

SUNAIR® & SUNSTAR®

Lateral Arm Awning

Installation



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Specifications and instructions subject to change without notice

Congratulations on your SUNAIR® awning purchase. To install the SUNAIR® and SUNSTAR® awning we recommend using 3/8” bolts. The length of the bolts should be 4 – 7” or longer and vary in size depending on the installation. Measure the thickness of the wall to make sure you will not penetrate the inside of the wall. Make sure the bolts are fastened to studs, headers, joists, or other structurally sound members. Plywood alone will not support the awning. Wind is the largest factor affecting the awning. Even moderate winds put great strain on the brackets and installation, and that is why it is important that the awnings are fastened and installed properly. Many types of installations exist. Always check with your fastener supplier for the correct bolts and size. Minimum two bolts are needed for each wall bracket, and three (3) for each roof bracket. When installing into wood make sure the bolts penetrate at least 2 ½ – 3” into solid wood.

Make sure the wall where you are intending to install the awning is straight and the awning will fit in the desired space and uninterrupted by downspouts, lights, or other obstructions. If the wall is not straight, you will need to shim it out with proper spacers. There are certain areas on the awning frame where you can not locate an awning bracket like where arms shoulders and center supports (if configured) are located on the support tube. Lay out the awning on the deck or patio and make sure that your bracket location on the wall will not interfere with these areas of the frame. If you are having difficulty locating studs from the outside, a great way to find the center of studs in a wall is to locate studs on the inside of a house with a stud finder, and then measuring the distance to the glass edge of a window. Transfer this same measurement back on the outside wall. Use a 1/8” drill bit for probing as it can easily be caulked. Before you bolt into wood, always predrill the hole with a 1/4” hole to fit a 3/8” thick installation bolt. It is not recommended to use an electric “Impact” wrench to tighten the bolts. Do not over tighten the bolts as you might strip the threads. If mounting on the wall under an overhang, allow at least one inch (1”- 1/2”) between the top of the bracket and the overhang for the fabric roller tube.

WARNING!

<u>Unit size:</u>	<u>Number of brackets</u>
8 – 14 ft wide	3 (XP 4 ea.)
15 – 17 ft wide	4
18 – 20 ft wide	5
21 – 28 ft wide	6
29 – 33 ft wide	8
34 – 40 ft wide	9
41 – 50 ft wide	11

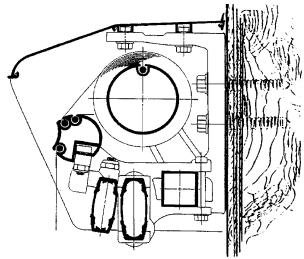
Note: XP awnings will have one extra bracket configured per awning (see above).

The Awning Arms are spring loaded and under heavy tension. Do not attempt to remove an arm or fabric without referring to special instructions. Always check to see, that the proper number of installation wall brackets are supplied with your awning. If needed, add more brackets, see chart to the Left. Sunair® makes no guarantee expressed or implied that any of the processes described in these instructions are correct for your particular installation. These instructions are only intended as a general guide with typically utilized practices within the industry. You should consult an engineer / building expert and a fastener supplier on your own too determine the correct or best method to install your awning and for the correct bolts to use for your application. Sunair is not responsible for omissions or inaccuracies contained in this document whether due to misprints, translations or Transcriptions.

INSTALLATION TYPES:

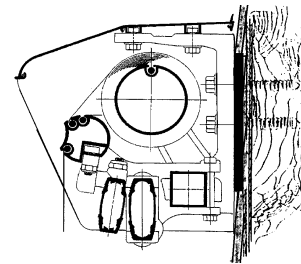
Wood Frame or Clapboard Wall

If the wood wall or wood siding is a hard surface it is usually possible to install the bracket right on the wood surface itself. Nail holes on the outside usually gives you an indication of where studs are located. Doors and windows can be used to find the studs and headers. Make sure the bolts are long enough to anchor 2 1/2" - 3" into the wood stud or headers. Always pre-drill the holes to avoid splitting the wood stud.



Vinyl Siding Option A (standard)

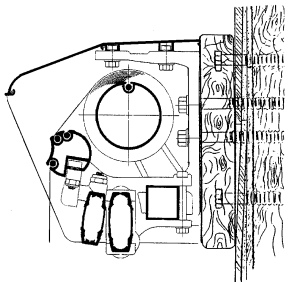
The brackets can sometimes be installed right on the siding. The siding may become compressed under the load of the awning. Use an AU14 Bracket Spacer shaped to fit the AU10 Wall Bracket, available in 10mm thickness. The spacer can be cut in half. Use the spacer as a fill to minimize siding compression. This option is not recommended with larger projections. With Larger projections it may be necessary to cut the siding for the bracket and use a solid spacer. You can also use your own spacers of choice.



