

Maui Vista

Rainier Full Retention Solar Screens

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Drawings may not be to scale and are meant to illustrate approximate coverage and style only. Curves may be greater or less than drawn. Column placement may vary. Areas shaded move according to the position of the sun. Colors are for illustrative purposes only. See fabric and color samples for true colors.

April 23, 2016



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Request for Approval – Lanai Solar Shades:

- ❑ Owners wish to add a high quality solar screen to their lanai in order to mitigate the damaging effects of sun exposure and to increase the utility of their outdoor space.
- ❑ The Owners have requested our assistance in preparing this “Approval Request Package” to facilitate the review and approval process required by the Board.
- ❑ We have worked with a number of Condo and Home Owner Boards and understand the importance of providing:
 - ✦ consistency of look within the complex to ensure the solar screens blend with the architectural design aesthetic.
 - ✦ Achieving a “built in” look to the solar screen installation so that they do not appear to be an after thought.
 - ✦ Provide a high quality product, able to stand up to Maui’s high winds, salt air and intense sun for many years.
- ❑ Our full retention solar screens are the approved models at the following complexes:
 - ✦ Kai Malu at Wailea; Ke Ali’i Ocean Villas; Island Sands; Maalaea Kai; Kahana Sunset; Luana Kai, Leeinaala Condos, Napili Point, Hukulani Golf Villas, Wailea Palms- Residence Units, Kai Ani Villages.

“Full Retention” solar screens would benefit all Units at Maui Vista that have a sun issue in the mornings or afternoons.

- *Full retention side tracks keep the fabric in place and hold up to the Maui trade winds.*
- *Lanais and unit interiors would be cooler and offer more privacy ... while letting the owners retain their views and increase their usable living space to their properties.*
- ***Ground floor units*** ... *can have the same installation as their neighbors above, however they would have less utility of their extended lanai space when the screens are in use.*



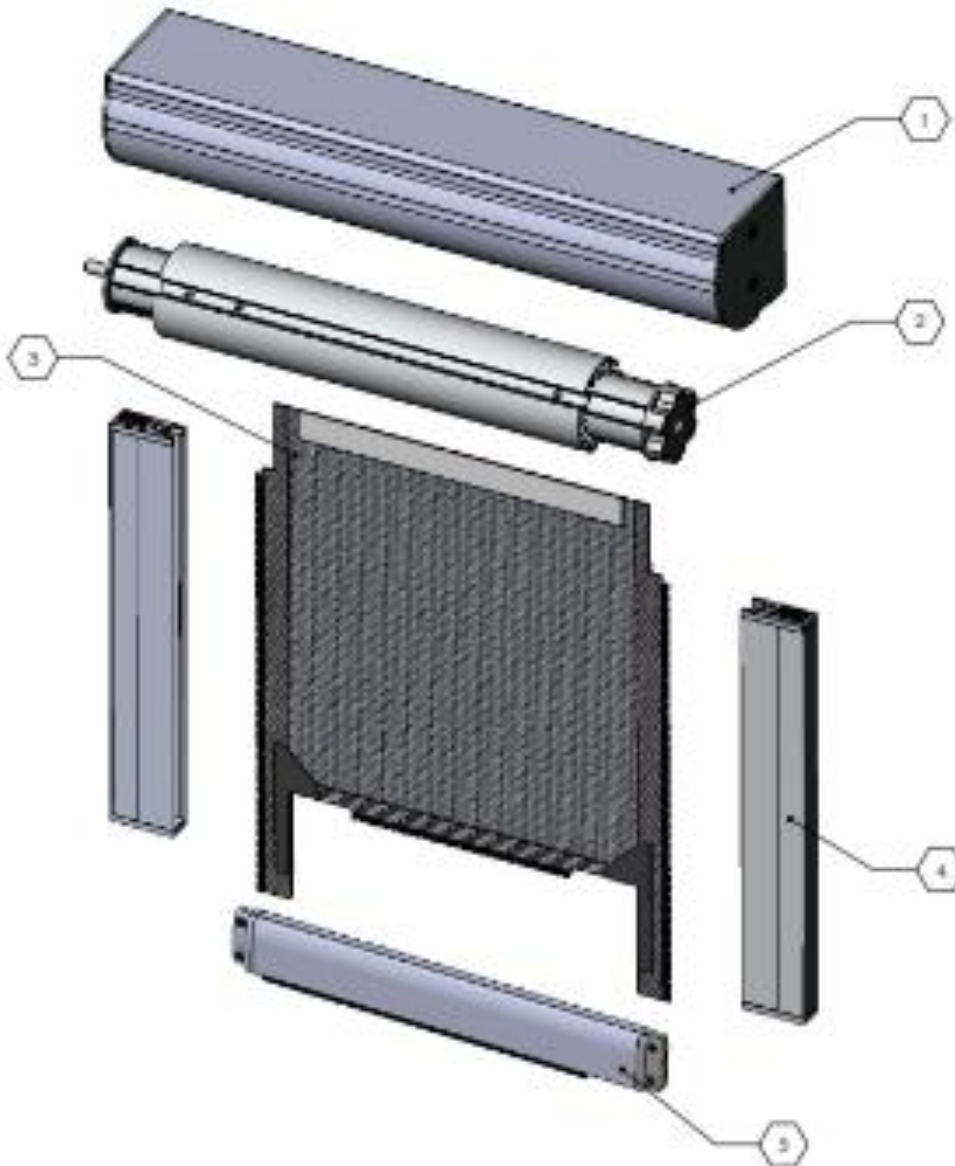
Product Details and Installation Information

