

1. Press the UP arrow to send the shade to its current UPPER Limit.
2. Press and HOLD both UP and DOWN arrows simultaneously until the shade jogs. Adjust to a new UPPER limit position.
3. Press and hold the MY button until the shade jogs, to confirm new limit.

### Setting INTERMEDIATE Position

1. Press the UP or DOWN arrow to operate shade. At the desired INTERMEDIATE position press the MY button briefly to stop the shade.
2. Once the desired INTERMEDIATE position is reached, press and hold the MY button until the shade jogs. The INTERMEDIATE position is now added to memory.
3. To use, simply press the MY button when the shade is not running and the shade will return to your INTERMEDIATE Position.

### Misc. Programming

#### PROGRAMMING ADDITIONAL TRANSMITTERS

1. To program additional transmitters you will need your ORIGINAL transmitter which is already programmed to the shade and the NEW transmitter.
2. The ORIGINAL transmitter needs to be on the channel that operates the shade or shades that you want on the NEW transmitter and the NEW transmitter needs to be on the channel that you want the shade or shades assigned to.
3. Press and hold the PROGRAMMING BUTTON on the back of the ORIGINAL transmitter for approximately 3 seconds or until the shade jogs.
4. Press and hold the PROGRAMMING BUTTON on the back of the NEW transmitter for approximately 3 seconds or until the shade jogs.
5. The NEW remote is now programmed.

## 20. How to Change Motor Location

The TZ100 system is very easy to change motor locations. Follow the steps below to change motor locations.

### Changing Motor Location

1. With the shade lying on the ground, pull the motor out of the tube/shade. It is not screwed in and will slide right out.
2. On the other end of the shade, pull the IDLE END out of the tube/shade. It is not screwed in and will slide right out.
3. Slide the motor into whichever end of the shade you need it in. Confirm the drive key on the motor is located in the keyway of the crown and NOT at the split in the crown.
4. Slide the IDLE END into the opposite end of the tube.
5. The shade assembly is done and ready to be installed.

## 21. Maintenance

Maintenance must be considered with local conditions in mind but it is expected that the installed system will be checked every year. For difficult conditions (external, dusty, sandy, cold, high wind etc.) the systems should be checked on a more regular basis.

### Every 12 Months

- Check tracking and fabric condition (creases)
- Check that tracking is correct and fabric is clear of spools
- Make adjustments where required
- Check limit positions
- Do not allow the hembar to touch the return pulleys, shade roll or head box
- Make adjustments
- Check fabric edges for small rips / cuts / damage
- Damaged edge will reduce the tear strength of the fabric
- Check tension cable
- Ensure cable is spooling correctly and neatly
- Check the plastic coating is in place and not damaged
- Check for knots of damaged wire under the surface
- Replace cable if necessary
- Check for good pulley rotation
- Ensure cable is seated in the pulley V correctly
- Check mounting screws
- Tighten any loose screws
- Check for good pulley operation
- Check wind sensor operation
- Clean and remove any debris from the system

### Every 5 Years

- Check hembar end caps for wear
- Replace if necessary
- Replace tension cable if not replaced already

### Every 10 years (additional checks)

- Check motor operation
- Depending motor usage and working conditions, consider replacement.