



MIRAGE PATIO AWNING

This publication covers installation for the following models:

- **Mirage w/ Direct Response**

RV



Read this manual before installing or servicing this product. Failure to follow the instructions and safety precautions in this manual can result in personal injury and/or cause the product to not operate properly.

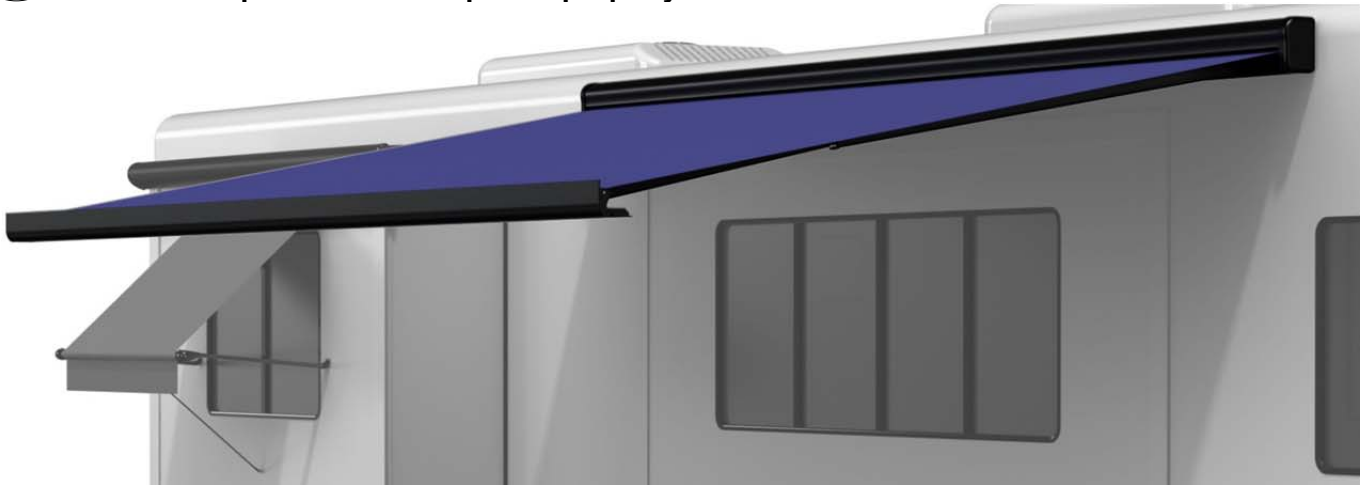


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PROPRIETARY STATEMENT

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The information contained in this manual pertains to the current configuration of the models listed on the title page. Earlier model configurations may differ from the information given. Carefree of Colorado reserves the right to cancel, change, alter or add any parts and assemblies, described in this manual, without prior notice.

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SAFETY INFORMATION



This is the safety alert symbol. It is used to alert individuals to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible personal injury or death.



Indicates a hazardous situation, which if not avoided, could result in death or serious bodily injury.



Indicates a hazardous situation, which if not avoided, may result in minor or moderate bodily injury.



Indicates a situation that may result in equipment-related damage.

General Safety:



This product can expose you to chemicals including Di-isodecyl phthalate (DIDP), Vinyl Chloride and Formaldehyde, which are known to the state of California to cause cancer or birth defects or other reproductive harm. For more information visit www.P65warnings.ca.gov



Shock Hazard. Always disconnect battery or power source before working on or around the electrical system.



Always wear appropriate safety equipment (i.e. goggles).



Always use appropriate lifting devices and/or helpers when lifting or holding heavy objects.



When using fasteners, do not over tighten. Soft materials such as fiberglass and aluminum can be "stripped out" and lose the ability to grip and hold.

Electric components in this product have been tested by the following agencies:



Motor: UL Recognized (USA)
CSA Approved (Canada)
Controls: UL Listed (USA & Canada)



OVERVIEW

GENERAL DESCRIPTION

The Mirage Patio Awning offers the coach owner an awning system that provides as much or as little shade as required. The canopies are housed in an aluminum case that easily blends in with the coach side wall. The canopy is made from Sunbrella® fabric.

Each unit is equipped with Mirage lateral support arms that are the strongest available on the market. No vertical arms interfere with coach sidewalls or equipment that may be mounted on the sidewalls or sidewall graphics. These arms can also be adjusted to vary the canopy pitch up to 2 feet (it is strongly recommended that service and adjustments be performed by trained technicians).

The unique and innovative 110V electronic control system provides Carefree's *Direct Response* system with interior pushbutton controls for standard extend/retract functions. When power is ON, the auto-retract system is engaged to automatically retract the awning in windy conditions. Sensitivity can be set to respond to a variety of wind speed conditions. An RF remote is standard with the *Direct Response* system.

Mirage Patio Awning Specifications

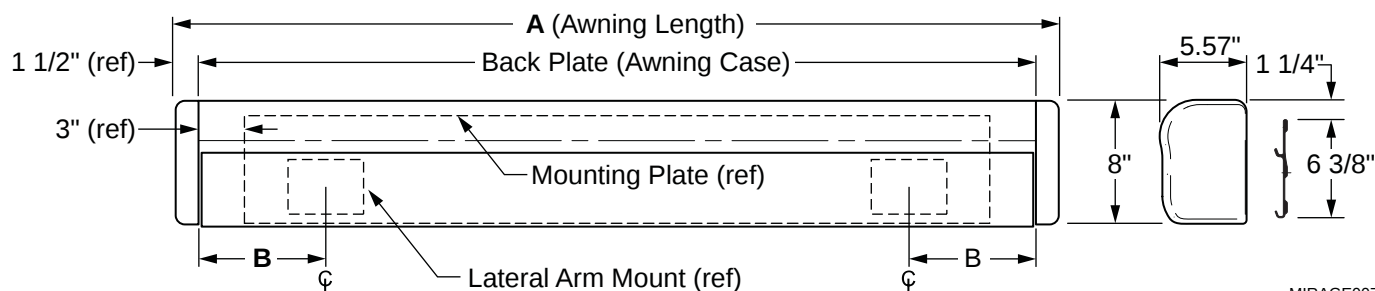
The following information is for reference only. Specific information is detailed in the installation instructions.