- Rainier Full Retention Solar Screens

Overview – our line of Full Retention Solar Shade units are manufactured in Seattle by Rainier Industries. They are high quality, well designed units meant to blend neatly with the look of the existing structure. Thick gauge, powder coated aluminum side tracks and housing provide a finished look as well as protecting the fabric. The side tracks are “full retention” models designed to fully contain both sides of the fabric providing very high wind resistance. All fasteners are hidden.

- **Hardware** – all hardware components are either aluminum or stainless steel and are powder coated for rust prevention. Perfect for a sea side location.
- **Side tracks** - the full retention tracks are only 2 ¼” wide and are aligned with the head cover forming clean lines defining the sides of the unit.
- **Full Retention** – the side tracks are specially fitted with a zipper retention sleeve which will retain the entire length of the fabric sides. This system has been tested to over 50 mph.
- **Operation** – almost always motorized, but can be fabricated with a manually operated hand crank. No pull chains or cords are used as they are not strong enough for exterior use.
- **Motors** - Somfy Altus RTS tubular motors are installed into the roller tubes which support the fabric roll. The motors are not visible and are controlled with wireless (radio frequency) remote controllers.

Rainier – SRS: Simple Schematic



- **Hardware** – these screens are built for a marine environment and all hardware components are either aluminum or stainless steel. The aluminum is powder coated for rust prevention.

- **Full Retention Side tracks** - the side tracks are specially fitted with a zipper retention sleeve which will retain the entire length of the fabric sides. Similar size screens have been field tested to well over 50 mph.

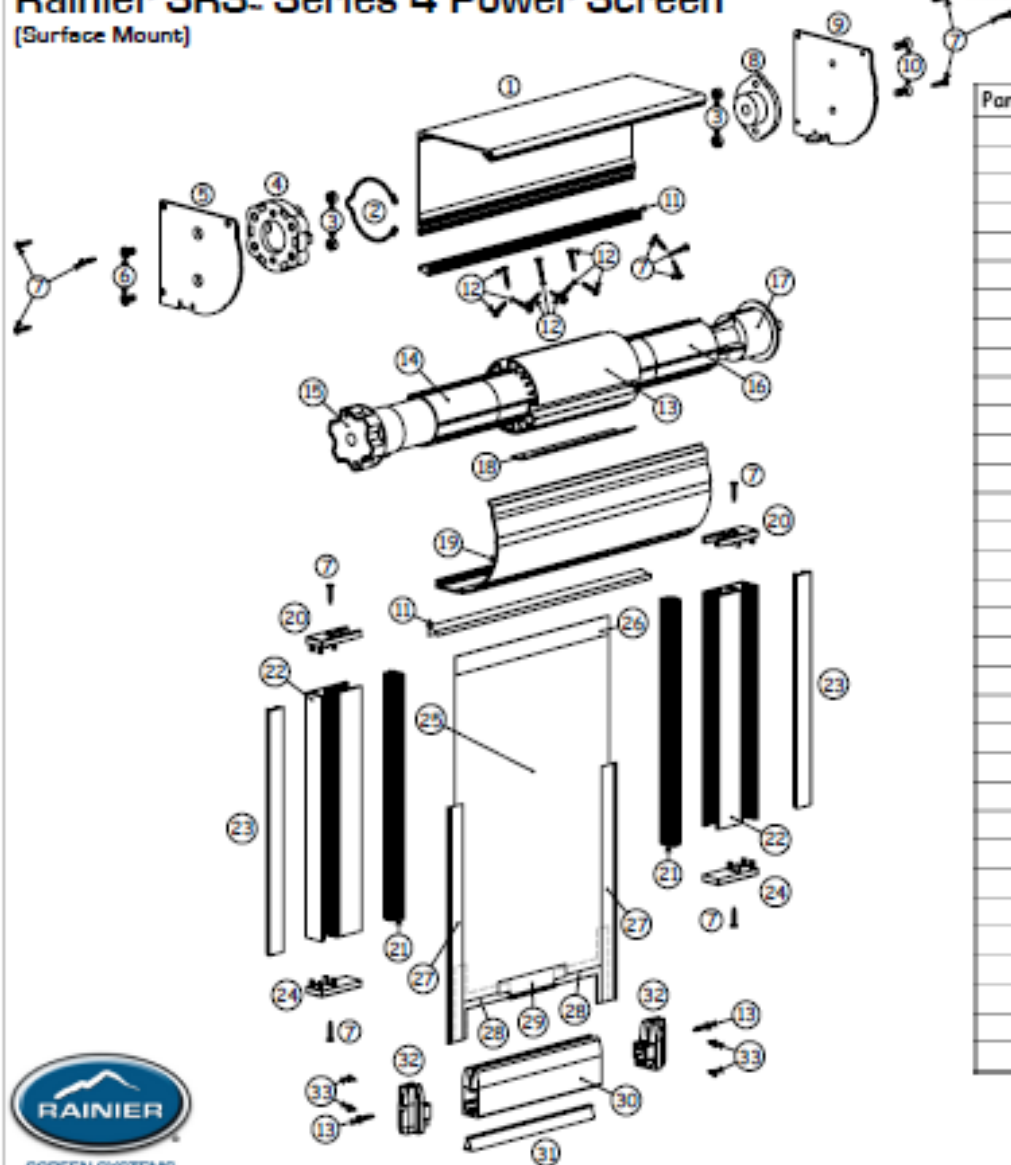
- **Operation** – can be either hand crank or motor operated ... (no pull chains or cords).