Vinyl siding can usually be opened or unzipped from the outside with a special tool to help you locate the studs. If the surface under the siding is too soft, you will need to cut away the siding and use solid spacers.

Vinyl Siding option B (pressure treated board)

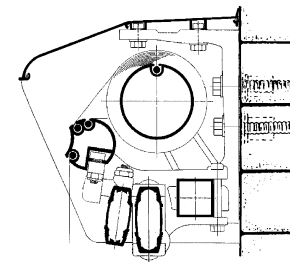
Mount a 2"x 10" pressure-treated board to the house and fasten the brackets through the board into the header or studs(longer bolts are needed). You could use a 2" x 8" board if installing without a hood. Best to trim out the board with PVC. Some installers will remove the siding and install a board in its place, and trim the siding around it. Or, you can add a board on outside.



Important: Please note a single board is not strong enough to support the awning by itself. The board is only there to stabilize the wall surface and offer you a harder surface to mount to. You must bolt through the beard into solid wood framing members.

Brick Wall Installation

Make sure the face is structured and not just an unsupported facade. Do not bolt into top rows of bricks or close to an outside corner. We suggest using 3/8" lag bolts with lead shields with Hilti epoxy. It is best to bolt through the brick, or turning the lead sleeves so they expand towards the brick or bolt brackets through the brick into wood for most secure mount. If using Sleeve anchors, be careful to make sure that the threaded rod does not extend too far and rip the fabric on the roller tube.

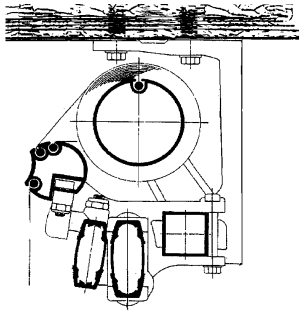


It is recommended for larger projections or brick that is softer to use extra brackets and Hilti epoxy type fastener system for best results (Check with your fastener supplier). Do not mount on a brick that is old and too soft with bad mortar.

INSTALLATION TYPES:

Ceiling Installation (standard)

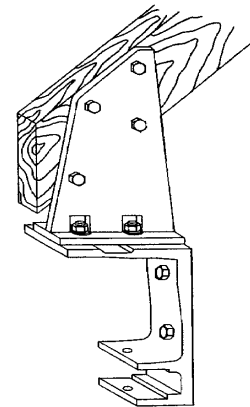
Use AU16C brackets instead of the standard wall brackets. Make sure the soffit or joists are strong enough to support the extended awning. If you have a soft soffit, you may have to cut out the area where the brackets will be installed and use a solid spacer. As an option you can mount a 2"x 8" pressure-treated board to the ceiling and fasten the brackets through the board into the ceiling joists for better strength (The AU16C brackets are optional).



If there is a trim piece or "lip" sticking down behind the gutter, make sure it will not interfere with the awning as it extends.

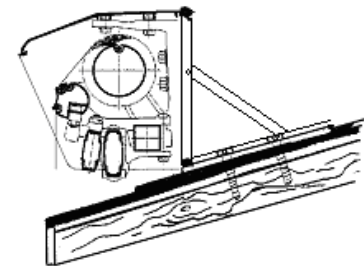
Ceiling Installation (using beam brackets)

Use AU16C brackets like the standard ceiling installation. Add an additional AU45 9" beam bracket for angled beams and AU46 5" beam bracket for straight beams. One beam bracket is needed in addition to each AU16C ceiling bracket (The beam brackets are optional).



Roof Installation (Flat roofs use Stainless AU18S Bracket)

Use the AU18 Roof Brackets (Aluminum or Stainless) and locate the roof rafters. The face of the roof bracket can be mounted up to 10" back from the gutter for a more flush installation. If the unit is manually operated or with a manual override motor the awning may need to overhang the gutter more in order to use the crank handle. If so, mount the face of the roof bracket closer to the back of the gutter. Caulk the holes under and around the roof bracket to form a tight seal. This installation option is designed for asphalt shingle roofs. One roof bracket is needed for every AU10 wall bracket with three lag bolts each. A hood is recommended and the AU18 brackets are optional. See separate supplemental instructions with the roof brackets.