LENGTH 12' – 21' [3.66m - 6.4m] (in 1 foot [.305m] increments)

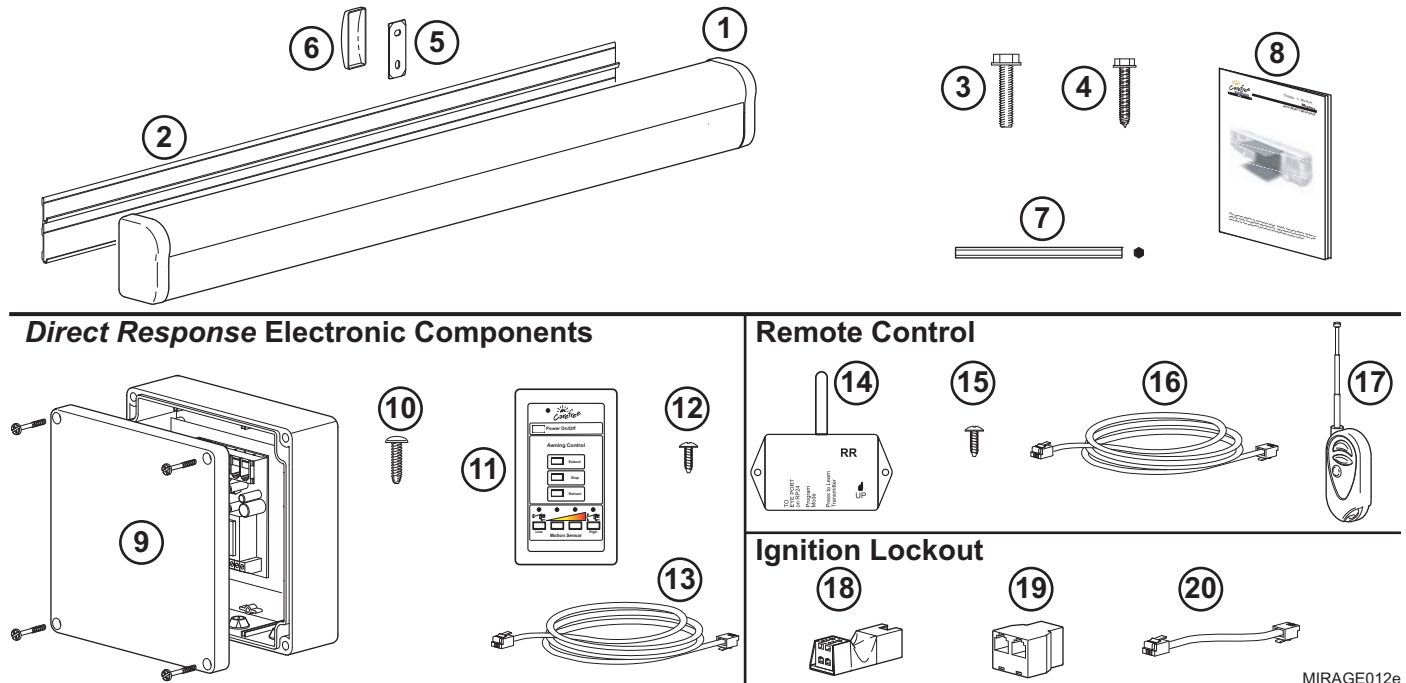
EXTENSION:	10' [3m]	DROP @ MIN. PITCH: 10" [25cm]			DROP @ MAX. PITCH: 35" [89cm]		
	Values are approximate, actual dimensions may vary with specific installations.						
SUPPORT:	Lateral Spring Arms 2 for 12' - 18'; 3 for 19' - 21'						
MOTOR:	Tubular	Available in LH or RH configurations					
	Power:	120V, 60Hz, 2.5A	Torque:	60nm	Speed:	14 RPM	
CONTROLS:	Direct Response™						
COLOR:	Hardware:	White or Black					
	Fabric:	Woven Acrylic (refer to sales literature for colors)					

APPROXIMATE WEIGHT (LBS.)

Awning Length	Weight	Dim B	Awning Length	Weight	Dim B	Awning Length	Weight	Dim B
12	134	6.5in	15	160	11.25in	19	194	17in
13	143		16	169		20	203	
14	152		17	177		21	211	
			18	186				



MIRAGE007a

COMPONENT CHECKLIST

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☒	ITEM	DESCRIPTION	QTY	NOTE
☐	1	Awning Assy	1	1
☐	2	Mounting Plate, Full Length, Standard	1	
☐	3	Screw, Rolock	3/8 x 1 1/2	Note 5
☐	4	Screw, Lag	1/4 x 1 1/2	3
☐	5	Backing Plate		6
☐	6	Backing Plate Cover		6
☐	7	Hex Key	7mm x 133mm	1 2
☐	8	Owner's Manual		1 2
☐	9	Control Box		1
☐	10	Screw, Pan Head	#8 x 3/4	4
☐	11	Key Pad, Single Awning		1
☐	12	Screw, Phillips Truss Head	#6 x 1/2	2
☐	13	Cable	60"	1
☐	14	RF Receiver, 433MHz		1
☐	15	Screw, Phillips Truss Head	#6 x 1/2	2
☐	16	Cable	60"	1
☐	17	Remote Control Key FOB, 433MHz		1 3
☐	18	Sensor, Ignition Lock-Out		1 4
☐	19	Splitter		1 4
☐	20	Cable	6"	2 4

- Notes:
1. Specific awning configuration is specified at time of order, including the awning length, LH or RH configuration, fabric etc. Check awning assembly against original purchase order.
 2. Place hex key (item 7) and Owner's Manual (item 8) with RV owner information. Installation manual, if included, is for installer reference.
 3. Additional remote control Key FOBs may be ordered separately (SR0015).
 4. Ignition Lock-Out is optional equipment that must be specified at time of order.
 5. For units 18' or shorter quantity for item 3 (screws) is 12. For units greater than 18', quantity is 16.

INSTALLATION

WARNING The Mirage awning has significant weight. The awning and attaching brackets must be securely attached to the structural frame of the vehicle. Consult the coach manufacturer to determine the type and position of the structural members and the structure's ability to support the weight. Failure to heed this warning can result in serious injury and property damage.