#	DESCRIPTION
1	SERIES 4 SRS HOUSING ASSEMBLY
2	SERIES 4 ROLLER TUBE ASSEMBLY
3	SRS FABRIC ASSEMBLY
4	STANDARD SIDE TRACK ASSEMBLY
5	HEM BAR ASSEMBLY

Rainier SRS- Series 4 Power Screen

(Surface Mount)

Rainier Industries, Ltd - 18375 Olympic Ave. S. - Tukwila, WA 98188
1.800.869.7162 - www.Rainier.com

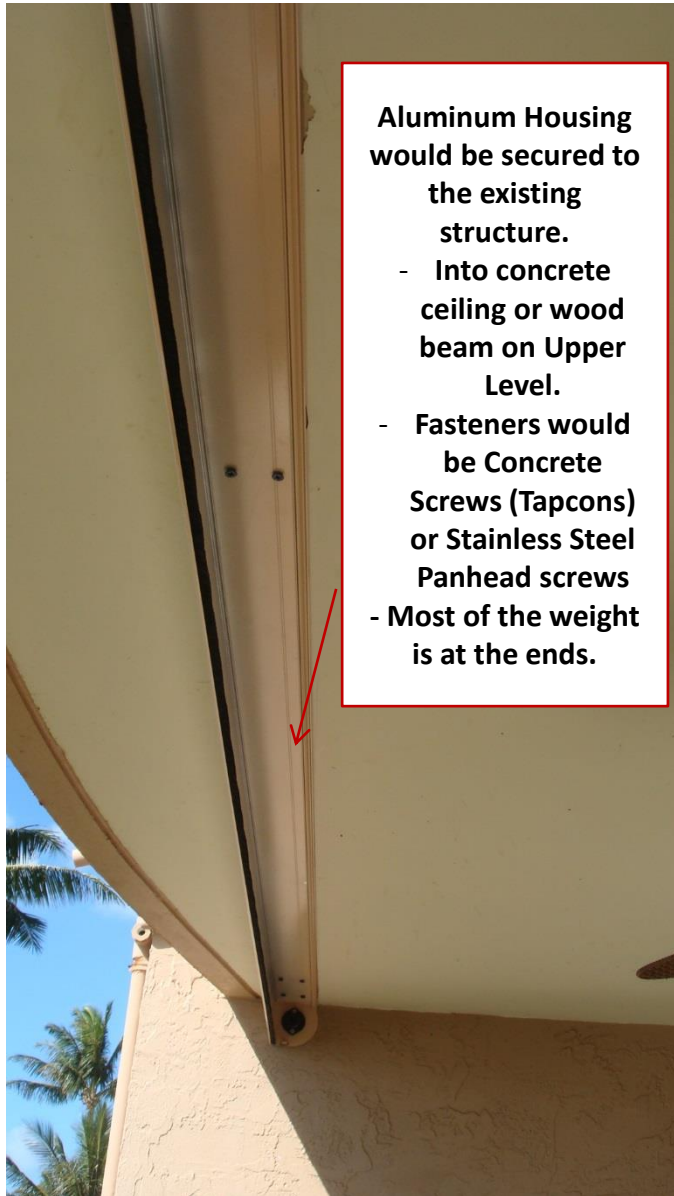


Part Reference	Qty	Description
1	1	Series 4 Housing Base
2	1	Motor Mount Spring Clip
3	4	M6 X 10mm Hex Head Nut
4	1	Motor Mount Bracket
5	1	Series 4 Left Housing End Cap
6	2	M6 X 12mm Flat Head Machine Screw
7	13	6-20X3/4" Self Drill Flat Head Screw
8	1	10mm Idler Mount
9	1	Series 4 Right Housing End Cap
10	2	M6 X 16mm Flat Head Machine Screw
11	2	1/2" Housing Brush
12	11	6-20X3/4" Self Drill Pan Head Screws
13	1	Series 4 Outer Roller Tube
14	1	Series 4 Inner Roller Tube (Motor)
15	1	Somfy Motor
16	1	Series 4 Inner Roller Tube (Idler)
17	1	10mm Spring Loaded Idler
18	1	Adhesive Hook
19	1	Series 4 Housing Cover
20	2	Standard Side Track Top Cap
21	2	PVC Side Track Retainer
22	2	Standard Side Track
23	2	Standard Side Track Cover
24	2	Standard Side Track Bottom Cap
25	1	Screen Fabric
26	1	Sewn Loop
27	2	Vertical Zipper
28	2	Reinforcement Tab
29	1	Horizontal Zipper
30	1	Hem Bar
31	1	Hem Bar Brush
32	2	Hem Bar End Cap
33	2	#6X3/8" Flat Head Top Screw

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PATENT PENDING



Detailed
Product
Schematic