Note: Read supplemental installation procedures for roof brackets carefully before starting. If mounting on "FLAT" roofs, use the stainless roof brackets as they can be adjusted flat. Flat installation is not available with the aluminum roof bracket.



AU18S Stainless



AU18A Aluminum

BEGIN INSTALLING YOUR SUNAIR®

Always read the entire installation instruction manual prior to starting the installation.

Place the awning next to the designated wall. Determine where to install the brackets. The awning has to be mounted at the proper height at the back wall. For proper pitch and clearance on the awning when it is extended minimum recommended clearance under front bar is 7ft when the awning is extended. A 7' 6" minimum clearance is usually better as the valance hangs also lower under front bar. Please refer to the pitch chart on the next page for proper bracket installation height. The pitch chart represents the ideal mounting height at the back using the 7 ft minimum height at front. A 10ft projection awning should be mounted at 9'6" high representing a 3/12 pitch or 3" for every 12" of projection (for example, 10ft projection x 3" = 2'6", and 2'6" + 7' = 9'6"). Because the ideal pitch may not always be attained a 2/12 pitch or 8 ½ to 9ft installation height is acceptable, with an absolute minimum installation height of 8ft at the top of the brackets. If more than 7' clearance is desired under the front bar when the awning is extended, please mount the awning brackets higher up on the rear wall by that same distance.

Note: A good rule of thumb is never to install a Lateral Arm awning below 8 feet at the top of the brackets. If only eight feet is attainable the awning projection should not exceed 10ft and the awning will project almost flat and extend on a shallow pitch (Please refer to our warranty for further information). The more pitch on the awning the better it will function.

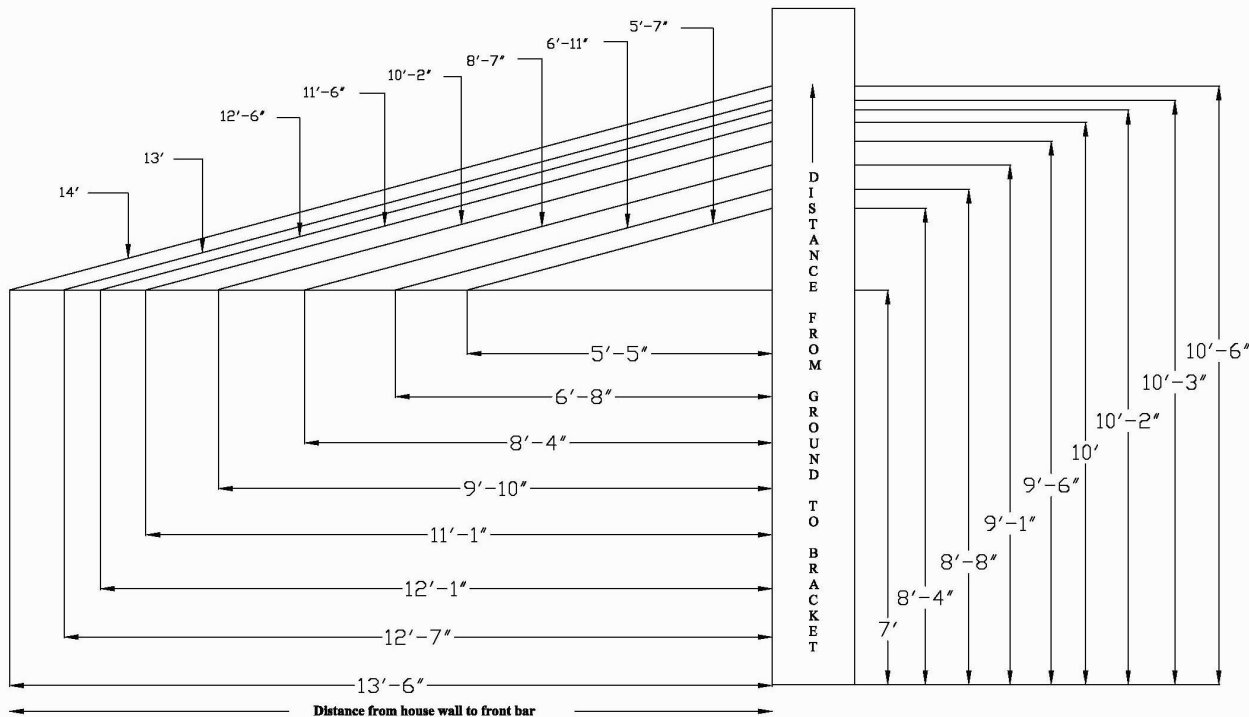
When the proper installation height has been determined depending on the width and projection of the awning ordered, the wall brackets will have to be spaced out properly along the support tube or square bar, as determined by the type of wall structure you are mounting to. Please refer to our "excel " arm placement guide for a reference on the best location. It is recommended that the two outer wall installation brackets should be located inside or outside the outer arm shoulder attachment, but no further than 10" away, and not closer than 4". The third (3rd) bracket should be located as close to the center or third arm (if configured on the awning) within 4 to 10". Same for a fourth (4th) arm if configured. Any additional brackets should be spaced evenly and located to best support the square bar / support tube. On 13ft and 14 ft projection awnings, it is necessary to install one bracket outside the arm shoulder and one bracket closer to the inside the arm shoulder while also making sure the center of the awning is supported. Sometimes adding a wood board is necessary. *Example:* A 16' wide x 14' proj. awning will need to be installed on a wood board as there is not enough room to mount one bracket outside the arm shoulders.