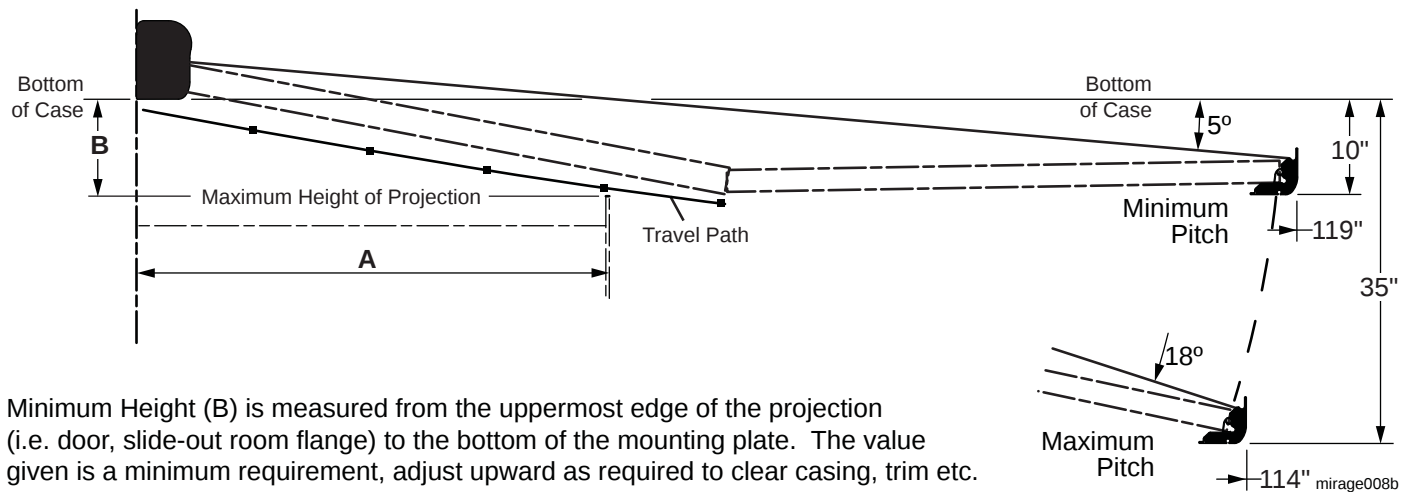


CAUTION The awning is extremely heavy. Moving and/or lifting the awning requires a minimum of 3 people. The use of a lifting device is strongly recommended.

REQUIRED PRE-INSTALLATION PARAMETERS

Prior to installing the awning, the installer must determine the layout of the specific construction elements to successfully assemble and mount the awning.

- Determine the location, size and type of structural framing in the area where the awning is to be mounted.
 - There must be structural framing at the awning mount locations. Fiberglass or sheet metal siding alone is **NOT** strong enough to support the weight of the awning!
 - If the framing is not obvious, it may be possible to use a stud finder or other similar device to locate the frame.
 - If in doubt, contact the coach manufacturer to determine the type and position of the structural frame.
- The awning is factory set with minimum pitch. Mounting height above a door opening or slide-out room must be adjusted for a greater pitch. The chart below provides the minimum distance from the top of a protrusion to the bottom of the mounting plate when the awning is set at MINIMUM and MAXIMUM pitch:



Door Width (A) →	0"	12"	18"	24"	30"	36"	42"	48"
B @ MINIMUM PITCH	2.5"	3.25"	4.25"	5.25"	6.25"	7.25"	8.25"	9
B @ MAXIMUM PITCH	2.5"	5.75"	8.25"	10.75"	13.25"	15.75"	18.5"	20.5"

- Determine the mounting locations for the control box and switch assemblies.
 - For 110VAC installations, the installer must provide enclosed junction boxes for all wire splices. Boxes are required in conformance with prevailing construction codes.
 - At the control box location, AC input is required. It is recommended that the installer provide a dedicated AC circuit for the awning system that is protected by an appropriate sized fuse/circuit breaker. Each patio awning draws a maximum of 3 amps.

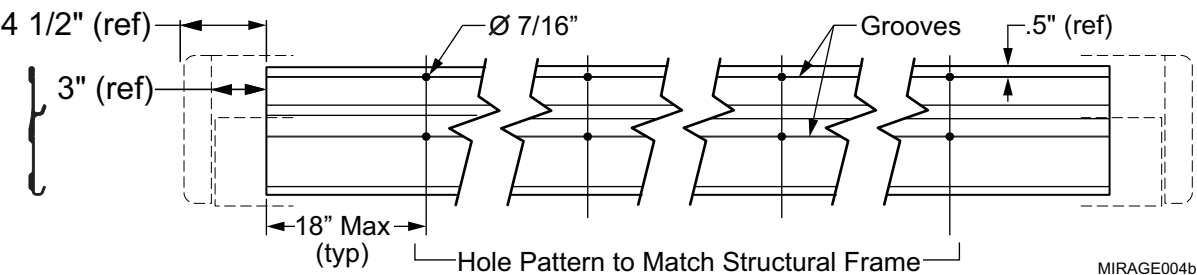
MOUNTING PLATE LAYOUT AND INSTALLATION

1. Determine the location of the awning:
- Mounting area must be plumb and clear of obstacles;

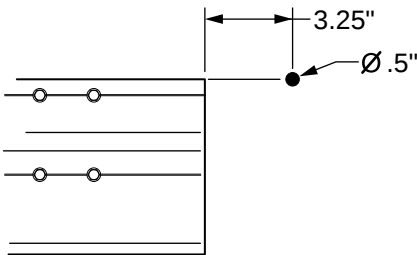
• The mounting plate is 9" shorter than the awning (w/ standard end caps); 6" shorter than the back plate. (Reference Figure 1).
2. Mark the mounting plate position with a chalk line ensuring that it is parallel to the ground. Include the end points of the mounting plate.
3. Use a non-permanent method of marking to temporarily mark the location of the structural framing in the mounting area.
4. Transfer the frame pattern to the mounting plate.
5. Below is the minimum number of required mounting locations. Each position uses two screws.

Awning Length	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'
# of Locations	4				5					6

6. On the plate mark the location of the mounting locations. The inner mounting locations should be spaced as evenly as possible between the outer mounting locations. Locations must match the frame location pattern. If a mounting location cannot match a structural member, refer to the "Alternate Mounting Plate Attachment Method" below.
7. On the mounting plate drill 7/16" holes at the marks made in the previous step. The grooves in the plate are the vertical locations for the holes. Each location has two holes.



8. Position the mounting plate on the coach wall using the marks from step 2. Horizontally position the plate as required.
9. On one end of the plate, use the plate as a template and drill an 11/32" pilot hole into the structure. Attach the plate using a 3/8-16 x 1 1/2 thread cutting screw.
10. Confirm position of plate and repeat step 6 on the opposite end of the mounting plate.
11. Continue to drill and attach using the 3/8-16 x 1 1/2 thread cutting screws until all mounting holes are done.
12. Drill one (1) 1/2" hole through outer wall as shown in **Error! Reference source not found..** RH configuration is shown, for LH configuration reverse end location. (Hole is behind the awning motor.)

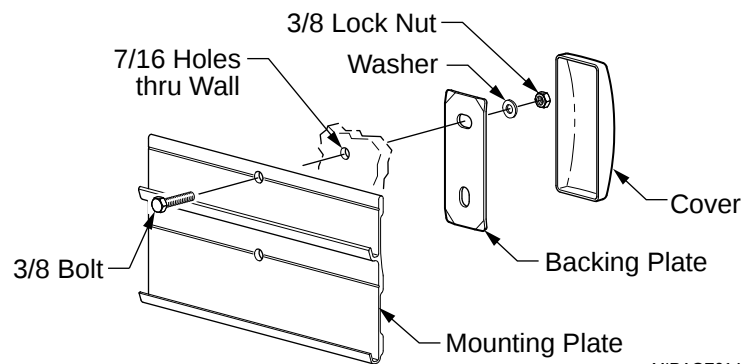


ALTERNATE MOUNTING PLATE ATTACHMENT METHOD

NOTICE This method should be used only as required. Primary attachment **MUST** be into the structure as described above.