Aluminum Housing would be secured to the existing structure.

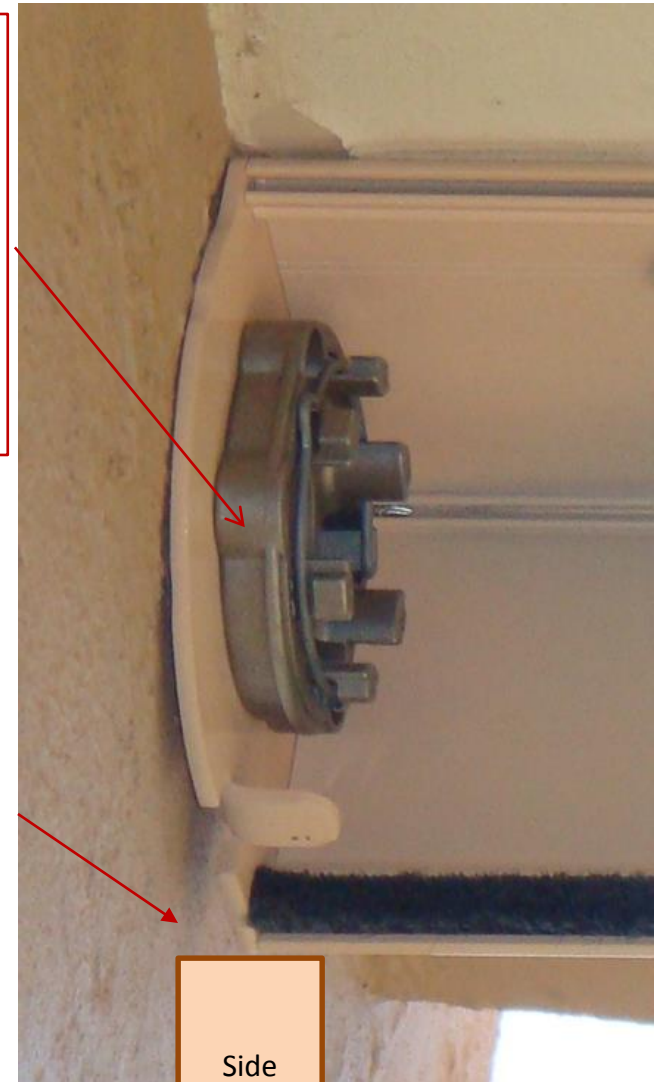
- Into concrete ceiling or wood beam on Upper Level.
- Fasteners would be Concrete Screws (Tapcons) or Stainless Steel Panhead screws
- Most of the weight is at the ends.

There are mounting brackets attached to both ends of the housing.

- these are how the roller tube and motor are secured to the housing.
- These are installed in the factory.

Sidetack fits up against the bottom of the housing.

Electrical wire can exit the housing right into the outside channel of the side track.



Side Track

Performance to Date – We have not had any issues during the past 10 years with any of our screens negatively impacting an existing structure.

- All hardware components are lightweight in their design, yet strong against the elements.
- All fasteners are either stainless steel (for wood/Steel) or concrete screws designed for penetrating and retaining into concrete.
- Fasteners are not installed so deeply as to cause structural impact or to contribute to spalling.
- Screens are designed and required to be retracted in the event of severe weather and strong winds. This allows the fabric and hembar to be safely taken off the elements mitigating the chances of structural damage.

Mechanical Engineering Studies – we have not done any detailed mechanical or structural engineering studies as a required condition of any of our installations.