On a traditional wall, it is a good idea to mount the outer brackets first and use a string line to place the remaining brackets. Make sure you have the proper lag bolts and number of brackets (see previous pages). Once the awning brackets are mounted, the awning can now be set into the brackets and locked in with the Bolt and T nut enclosed (see bracket sketch on next page). If you have an optional "Hood" configured you will need top mount that first (See hood instructions on next page).

The AU16C and AU10 wall bracket both uses an 5/16" x 2 1/4" bolt/washer with a "T nut" and washer to secure the square bar or support tube. Make sure you use a ratchet to tighten the front bolts when the awning is in retracted position. Use an open end wrench to hold the nut in place when tightening the bolt with the ratchet.

Note: If you have questions, please feel free to call us, and we can answer any questions you have as best possible. Please also see the arm placement chart for bracket placement.

PITCH CHART AND IDEAL MOUNTING HEIGHT



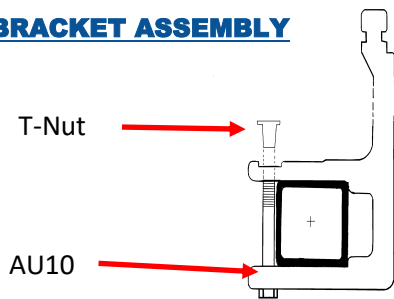
Note: With the awning installed at the proper pitch, you will lose some projection (see above). Sunstar projections slightly differ. Max available projection for the Sunstar is 11' 6"

HOOD OPTION:

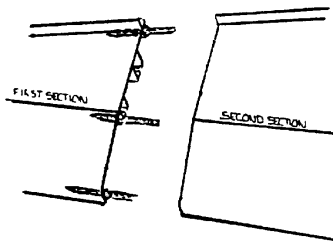
The hood should be mounted before the awning is set in the brackets. Slide the head of each bolt into the front or back groove of the hood (one for each bracket into each slot) until it reaches approximately the position of the corresponding bracket. Attach the hood end covers with the Phillips screws supplied to the left and right side of the hood. Place the hood on top of the adapters and insert the hood bolts through the adapter. Attach the washers and nuts and tighten (see hood assembly sketch below). The AU14 hood bracket which is a 3/4" wide Bracket similar to the AU10 wall bracket is used in combination with the AU15 to support the hood where the hood is spliced or unsupported by a wall bracket. For example, use the AU14 & AU15 on in the center of a two arm awning when all 4 install brackets are used near both arms. To splice two pieces of hood together use the aluminum pins supplied. Insert the pins in the same slots as the hood end cap screws.

Note: It is sometimes necessary to install one awning bracket close to the splice for support.