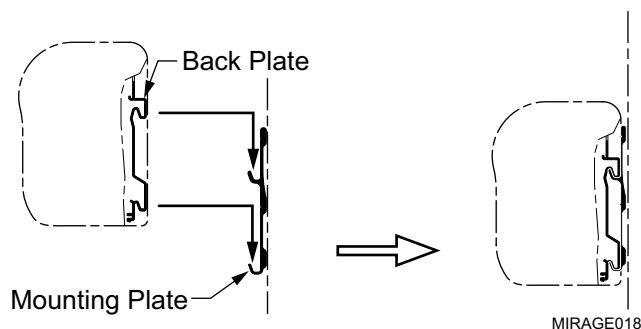
When it is not possible to attach into structure or if the screws will be exposed inside the coach, an alternate method is to use a backing plate and cover. The installer must furnish the 3/8 bolts, washers and lock nuts.

1. Using the mounting plate as a template, drill 7/16" holes through the wall. The inside of the wall must be accessible.
2. Attach as shown using a backing plate and cover. Torque nuts to 50 in-lb.



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MOUNTING THE AWNING UNIT



MIRAGE018

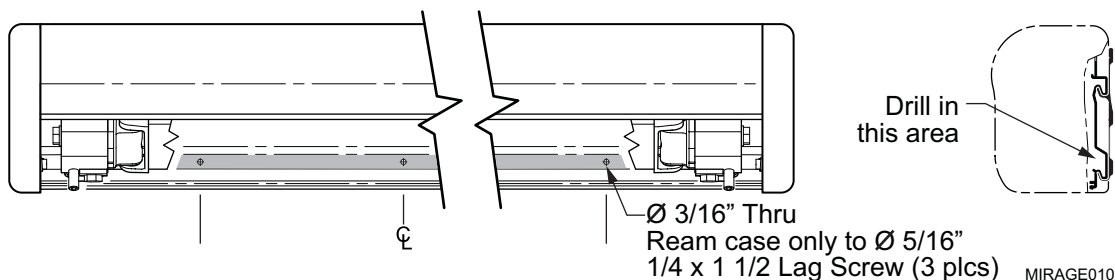
1. While lifting the awning, route the awning motor wires through the 1/2" hole drilled previously.

NOTE: It is necessary to first insert the sensor cable and connector through the hole then insert the motor wires.

2. Set the awning into the hooks of the mounting plate.
3. Adjust the horizontal position of the awning as required.

SECURING THE AWNING

NOTE: This procedure requires opening the awning. Follow the Manual Override instructions on page 13. These steps can be done after the electrical installation when motorized power is available.



1. Adjust the awning horizontally as required.
2. Open the awning approximately 3 feet to access the back panel of the awning case.
3. Drill three (3) 3/16" holes through the case, mounting plate and into wall (do not go through interior surfaces of wall) in the approximate areas shown above.
4. Ream out the holes in the case only to 5/16".
5. Attach the awning case to the mounting plate and wall using three (3) 1/4 x 1 1/2 lag screws.
6. From inside, seal the wires and access hole with a quality silicone sealant.

ELECTRICAL INSTALLATION



WARNING Shock Hazard. Always disconnect battery or power source before working on or around the electrical system.

IMPORTANT NOTICES:

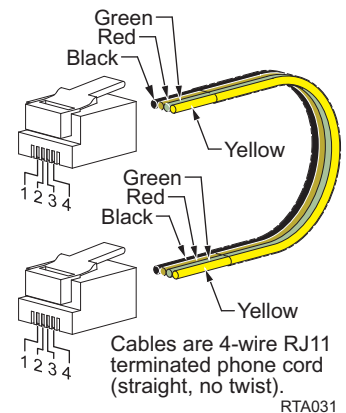
- Failure to follow the wiring instructions in this publication may void the motor warranty.
- All wiring must conform to NEC (National Electrical Code) and local codes.
- DO NOT wire two or more motors to one switch—No parallel wiring.
- The SO cable from the 110VAC awning motor can only pass directly through a wall, it can not be laid up in the wall and must be connected to NM wire or individual wires in conduit no more than 6 inches past the point of entry.
- The installer must provide enclosed junction boxes for all 110VAC wire splices. Boxes are required in conformance with prevailing construction codes. Installers are required to furnish the flush mounted, UL approved electrical duplex boxes where required.

DIRECT RESPONSE

The 110V electronic control system provides the user with simple pushbutton controls for the awning. The *Direct Response* electronic system is a premier auto-retract system that detects motion from adverse wind conditions and retracts the awning. Sensitivity is set by the user.

- System includes: Control box, Master control panel (w/ pushbutton awning control and windspeed sensitivity setting), motion sensor (factory installed).
- An RF remote control is provided with the *Direct Response* system.
- An optional ignition lockout is available.
- The switches use a 5VDC signal to operate the control box; thus eliminating the need for a junction box for the control panel.
- Components are connected using terminated cables. Terminated cable is 4-wire RJ11 terminated phone cord (straight, no twist). This does not include 110VAC power connections.

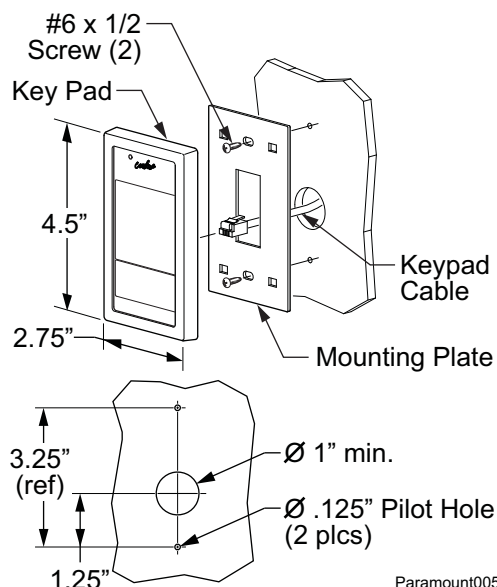
NOTE: Cable lengths of the furnished cables are listed in the chart with the system wiring diagram. If a connection requires a length greater than the supplied cable, the installer must provide a terminated jumper cable from the box location to the cable end. Terminated cables are 4-wire RJ11 terminated phone cord (straight, no twist).



Key Pad Installation

1. Locate the mounting location of the key pad. The key pad requires a flat area approximately 2 3/4" wide by 4 1/2" tall.
2. Use the mounting plate as a template and mark the location of the two mounting holes.
3. Remove the plate, mark and cut a 1" hole in the position shown.
4. Mount the plate to the surface using the included screws.
5. Route the 25 foot RJ11 cable from the control box location through the wall and mounting plate.
6. Attach the cable to the back of the key pad then attach the key pad to the mounting plate.