- The Board at Hokulani Golf Villas did have their architects (Riecke, Sunnland, Kono) review our product and installation approach for that complex ... to their satisfaction. The screens there are much larger at 25' x 12.5'!
- We would be willing to assist any such review if the Maui Vista Board retains a structural engineering firm or architectural firm to review the implications of adding solar screens to your lanais.

Hokulani Golf Villas ... screens are 25 feet long x 12.5 feet tall



Approx. comparable size of
proposed Maui Vista screens

Motors and Electrical Information

Note: while 95% of purchasers select motorized screens, the option is available for a manually operated, gear driven screen. The manual operation is via a hand crank.

The Rainier Full Retention (SRS) Retractable Screens will all use Somfy Altus RTS Motors. Sizing will be the 535A2 motors below.

- ***These tubular motors are contained within the roller tubes, protected from the outdoor elements.***
- ***These are 110v motors ... drawing only 2.1 amps each.***
- ***The motors must be connected to a line voltage source (not switched) ... and operate via a wireless controllers which can either be hand held or permanently mounted to a wall.***



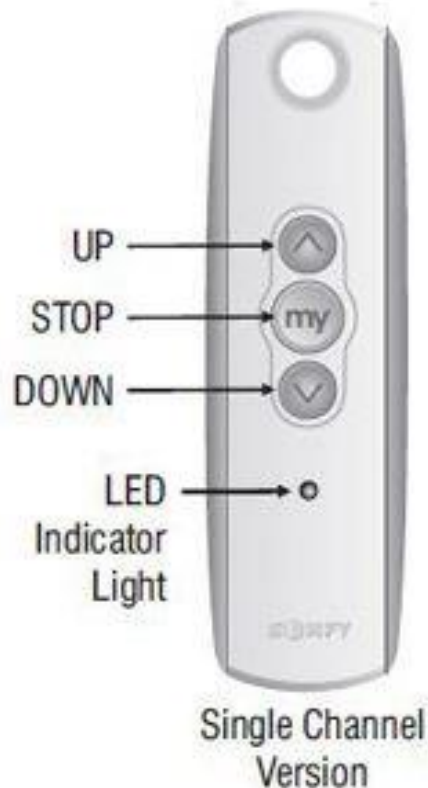
LT50 Altus RTS Range - Star Head Electronic Limit Switch

MOTOR TYPE	NOMINAL TORQUE		SPEED	ELECTRICAL RATING				LIMIT SWITCH CAPACITY	WEIGHT		THEORETICAL LIFTING CAPACITY*	
	In. lb.	Nm		Volt	Hz	Ampere	Watt		lb.	kg.	lb.	kg.
** 506S2 ALTUS RTS	53	6	38	120	60	1.1	125	250	4.58	2.08	53	24
** 510S2 ALTUS RTS	88	10	38	120	60	1.3	150	250	4.40	2.0	88	40
525A2 ALTUS RTS	220	25	20	120	60	1.6	180	250	4.73	2.15	220	100
530R2 ALTUS RTS	264	30	14	120	60	1.5	170	250	4.73	2.15	264	120
535A2 ALTUS RTS	308	35	20	120	60	2.1	240	250	6.10	2.77	308	140
540R2 ALTUS RTS	352	40	14	120	60	1.8	210	250	5.61	2.55	352	160
550R2 ALTUS RTS	440	50	14	120	60	2.1	240	250	5.61	2.55	440	200

** Also available in an RHT version

The Somfy Altus RTS Motors are operated via wireless remote controls using Radio Frequencies.

- ***Electrical wiring is not required for the remote controls***
- ***Owners would not interfere with each others screen operation.***
- ***There is a choice of a hand held remote (which is what we recommend) ... or an Onwall/Inwall version that is similar to a Decora look.***
- ***Owners that rent their units are often worried that renters will lose their handheld remote. In 10 years, we have yet to have this happen.***