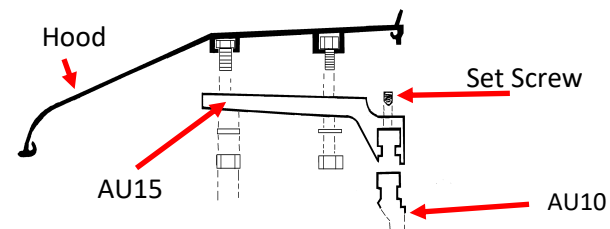
BRACKET ASSEMBLY



HOOD SPLICING

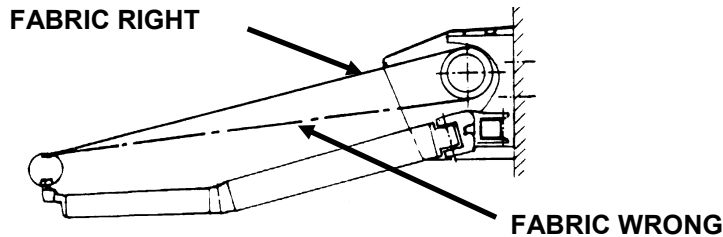


HOOD ASSEMBLY

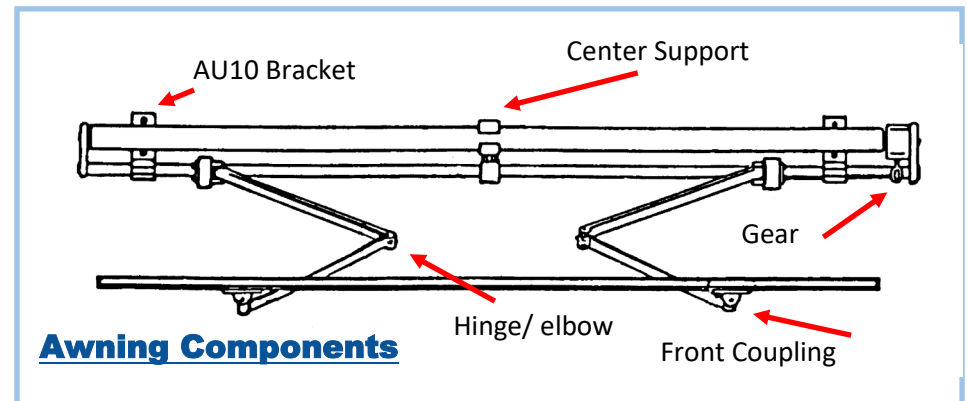
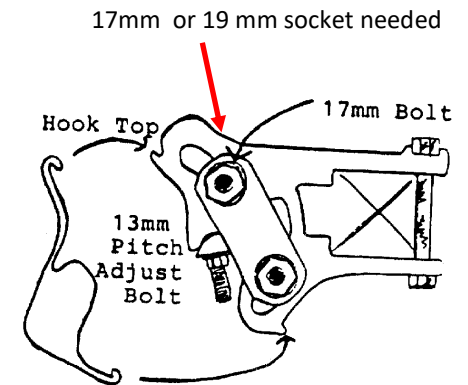


Adjustments:

All awnings with fabric are adjusted at the plant. The pitch will need to be re-adjusted at time of installation. The following guidelines should be followed when adjusting the pitch. Extend the awning to its fullest projection and loosen the 17mm or 19mm lock nuts on the side of the Slide Unit. When raising or lowering the pitch, the arm should be supported by lifting the front bar to assure the front adjustment bolt will not be stripped. Now, turn the 13mm or 17mm arm adjustment bolt/nut at the front/bottom of the Slide unit bracket clockwise to raise the arm or counter clockwise to lower the arm (See shoulder / slide unit sketch to Right). Tighten the 17mm or 19mm side lock nuts after the arm is adjusted. Then, tighten the front bolt also. Repeat for all arms configured. Make sure all bolts are checked and tightened.



Shoulder / Slide Unit

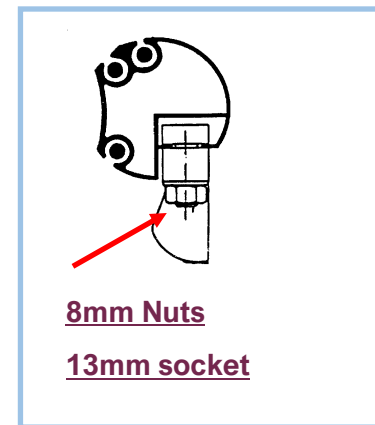


Awning Components

If you change the pitch on an awning with a center support, change the position of the cradle. A 1/2" gap should exist between the lower lip of the Center Support cradle and the fabric (see Center Support sketch above Right and on next page). Loosen the 5/32" bolt on the front, slide the C cradle out and change the slot so that the front of the bottom lip is in best position, and retighten the bolt. Make sure the Center Support is centered on a fabric seam. The Center Support should be located on a fabric seam closest to the center of the awning (The seams are the two double needle stitches between the fabric panels).

Make sure the fabric is not under rolled as per above sketch. If a center support is configured, and the fabric is under rolled, it will tear the fabric.