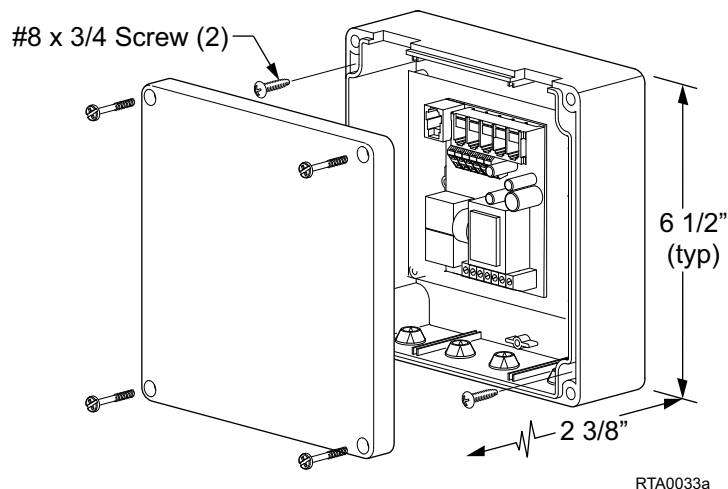
NOTE: The key pad attaches to the plate with magnetic latches. No additional attaching hardware is required.



Control Box Installation

(refer to wiring diagram on page 8)

1. Determine the location of the control box.
2. Remove the lid from the control box.
3. Attach the box using a minimum of two (2) #8 x 3/4 screws. The screws should be mounted in opposite corners.
4. Route a 2-conductor 14AWG NM wire w/ ground from the AC power source to the box. It is recommended that the installer provide a dedicated AC circuit that is protected by an appropriate sized fuse/circuit breaker. Each patio awning draws a maximum of 3 amps. Connect wires to the control box as shown in the wiring diagram.
5. Splice the awning motor wires to a 3-conductor 14AWG NM wire w/ ground. (Refer to note 1 on the wiring diagram on page 9.)
6. Route the cable wire from the motor to the control box and attach the wires to the terminals as shown.



NOTE: For RH motor configurations:

RED WIRE goes to terminal (1);

BLACK WIRE goes to terminal (2).

For LH motor configurations:

RED WIRE goes to terminal (2);

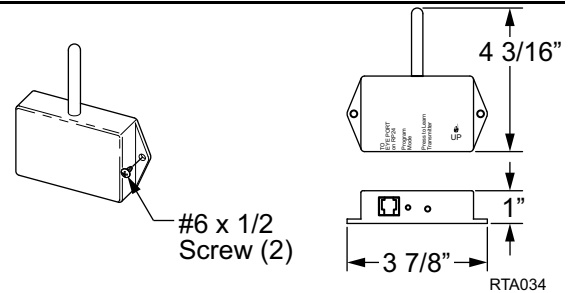
BLACK WIRE goes to terminal (1).

7. Connect the cable from the switch panel to "ACC" in the control box.
8. Connect the cable from the motion sensor to "AMD" in the control box.

NOTE: Use the slot cutouts in the box to route the phone cables.

Installing the Remote Receiver

1. Determine the location of the RF receiver:
 - 1.1 Do not mount the unit near heat producing elements such as LP appliances or engine exhaust components.
 - 1.2 For best reception, do not mount the unit near or on a metal surface.
 - 1.3 Mount the unit with the antenna pointing up.
 - 1.4 The included cable is approximately 60 inches long. Mount the unit close enough to the splitter or control box so that the cord can be connected without stressing the connections.
 - 1.5 Allow adequate room below the box to access the connector jack, programming button and indicator light.
2. Position the box and secure using two (2) #6 x 1/2" screws.
3. Connect the cable to the receiver.
4. Route the cable to the splitter; or, to the control box and connect to "EYE".



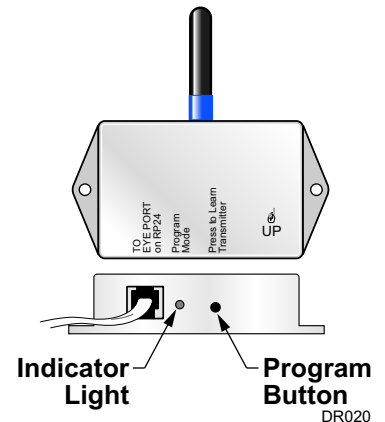
PROGRAMMING THE REMOTE RECEIVER

These instructions apply to the current 433 MHz configuration of the remote and receiver (RR version 5). For older versions refer to the Service Manual listed on the inside of the front cover.

1. Power to the control box must be on.
2. Press and release the "Press to Learn Transmitter" button on the bottom of the receiver box. The receiver is in program mode when the red light comes on.
3. Press and release the stop button on the remote. The red light will go out after the receiver learns the remote signal.

NOTE: Pressing the stop button will cause the blue up arrow button to default as the open (extend) function. If a function button is pressed to train the receiver, it will be programmed as the open (extend) button. Example: Pressing the bottom button will program the bottom button for extend and the top button as retract.

4. Repeat for each additional remote.



OPERATIONAL NOTES:

- Transmitter and receiver operate on a frequency of 433 MHz.
- The receiver exits the program mode after ten seconds.
- If the light does not come on above, the memory is full and must be cleared. If the light still does not come on, check the continuity of the cord between the boxes and repair or replace as required. Pin 1 of the 1st connector goes to pin 1 of the 2nd connector etc.
- If the light does not go out in above, the receiver already knows the transmitter's signal or the battery in the remote needs to be replaced.
- To clear the memory: PRESS AND HOLD the transmitter learn button for 5 seconds. While holding the button, the indicator light should be OFF for the full 5 seconds then come on.
- The system may be programmed for up to 5 remotes. Additional remotes may be ordered separately.

Ignition Lockout Sensor Installation (Optional)

Two ignition lockout sensors are available with the Direct Response System.

- The STD ignition lockout module disables the extend function when the module receives a current through a switched 12VDC circuit.
- The RTL ignition lockout module will fully retract the awning and disable the extend function when the module receives a current through a switched 12VDC circuit.

A switched 12VDC source is a line that is "hot" when the ignition switch is in the on position; or, a 12VDC circuit through a relay that is "hot" when a specific condition is met (i.e. releasing the parking brake). Relays are not furnished.