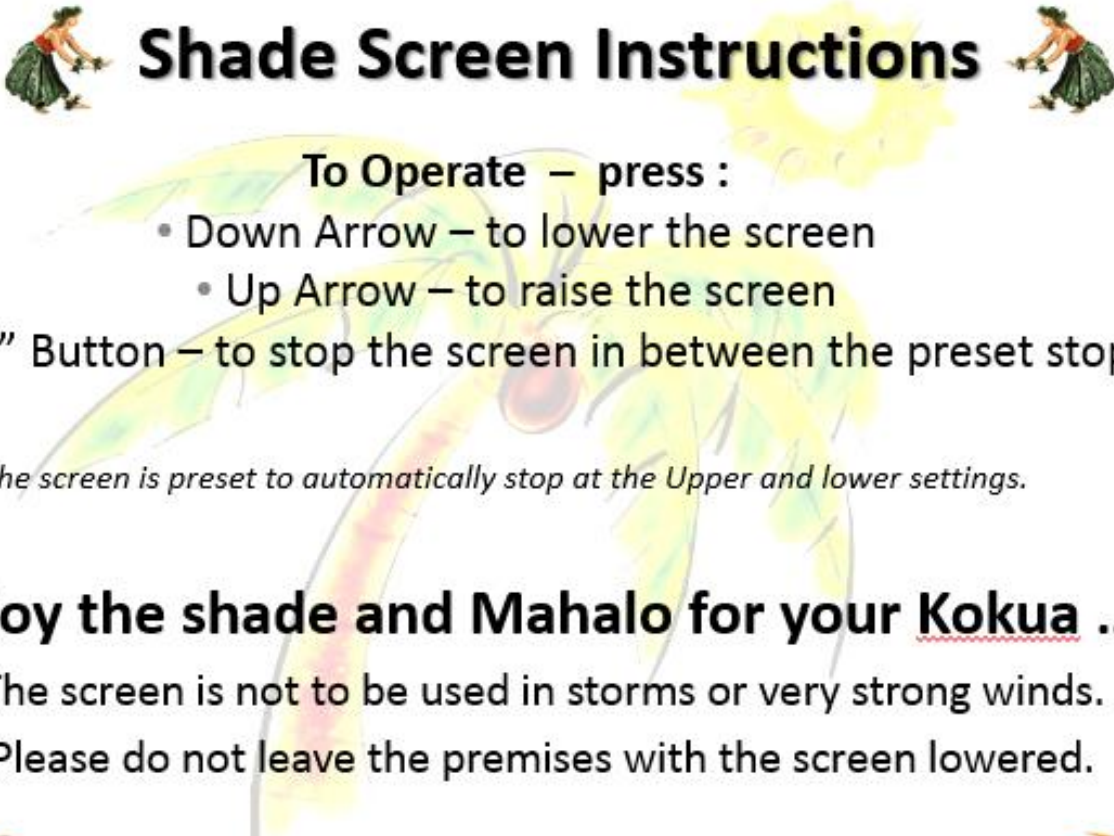




Handheld Remote



Inwall Remote

This is an example of Screen Instructions that owners in other complexes have used to instruct their guests on how to use the Solar Screens ...



 **Shade Screen Instructions** 



To Operate – press :

- Down Arrow – to lower the screen
- Up Arrow – to raise the screen
- “MY” Button – to stop the screen in between the preset stops

The screen is preset to automatically stop at the Upper and lower settings.

Enjoy the shade and Mahalo for your Kokua ...

- The screen is not to be used in storms or very strong winds.
- Please do not leave the premises with the screen lowered.

 (808) 879-9600 www.SkyShadesHawaii.com 

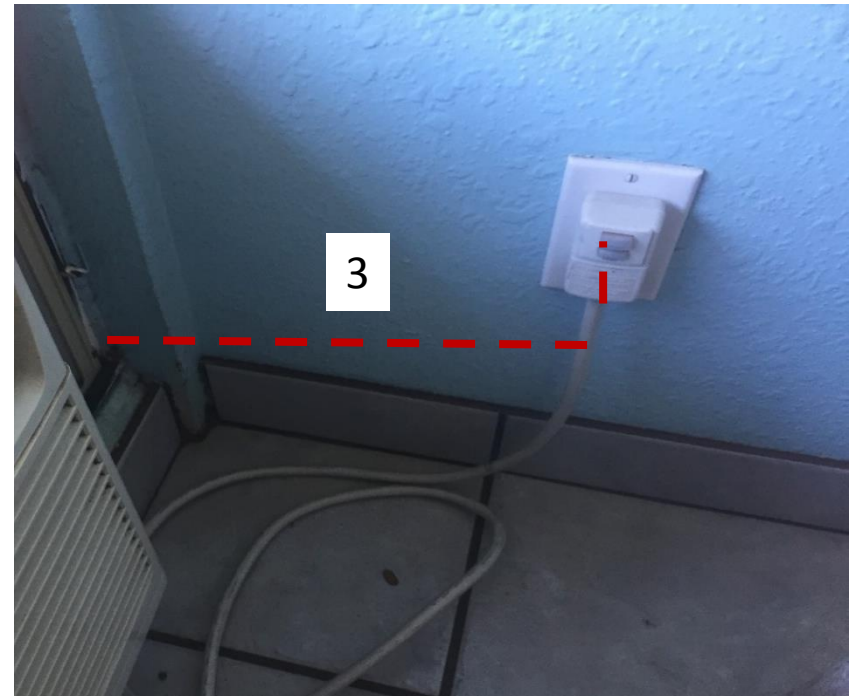
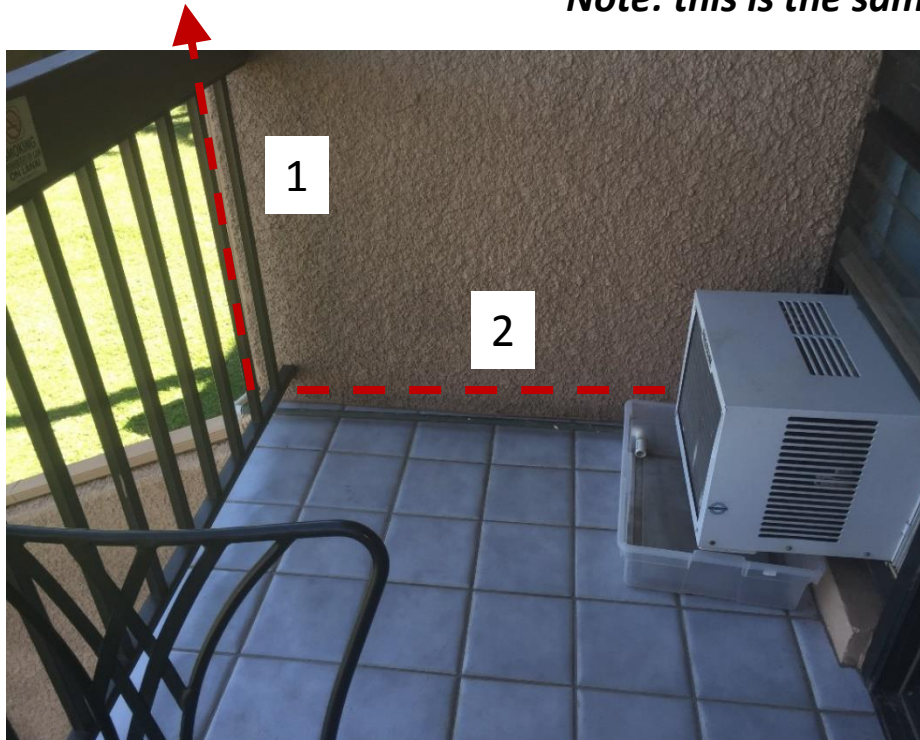
As there are no existing electrical outlets on the lanais ... the power for the motors would come from inside the units. (note: motors only draw approximately 2 amps)