The arms should work together as a unit and close simultaneously. If one arm closes or retracts before the other (the elbow of one arm hits the square bar before the other arm), the front bar arm attachment / coupling at front of the arm behind the front bar for that arm should be adjusted slightly outward or toward the end of the front bar until the arms function properly together. To do this, extend the awning about 24". Loosen the two 8 mm nuts on the front coupling on the arm that closes early. Slide the coupling about 1/2" towards the outside end of the awning or to the point when the elbows or hinges are even. Re-tighten the bolts. Repeat if necessary. (see front coupling sketch and awning component sketch to the Right and above Right).



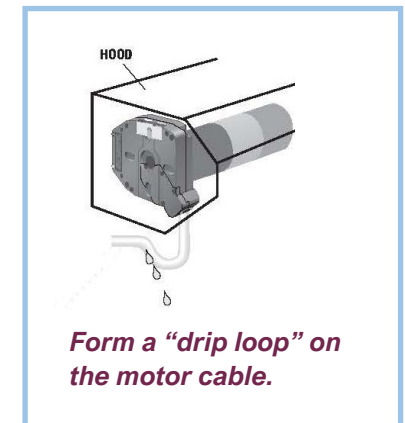
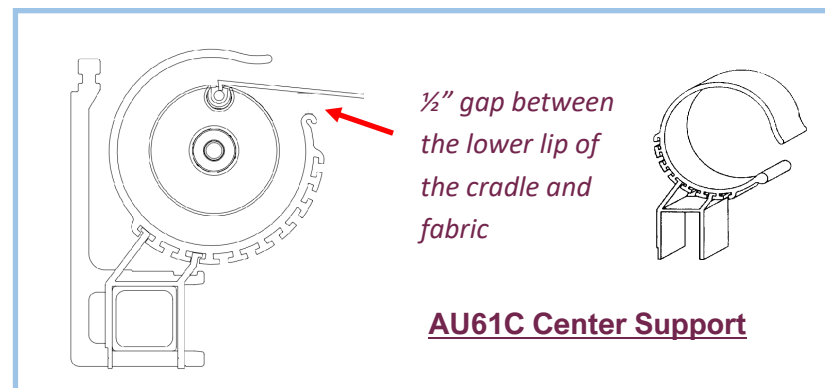
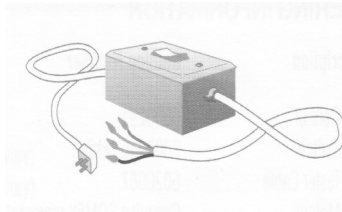
AU123 Front Coupling

Adjustments:

The set screw in the hinge or elbow has been pre-set, exposing the proper number of threads and limits the arms from excessive play in the wind when the awning is extended. If the motor or manual gear is hard to start cranking when retracting, reset the set screw to expose one or more threads. If the arms have excessive play or move too easily from slight wind gusts, the set screw should be set more flush by tightening further. Small projection awnings and three/four arm systems with more tension may require one or two more threads exposed (see hinge sketch below).

Cable Tester for Motor

Order # 500176020086



Specialty tools needed:

The following tools are needed to adjust and mount the awnings.

1/2" Socket/Ratchet for Brackets AU10 Bolt

1/2" Open End Wrench to attach the Hood (if ordered)

17 mm & 19 mm Socket for Slide Unit (to change pitch)

13 mm Socket (deep socket) for Front Arm Attachment/Pitch Adjustment and AU16C brackets

10 mm Socket/Wrench for gear adjustment (if necessary)

Phillips Screwdriver to attach hood end covers

IMPORTANT about motors !

Always check the limits when you are extending and retracting the awning for the first time to make sure they are properly set. Most limits are set at the plant initially but sometimes the "factory" limits may change during shipping. Should adjustment be necessary, please refer to the motor instruction sheet supplied. If the limits are not set properly as the awning is extended for the first time the fabric may get damaged by the center support (if configured). The motor cable should also not act as a direct conduit for the water to enter the head. Install a "line drip loop" to divert water away from the head (SEE ABOVE). Also, do not cut the RTS power cord less than 18", as the cable serves as the antenna for the RTS receiver. If mounting two RTS radio motorized units next to each other install the motors at opposite ends to minimize interference between motors. Before the electrician wires the motor, it is very important to read the motor wiring instructions carefully. A tester cable kit is recommended when testing all "hard wire" motors. The tester cable kit is available for purchase (See tester cable next page). See separate information about the motor connections and optional plug in cords.