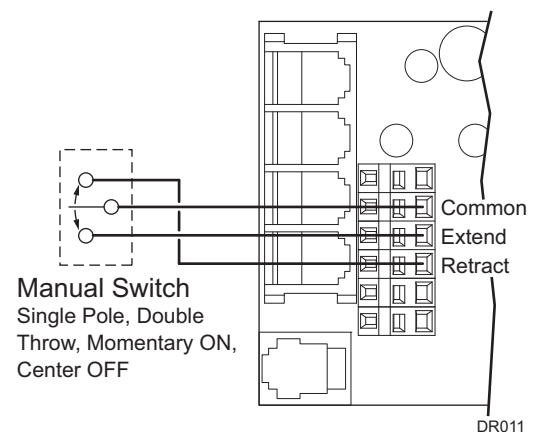
1. Disconnect power to the awning. Shut off the power source or pull the appropriate circuit breaker.
 2. Locate the control box for the Direct Response System.
 3. Open the cover of the control box.
 4. For Single Awning Applications:
 - 4.1. Disconnect the remote receiver cable from the "EYE" port in the control box. Do not disconnect the cable from the receiver box.
 - 4.2. Connect the supplied 6" cable to "EYE" port in the control box.
 - 4.3. Attach the splitter to the other end of the cable.
 - 4.4. Plug the cable from the remote receiver into the splitter.
 - 4.5. Attach the Lock-Out Sensor to the end of the 60" cable. Route the cable as desired and connect the cable to the splitter.
 - 4.6. Proceed to step 6.
- NOTE:** Wires to the module are not pin specific.
5. Attach one 18-gauge wire to a terminal of the sensor and route the wire to a suitable 12VDC ground.
 6. Attach a second 18-gauge wire to the second terminal of the sensor and route the wire to a SWITCHED 12VDC source.
 7. Bundle and secure the sensor, cable and wires as required.
 8. Reattach the control box cover.

OPTIONAL MANUAL BYPASS SWITCH

Installers may elect to install a manual bypass switch for testing or emergency operation of the awning. The simple switch allows the operator to extend or retract the awning without using the keypad control panel.

1. Open the control box and identify the terminal block next to the phone cord jacks.
2. Connect the switch to the terminal block as shown in the diagram.

The switch is a single pole, double throw, momentary ON, center OFF. Components are installer furnished.



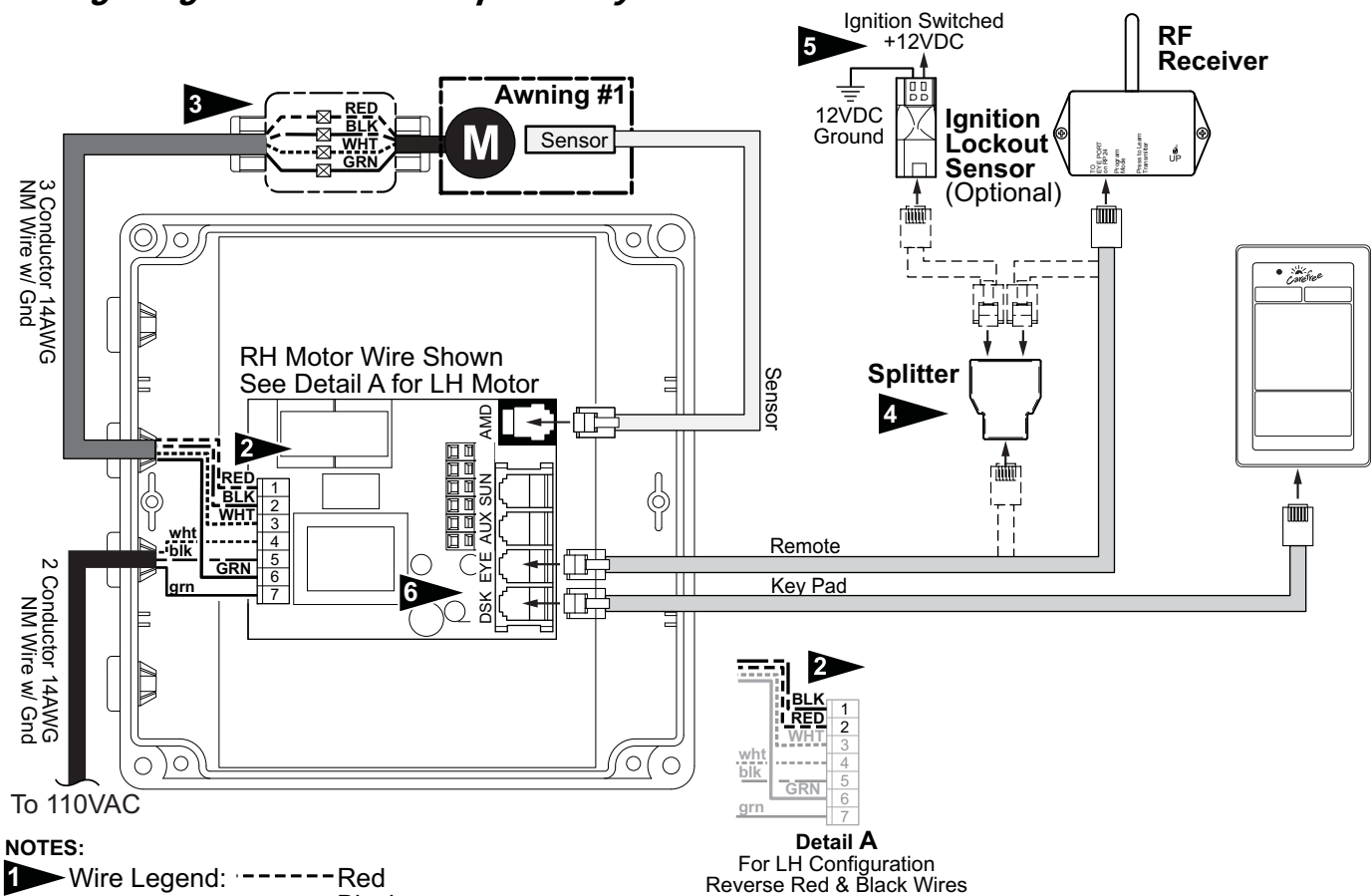


Figure 1. Wiring Diagram – Direct Response System.

DR012a

FROM		To (RH CONFIGURATION)		To (LH CONFIGURATION)	
Motor	Red	Control Box	1	Control Box	2
	Black		2		1
	White		3		3
	Ground		6		6
AC Power Source	White	Control Box	4	Control Box	4
	Black		5		5
	Ground		7		7
Awning Sensor	10' Cable	Control Box	"AMD"	Control Box	"AMD"
Key Pad	60" Cable	Control Box	"DSK"	Control Box	"DSK"
Splitter	60" Cable	Control Box	"EYE"	Control Box	"EYE"
Receiver	60" Cable	Splitter		Splitter	
Ignition Lockout	60" Cable	Splitter		Splitter	

Notes: 1. Cable lengths are the lengths of the furnished cables. If a connection requires a length greater than the supplied cable, the installer must provide a terminated jumper cable from the box location to the cable end.