- an existing electrical outlet closest on the interior wall would be the power source.*
- the screens would be ordered with a 24' cord (which is rated for exterior use). This length will get all the way from the motor to inside to the power source.*
- the power cord would run down from the motor, inside the sidetrack . It would exit the sidetrack about the level of the bottom railing connection.*
- the electrician would feed it through a piece of small, metal conduit fixed to the exterior wall and butted to the side track.*
- there would be a small access hole drilled into the side framing of the louver window frame for the wire to pass from the outside to inside of the unit.*
- on the interior, the wire would be put inside a small conduit secured to the interior wall and then run to the existing outlet where the electrician would hardwire it to the existing outlet. The electrician generally puts in a GFCI outlet as protection for the outdoor solar screen.*

Note: all wiring and electrical connections must be done by a licensed electrician. If the unit owner does not have an electrician that they use (most do not) ... then we recommend J.J. Mitchell Electric, license # C29120 as they know our products and will coordinate their timing with ours.

- 1- Power cord will come from the motor ... and be hidden and protected inside the sidetrack.
- 2- It will be protected inside a painted metal conduit (exterior wall) and will enter the wall through the metal framing of the louvered window.
- 3 – it will be routed to the interior electrical source. The interior wire will be enclosed in a conduit as determined suitable to the owners look and the type or wall construction that they have.

Note: this is the same methodology used at Leeinaala Condos



Estimated Costs

- Initial Installation
- Cleaning

Our estimates for the solar screens installed would be as follows ...

- different pricing for Top Floor ... and for Motorized versus Manual Operation (Hand Cranks)

		Ground Floor thru 3rd Floor		Upper Level Units	
		Motorized	Hand Crank	Motorized	Hand Crank
Solar Shade	Series 4 Solar Screen with Full Retention Side Tracks. (size = approx. 14 x 9)	\$2,681.02	\$2,590.02	\$2,873.02	\$2,782.02
Side Tracks	Recessed Side Tracks required for Inside Mount Installation	90.00	90.00	90.00	90.00
Hem Bar	Upgrade to Heavy Duty Hembar + Extra Weights	130.00	-	130.00	-
Remote	Somfy 1 Channel Handheld Patio Remote Controller	115.00	-	115.00	-
	Subtotal - Product & Installation	3,016.02	2,680.02	3,208.02	2,872.02
Freight	Estimated Freight & Delivery	200.00	200.00	200.00	200.00
GET	Hawaii GE Tax	133.98	119.98	141.98	127.98
	Total Estimate (excluding Electrician)	\$3,350.00	\$3,000.00	\$3,550.00	\$3,200.00

Electrician Estimate

(varies by time to install conduit and type chosen)

*Allow approx. \$150 - 200
for Electrical work*

Not Applicable

*Allow approx. \$150 -
200 for Electrical work*

Not Applicable

The Solar screens are designed for long term use outdoors. As with any outdoor, moving product ... they need to be cleaned and maintained periodically for optimal use and life.

Cleaning the Screens and Sidetracks:

- Hose down the fabric, housing and side tracks as needed.
- Let fabric dry before rolling back up and storing in the housing.
- Dirt in the side tracks can impair the ability of the screen to operate smoothly.
- The best thing you can do is to frequently and thoroughly clean the side tracks. If a hose is not available, the sidetracks can be cleaned with a spray bottle.
- Cleaning the tracks and lubricating them with a dry silicone spray periodically can restore smooth operation. **DO NOT use oil, grease, petroleum or oil base sprays like WD-40** — *these may attract dirt or impair the proper operation of your screen(s).*

Cleaning Service:

We currently do not offer a formal cleaning package for any of the other condos. If this is desired for Maui Vista ... we would estimate pricing depending on how we would perform the service.

- Performed Onsite without removing the screen fabric ... it would probably cost around \$100 - \$150 for us to do this.
- If we removed the screen and took it away for a more vigorous “deep cleaning” ... it would take two people to remove and reinstall as well as our cleaning time and materials. My estimate for this level of service would be approximately \$200 -250.

Fabricator and Warranty Information

Your Retractable Solar Screens will be fabricated by Rainier Industries in Seattle.

- *Rainier has been in business since 1896!*
- *They offer a complete line of products along the shelter, shade and display ranges ... and provide projects all over the world. From the fabric wrapped buildings of the London Olympic Stadiums ... to the printing inside most of the Starbucks across the USA.*
- *SkyShades Hawaii has been a Rainier Shade dealer since they established their Retractable Screen Division. We have been the Hawaii Distributor for the past four years.*



Address:

18375 Olympic Ave. South
Tukwila, WA 98188

Phone:

(425) 251-1800
(800) 869-7162

Shade Division Manager:

- Steve Sadenwasser
- Direct: 425.981.1294

<http://www.rainier.com/>





Rainier Screen Systems Limited Warranty

1. **Warranty.** Rainier Industries Ltd. (RAINIER), a Washington corporation warrants, to the first Purchaser only, the Rainier screen to be free from defective materials and workmanship, when properly maintained and under normal use and service, for a period of ten years following delivery. Should the screen prove defective within this warranty period, Rainier will repair or replace the defect, at Rainier's option. RAINIER does not warrant the fabrics, motors or electronics used for such screens. Rather, all fabrics, motors and electronics are warranted by the manufacturer and not directly by RAINIER. RAINIER will supply copies of such warranties upon request. Notwithstanding that RAINIER does not directly warrant the fabric, RAINIER will at its election, either pay the labor cost at no charge to the original purchaser to replace any such fabric itself during the period of the fabric warranty. Notwithstanding that RAINIER does not directly warrant motors and electronics, RAINIER will manage the replacement of warranted motors and/or electronics on behalf of Purchaser.
2. **Purchaser's Duties.** The Purchaser shall give written notice to Rainier, of any alleged failure of the screen system within this limited warranty period, no later than 15 days after the Purchaser learns of such failure.
3. **Disclaimer and Exclusion of Warranties.** There is no express or implied warranty, representation or condition of any kind (including without limitation warranty of merchantability or of fitness for use) except for the express warranty in paragraph 1 of this Limited Warranty, and no further warranty shall be implied by law.
4. **Exclusion.** This warranty and all of Rainier's obligations stated herein shall not apply to:
 - (a) any repairs or alterations made without the prior approval of Rainier;
 - (b) any screen damaged by misuse, abuse, vandalism, or accident, or Act of God;
 - (c) moderate fraying, curling or bowing which is a natural characteristic of fabric;
 - (d) moderate waffling or puckering of the fabric near a fabric seam;
 - (e) installation of replacement screen or parts;
 - (f) any clear window vinyl;
 - (f) any freight costs to ship product to or from our factory in Tukwila, Washington.
5. **Limitation of Liability.** It is understood and agreed that Rainier's liability, whether in contract, in tort, under any warranty, in negligence or otherwise, shall be limited to the undertaking set out above in paragraph 1 of this Limited Warranty, and under no circumstances shall Rainier be liable for special, indirect or consequential damages. The price stated for the items purchased is a consideration in limiting Rainier's liability.
6. **Limitation of Actions.** No action for breach of warranty shall be commenced by the Purchaser more than one year after the accrual of the alleged cause of action.

Warranties:

- Screen Hardware = 10 years
- Fabric = 10 years
- Somfy Electronics = 5 year

7. **Merger.** This written warranty is the complete, final and exclusive agreement of the parties with respect to the quality and performance of the screen and to any and all warranties and representations related to it.
8. **No Oral Modification or Waiver.** No modification of this warranty, or waiver of its terms, shall be binding on either party unless approved in writing by both parties.
9. **Governing Law.** This warranty, and the rights and duties of the parties under it, shall be governed by the laws of the State of Washington.