Testing the System

1. Press the POWER "OFF". The POWER ON/OFF button disables all functions including Auto-Retract and the RF remote if installed. It does not disconnect the 110VAC power.
2. Press the POWER "ON". The LED indicator will come on solid when power is ON.
3. Press the EXTEND button, the indicator LED should dim and fast flash when the button is pushed. Observe the awning, it should fully extend. The system performs an auto-tension action when the awning is fully extended. The awning rolls in reverse to tension the fabric. The auto-tension feature works only with the extend function when the awning is fully extended or the stop button is pushed while extending.
4. After the awning is fully extended, press the RETRACT button, the indicator LED should dim and fast flash when the button is pushed t. Press the STOP button.
5. When the STOP button is pressed, the awning will stop.
6. Press the RETRACT button, allow the awning to retract fully.
7. Test the Auto-Retract function:
 - Fully extend the awning.
 - With the AUTO-RETRACT ON, set the WIND SPEED to the lowest setting.
 - Create a firm but gentle vertical rocking motion with the leading edge of the awning. The awning should retract after 2-3 seconds of the motion.
8. *If the optional Ignition Sensor is installed:*
 - Partially retract the awning.
 - Turn the ignition key ON.
 - Press the EXTEND button. The LED should flash for 2 seconds then shut off and the previous function LED will come back on.

Testing the Key FOB

1. Repeat steps 3 thru 5 using the key FOB.

NOTE: Power ON/OFF and the Auto-Retract can only be operated at the master control panel.

**For problems not covered above, refer to the service manual available on-line
@www.carefreeofcolorado.com**

OPTIONAL LED LIGHTING SWITCH INSTALLATION

An optional factory installed LED light strip is available for the Mirage awning. The strip is mounted in the lead rail; the harness is routed through the awning with the Direct Response cable.

NOTE: Installers may choose to furnish the control switch. The installation requires that the power line (+12VDC) be attached to a dedicated 2A circuit breaker or a 2A in-line fuse must be installed between the switch and power source. For easy access, locate the fuse close to the switch.

1. Route the harness into the vehicle with the Direct Response cable and the motor power cable.
2. Determine the location of the switch.
3. At the switch location, cut a 1 1/8" x 1 1/2" hole.

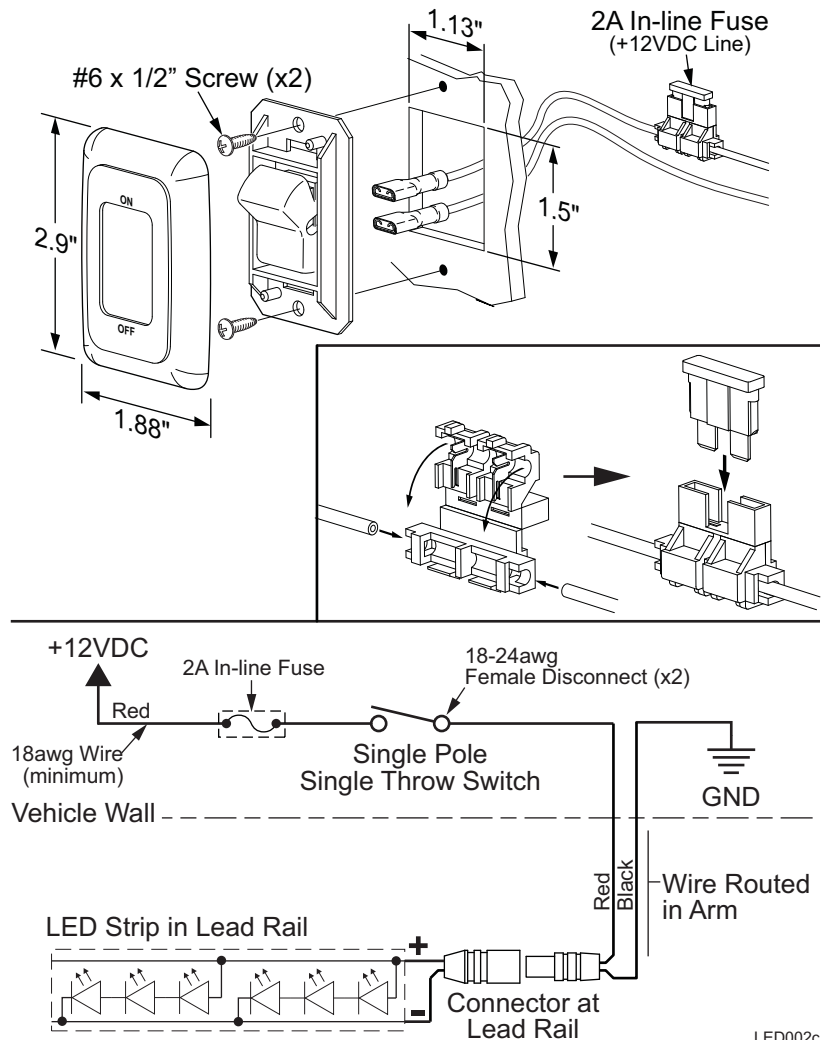
4. Wire the switch as shown below. Wire terminals at the switch are .187, 18-24 awg female disconnects.

NOTE: Allow adequate slack in the 12VDC power line so that the in-line fuse (installed in step 4) can be accessed from behind the switch.

5. Install the in-line fuse:
 - 5.1. Near the switch, cut the red 12VDC power line to the switch. Do not strip the insulation.
 - 5.2. Insert a wire end into one of the wire channels until it butts up against the stop.
 - 5.3. Fold that half of the connector body over until the element contacts the wire. Use pliers to crimp the connector closed.
 - 5.4. Repeat for the second wire end.
 - 5.5. Slide the fuse into the fuse port. Ensure that is firmly seated.
6. Press the in-line fuse, wires and switch into the mounting hole. Secure the switch using two (2) #6 x 1/2" screws.

7. Snap the switch bezel over the switch frame.

Kit SR0101 is available from Carefree and includes switch, fuse holder and 2A fuse.



LED002c

STANDARD SYSTEM ADJUSTMENTS

MANUAL OVERRIDE

If 110V power is not available to the coach, the Mirage awning can still be safely retracted using the manual override. The bypass may be accessed from inside the case on the motor housing or from the top of the case above the motor housing.

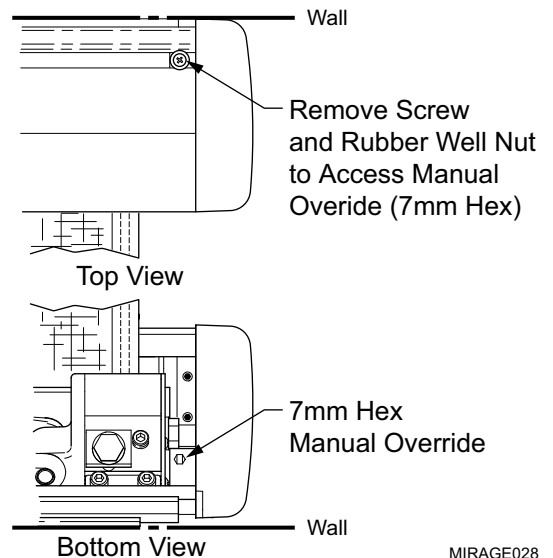
To use the inside bottom access: The awning must be open a minimum of 8" to afford access to the override.

To use the top bypass access: Remove the screw and well nut that is used to secure the end cap.

1. Chuck the 7mm hex key into a 3/8" battery powered drill.
2. Insert the hex key into the manual override on the awning. For the top access, it will be necessary to locate the hex by feel; it is not visible with the key inserted in the hole.
3. Operate the drill in the forward (clockwise) direction to close the awning. Reverse the drill to open the awning.

NOTE: When using the bottom override, the awning can only be closed within 6-8". It will be necessary to use the top access to close the awning completely.

4. When done, return the screw and well nut to the top of the case if removed.



MIRAGE028

ADJUSTING THE PITCH

NOTICE During installation or when the pitch of the awning is adjusted, it is important that the lead rail is parallel to the awning housing.

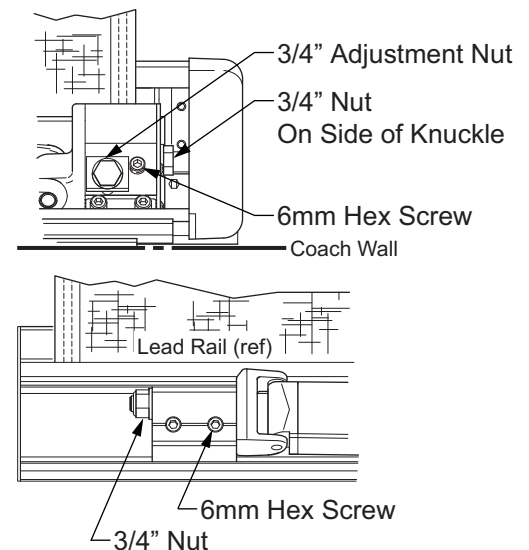
1. Extend the awning fully.
2. On one end, loosen the 6mm hex screw located on the spring arm knuckle.
3. SLIGHTLY loosen the 3/4" nut on the side of the knuckle.
4. Turn the 3/4" adjustment nut located on the bottom of the knuckle. CLOCKWISE raises the pitch, COUNTERCLOCKWISE lowers the pitch.

NOTE: When raising the pitch, it is helpful to have a second person lift up on the lead rail.

5. Repeat steps 2 through 4 for the other end.
6. When the pitch adjustments are completed, tighten the 6mm screw and the 3/4" nut on the side of the knuckle.

When the pitch is adjusted, it is necessary to adjust the angle of the lead rail for the awning to close correctly.

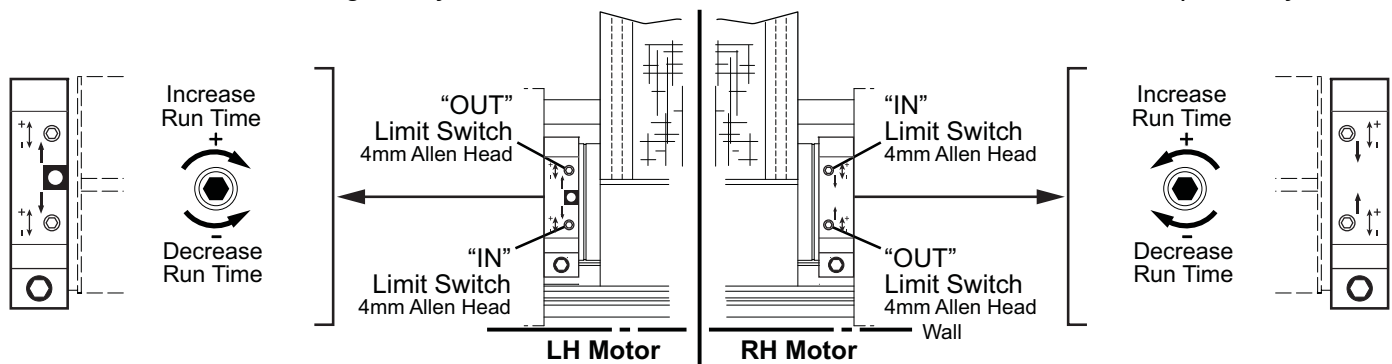
7. SLIGHTLY loosen the 3/4" nut on the side of each arm knuckle on the lead rail.
8. Turn the INSIDE 6mm hex screws of each knuckle to increase or decrease the angle of the lead rail. The face of the lead rail should be parallel with the coach wall.
9. When the lead rail adjustments are completed, tighten the 3/4" nut on the side of the knuckles.



MIRAGE024

SETTING THE MOTOR LIMITS

The motor limit switches are preset at the factory for best operation. The "OUT" limit switch is used to stop the motor when the awning is fully extended. The "IN" limit is NOT USED with the *Direct Response* system.



The limit switches are located inside the case, near the end cap. To access the switches, extend the awning 6-8".

MIRAGE023a

Adjusting the OUT Limit Switch

NOTE: During normal operation, the awning will extend out then roll back slightly to tension the fabric.

1. Extend the awning out completely.
2. Confirm that the arms are fully extended. The motor should stop and the fabric should be tight. If the motor continues to run, the fabric will sag; or, if the motor quits before the arms are fully extended, it will be necessary to adjust the "OUT" limit switch.

NOTE: It is best to make the adjustments in increments of a single turn. 3 full turns of the screw equals approximately 2" of fabric extension.

3. If the fabric sags:
 - 3.1. Retract the awning until the fabric is tight then retract an addition 10"-12".
 - 3.2. Using a 4mm Allen wrench turn the "OUT" limit switch COUNTERCLOCKWISE to reduce the time the motor runs.
 - 3.3. Extend to confirm that the adjustment is correct.
 - 3.4. Repeat the procedure until the awning extends correctly.
4. If the arms do not extend completely:
 - 4.1. Retract the awning approximately 10"-12".
 - 4.2. Using a 4mm Allen wrench turn the "OUT" limit switch CLOCKWISE to increase the time the motor runs.
 - 4.3. Extend to confirm that the adjustment is correct.
 - 4.4. Repeat the procedure until the awning extends correctly.

Adjusting the IN Limit Switch

NOTE: The "IN" limit switch is not adjusted with the Direct Response system. The system electronics monitors the motor and shuts the motor off when the awning is fully retracted.

If the IN limit switch is accidentally adjusted, the motor may shut off before the awning is fully closed. If this occurs, turn the "IN" adjustment screw to INCREASE the motor run time. It is not necessary that the screw matches the closed position.

NOTE: It is normal for the lead rail to slightly relax after the awning closes completely.



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